Table of Contents

Physiologic Control of Food Intake and Body Weight  6
Physiologic Turn-on of Hunger and how to turn them off The Natural Science of Appetite Suppression  10

Structure  12
Functions  12
Digestion  12
Neurobiology  12
Interactions  13

Natural appetite suppressants  18
Supplements as Natural Appetite Suppressants  18
1. Kinds of appetite suppressant  20
2. What are herbal appetite suppressants?  20
4. How they work?  20
5. Herbal appetite suppressants that are safe  22
3. How effective are herbal appetite suppressants?  22
1. Breakfast  24
2. Caffeine  25
3. Chewing Gum  25
4. Cinnamon  26
5. Fat  26
6. Fiber  29
7. Lemon/Lime  30

The 3 Hour diet  32
Diet, Exercise, and Eat Often  33
At Breakfast  34
At Lunch  34
At Dinner  34
Eating Dessert  35
Dining Out  35
At the Office  35
Watching TV  36
On a Saturday  36
During Your Workout  38
Pick Pistachies  38
Slice Your Food  39
Just Add Flax  40
Dress Down  41
Brush Immediately After Dinner  41
Add Air  42
Make Your Own Salad Dressing  42
Try Acupressure on Your Ear  43

Lose Weight without Feeling Deprived!  46
Have a Glass of Wine with Dinner  46
Skip Situps  46
Shorten Your Cardio Workout  47
Get More Sleep  47
Eat 3 Servings of Dairy Every Day  47
Eat Carbs (But Choose Wisely) eat complex natural carbs not processed  48
Prof. Nelson’s better butter:  48
Go to Bed Earlier  50
Eat More Protein  51
Go Organic When You Can  51
Get Up, Stand Up  52
Drink Cold Water  52
Rev Up in the Morning  53
Drink Coffee or Tea  54
Fight Fat with Fiber  54
Eat Iron-Rich Foods  55
Get More Vitamin D  55
Eat Watermelon  55
Stay Hydrated  56
Understanding Your BMI  58
Body mass index  58
METABOLISM FOR ENERGY AND THE RESPIRATORY QUOTIENT  59
Cellular respiration  65
Aerobic respiration  66
ESTIMATING YOUR CALORIE NEEDS  67
So Why Don't The Calorie Math Add Up?  73
The 272 Fast Food Items Highest In Calories  73
Health Food ... or Health Fraud?  93
Low calorie food list  95
127 Foods That Fight Fat  97
Sugars and Sweetness  101
Low Glycemic Food List  108
Low Glycemic Index  109
Blood sugar  112
Low blood sugar  114
Dextrose Sugar Related Health Problems:  115
What to do for your Health  116
Stick Out Your Tongue to Weight Loss!  122

Tongue's sixth 'taste' discovered — calcium  123
Best & Worst Foods for Your Cholesterol Trans fat is the worst offender. Here’s how to avoid it.  125
The 20 Unhealthiest Drinks in America - Exposed!  127
Healthier fries? Trans fat limits are working  128
2010’s Top 5 Diet Pills for Fast Weight Loss  130
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lipase and the FAT METABOLISM</td>
<td>213</td>
</tr>
<tr>
<td>Fat Absorption</td>
<td>213</td>
</tr>
<tr>
<td>Lipid Transport</td>
<td>214</td>
</tr>
<tr>
<td>Internal Lipase</td>
<td>215</td>
</tr>
<tr>
<td>Lipase Deficiency</td>
<td>215</td>
</tr>
<tr>
<td>Overweight</td>
<td>216</td>
</tr>
<tr>
<td>Lipase in Food</td>
<td>218</td>
</tr>
<tr>
<td>RECIPES</td>
<td>219</td>
</tr>
<tr>
<td>ACID FOOD</td>
<td>219</td>
</tr>
<tr>
<td>BAKING</td>
<td>220</td>
</tr>
<tr>
<td>SOUPS Why no cream; High levels of hidden salt in soup 'can increase the risk of cancer'</td>
<td>140</td>
</tr>
<tr>
<td>Gout Diet: Foods To Eat</td>
<td>144</td>
</tr>
<tr>
<td>MODERATE-PURINE FOODS</td>
<td>154</td>
</tr>
<tr>
<td>LOW-PURINE FOODS</td>
<td>154</td>
</tr>
<tr>
<td>Causes</td>
<td>155</td>
</tr>
<tr>
<td>Some other causes:</td>
<td>155</td>
</tr>
<tr>
<td>Some Possible Causes of Elevated Uric Acid Levels</td>
<td>156</td>
</tr>
<tr>
<td>Foods and Other Things to Avoid</td>
<td>157</td>
</tr>
<tr>
<td>Prevention</td>
<td>157</td>
</tr>
<tr>
<td>Supplements</td>
<td>158</td>
</tr>
<tr>
<td>Acupuncture</td>
<td>159</td>
</tr>
<tr>
<td>Remedies</td>
<td>159</td>
</tr>
<tr>
<td>Bhastrika Yoga Pranayama</td>
<td>162</td>
</tr>
<tr>
<td>Exercise to Reduce Fat</td>
<td>173</td>
</tr>
<tr>
<td>But First, Know Your Muscle Fibers...</td>
<td>177</td>
</tr>
<tr>
<td>How to Perform High intensity HGH stimulation Exercises</td>
<td>182</td>
</tr>
<tr>
<td>Human Growth Hormone (HGH)</td>
<td>191</td>
</tr>
<tr>
<td>Makes Your Metabolism Younger</td>
<td>191</td>
</tr>
<tr>
<td>What Promotes HGH?</td>
<td>192</td>
</tr>
<tr>
<td>What Stops HGH Secretion?</td>
<td>192</td>
</tr>
<tr>
<td>HGH and Sleep</td>
<td>192</td>
</tr>
<tr>
<td>How Is It Increased?</td>
<td>192</td>
</tr>
<tr>
<td>Reversing Somatopause- Middle Age Metabolic Slowdown</td>
<td>194</td>
</tr>
<tr>
<td>The FitnessFix For Middle Age Somatopause</td>
<td>194</td>
</tr>
<tr>
<td>You HaveToApplySome EFFORT For Growth Hormone Release!</td>
<td>196</td>
</tr>
<tr>
<td>Special Warning to Over-Achievers...</td>
<td>199</td>
</tr>
<tr>
<td>MET in exercise (metabolic equivalent tasks)</td>
<td>201</td>
</tr>
<tr>
<td>Don’t eat carbs at night</td>
<td>206</td>
</tr>
<tr>
<td>Why You Shouldn’t Eat Carbs At Night</td>
<td>206</td>
</tr>
<tr>
<td>Heat Exhaustion risk of 10+ Met activity</td>
<td>209</td>
</tr>
<tr>
<td>Outdoor hazards</td>
<td>209</td>
</tr>
<tr>
<td>Injury</td>
<td>210</td>
</tr>
<tr>
<td>Dehydration and overheating</td>
<td>211</td>
</tr>
<tr>
<td>RECIPES</td>
<td>219</td>
</tr>
<tr>
<td>ACID FOOD</td>
<td>219</td>
</tr>
<tr>
<td>BAKING</td>
<td>220</td>
</tr>
<tr>
<td>BEEF JUICE</td>
<td>221</td>
</tr>
<tr>
<td>BLENDED GREEN LEAVES</td>
<td>221</td>
</tr>
<tr>
<td>BONE BROTH</td>
<td>221</td>
</tr>
<tr>
<td>BUTTER SPREAD</td>
<td>221</td>
</tr>
<tr>
<td>COTTAGE CHEESE or QUARK</td>
<td>222</td>
</tr>
<tr>
<td>FERMENTS</td>
<td>222</td>
</tr>
<tr>
<td>FISH, MARINATED</td>
<td>223</td>
</tr>
<tr>
<td>FRUIT BALLS</td>
<td>224</td>
</tr>
<tr>
<td>HOMMOS</td>
<td>224</td>
</tr>
<tr>
<td>HOT VEGETABLE JUICE</td>
<td>224</td>
</tr>
<tr>
<td>JELLIES</td>
<td>224</td>
</tr>
<tr>
<td>LIVER JUICE</td>
<td>224</td>
</tr>
<tr>
<td>MINCED MEAT</td>
<td>224</td>
</tr>
<tr>
<td>PAWAW SMOOTHIE</td>
<td>225</td>
</tr>
<tr>
<td>POTATOES - grated</td>
<td>225</td>
</tr>
<tr>
<td>PROTEIN DRINK</td>
<td>225</td>
</tr>
<tr>
<td>REJUVELAC (FERMENTED SEED DRINK)</td>
<td>225</td>
</tr>
<tr>
<td>RICE DISHES</td>
<td>225</td>
</tr>
<tr>
<td>SAUERKRAUT</td>
<td>226</td>
</tr>
<tr>
<td>SEED CHEESE - SEED YOGURT</td>
<td>226</td>
</tr>
<tr>
<td>SEED MILK</td>
<td>226</td>
</tr>
<tr>
<td>SOY MILK</td>
<td>226</td>
</tr>
<tr>
<td>SPROUT SALAD</td>
<td>227</td>
</tr>
<tr>
<td>SWEET VEGETABLES</td>
<td>227</td>
</tr>
<tr>
<td>VEGGIE BURGERS</td>
<td>227</td>
</tr>
<tr>
<td>Lipase Supplements</td>
<td>227</td>
</tr>
<tr>
<td>Technical Details</td>
<td>230</td>
</tr>
<tr>
<td>External Use of Lipase</td>
<td>230</td>
</tr>
<tr>
<td>Safety</td>
<td>231</td>
</tr>
<tr>
<td>Raw foods and digestive enzymes</td>
<td>232</td>
</tr>
</tbody>
</table>

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If you do not have the money pay what you can, and if you cannot pay anything please pay the cosmos back with good deeds to others. Pass on the good karma by being good to others and helping them the way I am helping you. 
Pass it on.
Physiologic Control of Food Intake and Body Weight

The body is in a continual state of hunger, which is intermittently relieved by eating. If there is just one nutrient deficient then the system is in crave mode of search and find. This perpetual drive to eat is periodically suppressed by inhibitory impulses generated by such things as the presence of food in the gastrointestinal tract, the flow of nutrients into blood and other factors. After these “satiety factors” have dissipated, the desire to eat returns.

Why is it important to understand the factors that control food intake? At least two major areas of import come to mind:

- Obesity is the most prevalent nutritional disease of humans, dogs and cats in affluent societies such as ours, exceeding by far the number of nutritional deficiency diseases.
- Metabolic demands of people and animals increase with sickness or trauma, often in conjunction with anorexia. Sickness combined with anorexia leads to accelerated starvation.

Pregastric Factors

We all know of “environmental” conditions that can dramatically affect food intake. Consider which of the following items are likely important to animals, humans or both:

- Appearance of food: humans like or dislike certain meals based on visual appearance, but does your cat appreciate your buying fish-shaped food?
- Taste and/or odor of food: this is extremely important in all species.
- Learned preferences and aversions: Almost everyone has an aversion to one or more types of foods, and they also affect companion animals.
- Psychologic factors: mental states such as fear, depression and social interactions often affect food intake.

Subsequent studies showed that, although these hypothalamic centers are clearly very important in controlling hunger and satiety, they don’t explain the whole story.

Role of the Central Nervous System

For many years, the hypothalamus was thought to be the key to control of food intake. This view derived from classic experiments in which food intake was studied in rats with lesions in various areas of the brain. Such studies clearly identified two regions in the hypothalamus that dramatically influence feeding behavior:

- Lateral hypothalamus (hunger center): animals with lesions in this area become anorectic and lose weight.
- Ventromedial hypothalamus (satiety center): animals with lesions in this area overeat and become obese.
Never eat a live mole! This seagull did, the mole tried to tunnel out and they both died.

Understanding these factors is of particular importance to clinicians because they can be manipulated to manage anorectic patients.

Gastrointestinal and Postabsorptive Factors

The degree of gastrointestinal fill is the most important signal from the digestive tract per se - a full stomach and intestine induce satiety, probably via the vagus nerve relaying that fact back to the hypothalamus. Additionally, the enteric hormone cholecystokinin is well documented to induce satiety in experimental settings, while the hormone ghrelin seems to be a potent stimulator of appetite.

As nutrients such as glucose and amino acids are absorbed, their concentrations in blood rise, as do the concentration of several hormones (cholecystokinin as mentioned above, but also insulin and glucagon). These changes also have been linked to the sensation of hunger or satiety.

Long-term Control of Food Intake

Adult animals tend to maintain a relatively constant weight known as their "set weight". Much of this appears to be regulated on a time scale of weeks or longer.

If an animal is starved for a long period of time, then allowed access to food, it eats a far greater amount of food than a normal animal. Conversely, if an animal is force fed for several weeks, then allowed access to free choice food, it will not eat very much. In both cases, when weight returns to "set weight," feeding behavior normalizes.

An additional interesting observation is that when food is restricted, basal metabolic rate decreases, which is one reason that it is so difficult to lose weight by dieting.

It is clear that long term regulation of body weight results from a complex integration of a battery of hormonal, metabolic and neural signals. In view of how tightly body weight is regulated in the face of widely varying levels of food intake and energy expenditure, it is clear that robust feedback systems are in place.

Searching for the feedback signals - "satiety factors" - has been a holy quest in this field for many years and has recently borne fruit, thanks to studies conducted years ago on mice with genetic mutations that cause obesity.

The satiety factor studied most extensively to date is the hormone leptin, which has the following basic characteristics:

- Leptin is synthesized and secreted predominantly by fat cells (adipocytes).
- A major site of leptin receptors is in the hypothalamus, which is known to play an important role in control of food intake and metabolic rate.
- Plasma levels of leptin rise and fall in parallel with body fat content - as body fat mass increases, so does the concentration of leptin in blood.
- Injection of leptin into leptin-deficient animals leads to reduction in body weight by suppressing food intake and increasing metabolic rate and energy expenditure.

Several other genes have been isolated that encode proteins that affect food intake, energy metabolism and body weight. Right now it is difficult to predict their future role in the pharmaceutical control of obesity, but needless to say, a number of companies are betting multimillions that one of more of these proteins will become the miracle drug for treatment of obesity.

References and Reviews

Finally, our behavior is important. We learn bad eating behaviors such as the inane need to eat everything on our plate. Our parents insist that this involves the needs of starving children thousands of miles away, and just how us getting fat will help them is not really clear. We learn behaviors of over eating past the biological need. Our body can give us a signal to stop for we have eaten enough, but our verbal brain can say wait we paid $50 dollars for this and we eat past satiation.

When we eat there are several key hormones released that make us feel good. Specifically the gall bladder releases a euphoric anti-pain analgesic of CCK (CholeCystokinin). So there can be emotional reasons to over eat.

When we understand these reasons for over eating and obesity we can use our knowledge to lose weight. This book has many tips on how to do so. Knowledge is power.

Cholecystokinin (CCK or CCK-PZ; from Greek χολή, “bile”; κυστός, “sac”; κινίν, “move”; hence, move the bile-sac (gallbladder)) is a peptide hormone of the gastrointestinal system responsible for stimulating the digestion of fat and protein. Cholecystokinin, previously called pancreozymin, is synthesised by I-cells in the mucosal epithelium of the small intestine and secreted in the duodenum, the first segment of the small intestine, and causes the release of digestive enzymes and bile from the pancreas and gallbladder, respectively. It also acts as a hunger suppressant. Recent evidence has suggested that it also plays a major role in inducing drug tolerance to opioids like morphine and heroin, and is partly implicated in experiences of pain hypersensitivity during opioid withdrawal.[1][2]
Weight Loss

Quantum

Structure

CCK is composed of varying numbers of amino acids depending on post-translational modification of the CCK gene product, preprocholecystokinin. Thus CCK is actually a family of hormones identified by number of amino acids, e.g., CCK58, CCK33, and CCK8. CCK58 assumes a helix-turn-helix configuration. Its existence was first suggested in 1905 by the British physiologist Joy Simcha Cohen. CCK is very similar in structure to gastrin, another of the gastrointestinal hormones. CCK and gastrin share the same five amino acids at their C-termini.

Functions

CCK mediates a number of physiological processes, including digestion and satiety. It is located in the small intestine, and detects the presence of fat in the chyme. CCK then tells the stomach to slow down the speed of digestion so the small intestine can effectively digest the fats.

Digestion

Secretion of CCK by the duodenal and intestinal mucosa is stimulated by fat- or protein-rich chyme entering the duodenum. It then inhibits gastric emptying and gastric acid secretion and mediates digestion in the duodenum. It stimulates the acinar cells of the pancreas to release water and ions and stimulates the secretion of a juice rich in pancreatic digestive enzymes, that of the substances that stimulated the release of CCK drop, the concentration of CCK also increases by the somatostatin.

CCK also causes the increased production of hepatic bile, and stimulates the contraction of the gall bladder and the relaxation of the Sphincter of Oddi (Glisson’s sphincter), resulting in the delivery of bile into the duodenal part of the small intestine. Bile salts form amphipathic micelles that emulsify fats, aiding in their digestion and absorption.

Neurobiology

As a neuropeptide, CCK mediates satiety by acting on the CCK receptors distributed widely throughout the central nervous system. In humans, it has been suggested that CCK administration causes nausea and anxiety, and induces a satiating effect. CCK-4 is routinely used to induce anxiety in humans though certain different forms of CCK are being shown to have highly variable effects.

The mechanism for this hunger suppression is thought to be a decrease in the rate of gastric emptying,[4] CCK also has stimulatory effects on the vagus nerve, effects that can be inhibited by capsaicin.

The stimulatory effects of CCK oppose those of ghrelin, which has been shown to inhibit the vagus nerve.[citation needed] The CCK tetrapeptide fragment CCK-4 (Trp-Met-Asp-Phe-NH2) reliably causes anxiety when administered to humans, and is commonly used in scientific research to induce panic attacks for the purpose of testing new anxiolytic drugs.[5]

The effects of CCK vary between individuals. For example, in rats, CCK administration significantly reduces hunger in young males, but is slightly less effective in older subjects, and even slightly less effective in females. The hunger-suppressive effects of CCK also are reduced in obese rats.[6]

Interactions

Cholecystokinin has been shown to interact with Cholecystokinin B receptor.[7][8][9] CCK has also been shown to interact with calcineurin in the pancreas. Calcineurin will go on to activate the transcription factors NFAT 1-3, which will stimulate hypertrophy and growth of the pancreas. CCK can be stimulated by a diet high in protein, or by protease inhibitors.[10]

Cholecystokinin has been shown to interact with orexin neurons which control appetite and wakefulness (sleep).[11] Cholecystokinin seems to also have other indirect effects on sleep regulation.[12]

Cholecystokinin in body cannot cross blood brain barrier but certain parts of hypothalamus and brainstem aren’t protected by the barrier and the euphoric components effect these areas.

References

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## The Glycemic Index of Selected Foods

<table>
<thead>
<tr>
<th>SUGARS</th>
<th>LOW GLYCEMIC FOODS</th>
<th>MEDIUM</th>
<th>HIGH GLYCEMIC FOODS</th>
<th>GRAINS</th>
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<tbody>
<tr>
<td>Levulose</td>
<td>Fruit sugars</td>
<td>Xyitol</td>
<td>Agave Cactus sugar</td>
<td>Rye</td>
</tr>
<tr>
<td>Stevia</td>
<td>Fructose</td>
<td>Fructose Cola</td>
<td>Synthetic sweeteners are not problems of High Glycemic Index but they are toxins to nerves and must be avoided at all costs</td>
<td>Suga?</td>
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<tr>
<td>SUGARS</td>
<td></td>
<td></td>
<td>Jelly beans</td>
<td>Popcorn</td>
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<td></td>
<td></td>
<td></td>
<td>Grape sugar</td>
<td>(no artificial additives)</td>
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<tr>
<td>GRAINS</td>
<td></td>
<td></td>
<td>Date sugar</td>
<td>(with additives)</td>
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<tr>
<td>Millet</td>
<td>Pearson Barley</td>
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<td>Brown rice</td>
<td>Corn and Corn meal</td>
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<tr>
<td>Pearl Barley</td>
<td>Rye Sourdough</td>
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<td>Quick oats</td>
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<td>Bulgur</td>
<td>Cous-cous</td>
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<td>Ezekiel bread</td>
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<td>GRAIN FOODS</td>
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<td>Popcorn</td>
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<tr>
<td>Oatmeal</td>
<td>cookie with fructose</td>
<td>5 grain pulse</td>
<td>Macaroni</td>
<td>Baguette</td>
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<tr>
<td>cookie</td>
<td>bread</td>
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<td>Macaroon</td>
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<td>Spaghetti</td>
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<td>Bran Muffin</td>
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<td>Oatmeal cookie</td>
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<td>GOURMET FOODS</td>
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<td>Grape nuts</td>
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<td>Meat ravioli</td>
<td>Whole grain with vegetable pasta</td>
<td>Tomatoe</td>
<td>Doughnuts</td>
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<td>Brown bread</td>
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<td>Pop tarts</td>
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<td>Special K Pretzels</td>
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<td>Baguette</td>
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<td>FRUITS</td>
<td>Tomatoe</td>
<td>Lemon, Lime</td>
<td>Yogurt with fructose</td>
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<td>Dried apple</td>
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Dextrose enters the cell too fast and makes High Glycemic Index. This makes immune weakness, nerve irritation, and aggravates all diseases. Avoid our exposure to high glycemic foods.

Natural fruit sugars used moderately increase hormones, immunity, and health.

Do NOT Eat this --- Eat this

Left handed natural sugars; limit disease.

Right handed sugars, mostly processed; make all disease.
Quantum Weight Loss

Whey protein powder has been used for years by dieters as an effective natural appetite suppressant. Whey protein powder is also excellent for muscle growth, which is crucial because muscle burns fat. It is also very cheap, convenient, and comes in a variety of flavors. You can drink it as a delicious shake or add it to smoothies or any variety of food recipes.

Whole Foods as Natural Appetite Suppressants

Water

This is probably the least expensive option of all the natural appetite suppressants you can choose from. Drinking plenty of water throughout the day will do wonders to curb your appetite. Often times hunger is mistaken as thirst so simply drinking water at the first sign of hunger can quickly keep your appetite in check. Another technique is to drink an eight ounce glass of water before each meal. You’ll be surprised at how much less you eat.

Green Leafy Vegetables

Lettuce, spinach, cabbage, and bok choys are terrific natural appetite suppressants. They are remarkably low in calories and are a good source of fiber. And here’s a bonus - these are considered "negative calorie" foods because it can take more calories for your body to digest these foods than there are in these foods themselves!

Pickles

I know what you’re thinking, pickles? Yes, pickles - but not the popular commercial brands you’re used to. They often contain artificial colors and sugar. You want to look for the natural organic pickles found in health food stores or in the health food section of your favorite grocer. Natural pickles, which are essentially small cucumbers, only have a few calories each. An entire jar will have less than 100 calories! You can snack on these powerful appetite suppressants all day long without any guilt.

Apples

You know the saying, but now there’s another reason why you should eat apples - they’re great natural appetite suppressants. Apples contain only about 100 calories each, are a good source of fiber, and have very little carbs. Apples are perfect for a snack and make a great substitute for more calorie dense foods like candy bars and potato chips.

These are some of the most effective, “guilt-free” natural appetite suppressants you’ll find. You’ll be able to control your hunger and prevent overeating by including these in your weight loss program. More importantly, your weight loss efforts won’t be as challenging!

You can’t always resist the temptation to eat unhealthy fatty foods. No matter of your attempts, controlling appetite is always difficult. To help you fight this temptation, you may want to try a few natural appetite suppressants.

1. Green Leafy Vegetables
2. Pickles
3. Apples

Natural appetite suppressants

The biggest challenge when it comes to weight loss is controlling your appetite. These are the best natural appetite suppressants to overcome this challenge and to make weight loss easier.

Natural appetite suppressants can help you overcome one of the biggest challenges when trying to lose weight: controlling your appetite. If you can control your appetite, you can prevent overeating and you can lose weight easier.

When it comes to natural appetite suppressants, you have three options: supplements, whole foods, or a combination of both. Supplements can be more convenient but they can also be very expensive. Whole foods are excellent because they’re inexpensive and provide additional nutritional benefits you can’t get from a supplement. You need to decide which works best for you. Here is a list of some of the most effective natural appetite suppressants:

Supplements as Natural Appetite Suppressants

Hoodia Gordonii

Hoodia Gordonii is a cactus-like plant that is found in the Kalahari Desert of South Africa. It has been used by the Bushmen of South Africa for centuries as a powerful appetite suppressant. They eat a small piece of the hoodia plant before long hunting trips and their appetites are suppressed for hours.

If you can’t find hoodia gordonii in its raw form, but you can find hoodia diet pills that contain it. You need to be careful when you buy hoodia supplements as most of them contain very little hoodia gordonii. Those that do contain authentic hoodia gordonii can be effective appetite suppressants.

While they are convenient, they are very expensive. At the time of this writing, they cost around $60 for a one-month supply.

Whey Protein

Whey protein powder has been used for years by dieters as an effective natural appetite suppressant. Whey protein powder is also excellent for muscle growth, which is crucial because muscle burns fat. It is also very cheap, convenient, and comes in a variety of flavors. You can drink it as a delicious shake or add it to smoothies or any variety of food recipes.
Weight loss medications are generally divided in two categories - fat binders and appetite suppressants. While there are only few available fat binders, appetite suppressants come of greater diversity. In fact the most approved weight loss pills are actually appetite suppressants and there are even more to come.

There are two main groups of appetite suppressants - prescription and herbal appetite suppressants. In recent years herbal appetite suppressants are gathering more and more attention as majority of people trying to lose weight want to use herbal and natural appetite suppressants rather than synthetic drugs that can have serious side effects on your body and health. Luckily prescription appetite suppressants have alternatives, that are safer and at the same time effective.

2. What are herbal appetite suppressants?

Herbal appetite suppressant pills are dietary supplements made from different plants - herbs that help control the appetite. These herbs are also good for the heart and circulation, fast weight loss, lymphatic system, digestive health, for the skin, hair, nervous system, glandular system, respiratory health, urinary system and much more.

4. How they work?

Different herbal appetite suppressants doesn't share the same mechanism of action. Basically they work like stimulants, mimic the glucose production or make you feel full longer.

a) Herbal stimulants

Stimulants of herbal origin are maybe the biggest group. Most of them contain one very well known alkaloid - caffeine. Such examples are coffee, yerba mate, green tea, guarana, taurin, Hot Cocoa, chocolate, cola drinks etc.

• Caffeine can be very dangerous stimulant, but it is “tamed” by our civilization. The benefits from caffeine are too exaggerated, especially when it comes to appetite suppression. What is more likely is caffeine gives you nervousness, sleeplessness, irritability, anxiety and/or heart palpitations. Caffeine also has laxative effects, and those who become habituated to it may become constipated and experience headaches when they quit. There are also fatal cases from caffeine overconsumption.

• MA HUANG (Ephedra sinensis) is another herbal stimulant. This plant contains ephedrine and pseudoephedrine which are used in over the counter medications for asthma (ephedrine) and as a nasal decongestant (pseudoephedrine). It has similar action to amphetamines and caffeine. Products containing ephedrine were banned by the FDA, because of its side effects.

• Another stimulant herbal supplement is bitter orange extract. It contains synephrine, which is very similar to ephedrine and pseudoephedrine. Caffeinated and Ephedra-containing products have a lengthy history of use and are considered safe when consumed in reasonable amounts by healthy consumers. They should be avoided by persons sensitive to stimulants, or with any of the conditions listed above.

Stimulants derived from plants can be abused and such abuse can be hazardous. The safety of combining active amounts of ephedra or its alkaloids with caffeine sources is in question, but it can be assumed that the effects of both are stronger than either alone.

Those of you who choose to avoid all stimulants will want to watch for the listed ingredients in any products they buy.

b) Herbs that mimic glucose action

These appetite suppressants mimic the effect of glucose on the brain. When you eat your glucose levels get higher. This is sensed by your brain giving “full” signal. Some herbs mimic this effect giving the full signal so you don’t starve for food. Such herbal appetite suppressant is Hoodia. We have written more profound review on Hoodia here: link kam hoodia.

c) Herbs that make you feel full longer

After a meal you stomach needs some time to empty. Some foods empty your stomach faster than others, like fibers (this is why you go crazy for food half an hour after a salad). If your stomach empties more slowly, your stomach will give signals to your brain you are full, thus suppressing hunger.
Such action has Proactol, which combined with its fat binding effect makes it the best herbal weight loss pill. For more information you may want to read our review on Proactol.

5. Herbal appetite suppressants that are safe

Many herbal supplements are not so harmless. Many of them act as dangerous stimulants and have unpleasant side effects. Others simply don’t suppress your appetite efficiently. Read more about dangers from herbal appetite suppressants.

There are only few herbal weight loss supplements that can be used for appetite reduction. Among them there is only one that is effective, have no side effects and can be used even for long period of time:

- Hoodia - widely known and marketed herbal appetite suppressant. It is done for reason - it is by far the most potent hunger suppressor. It proved its effectiveness and safety and is the herbal appetite suppressant of first choice. It is maybe the most researched herbal appetite suppressant. We have detailed review on Hoodia Gordonii, showing you how effective is for weight loss. Additionally we have listed the best Hoodia products that are available on the market.
- Some plants contain substances that form fiber complexes with the fats you eat. As a result they slow down food passage, making you feel full longer and also creating the feeling you have had enough faster. Thus way you eat less, but you are satisfied for longer time. Although not pure appetite suppressant, but chiefly fat binder, they can promote unbelievable loss of weight. Read about such product here.

Another herbal supplements, although not appetite suppressors also could be used as an aid to your die (with caution):
- Green Tea - it has so much health benefits that it’s in a category of its own. If you want to try have in mind that it contains caffeine and has the same undesired side effects like guarana and mate. However, a cup or two green tea a day can replace your caffeine intake. In fact, it is recommended to drink a cup of tea before having a meal in order to suppress appetite. Truth is this has nothing to do with appetite suppression, but having a cup of liquid before meal makes you full your stomach faster and with less food. And again, as all caffeinated substances - you should be careful with great amounts of green tea or green tea extracts.
- Stevia - it is a herb that is thought to have appetite suppressing properties. However, it is herb that is sweet and can be used as a sweetener, replacing sugar. It doesn’t stop cravings for food.

3. How effective are herbal appetite suppressants?

For many herbal appetite suppressants are just scam, for others they are the aid that they needed to lose weight. The picture would be different if there weren’t so many products on the market, most of which lack any active ingredient.

According to researches and clinical trials some of the herbal appetite suppressants really show marked hunger suppression. Some of them, like Hoodia can even complete prescription appetite suppressants, lacking the undesired side effects of the latter.

While not all doctors agree that herbal supplements are effective, people that have used it say the opposite. The conservative point of view of the health professionals could be explained by the fact
that it is very risky for them to recommend a herbal product, that hasn't been in great number of clinical trials. This could eventually cost their license and job.

If you starve yourself, your body will freak out and will want to store every ounce in case it doesn’t get nourished again. What you actually need to do is to give it adequate nourishment so it doesn’t slow your metabolism down to adjust for lower calories.

Simple carbohydrates that we ingest daily (sugar, flour, bread, cereal, pasta, potatoes, rice) triggers insulin which can store the calories you eat into fat. The more protein you eat the more the fat burning hormone glucagon is released. The more carbohydrate you eat the more the fat storage hormone insulin is released. Carbs are nothing but danger to our health.

So it is important to stay full.

How?

Well, include as many items as you can from the list below. They are nothing but the best, proven natural appetite suppressants for hunger control.

1. Breakfast

The first and MOST IMPORTANT meal of the day. It is the first chance the body has to refuel its glucose levels, also known as blood sugar, after 8 to 12 hours without a meal or snack. Breakfast keeps your body feeling nourished and satisfied. People who fast often knows that you can skip lunch or dinner, but you MUST NEVER skip breakfast. It is THAT important.

2. Caffeine

Caffeine helps, but not for long. For short term appetite suppressing, yes. We all know coffee has lots of it but I’d advice you to put it aside and have green tea instead. An average cup of fresh coffee has 120mg of caffeine while the same cup of green tea has only 30mg. And, green tea has lots of health benefits. One of them being polyphenols, natural antioxidants that help prevent heart disease and cancer.

3. Chewing Gum
Chewing gum reduces cravings and the likelihood of snacking. It is one of the best afternoon appetite suppressants. A study found that by chewing gum before an afternoon snack, one would consume 25 less calories per day. That’s 175 calories by the end of the week!

4. Cinnamon

Cinnamon not only works as an appetite suppressant, but also stabilizes your blood sugar levels. Do note that glucose levels and hunger is highly related, therefore people with unstable blood sugar levels have enormous appetites a lot of the time. But you have to make sure that it is real cinnamon and not extracts.

5. Fat

Fat triggers the release of the cholecystokinin hormone which slows down food movement through the digestive tract. It is the last nutrient to get digested and leave the stomach, supplying you a delayed feeling of satisfaction after eating.

One should try to include as much flaxseed oil, olive oil and coconut oil in their meals as often as possible. While all oil suppresses appetite, these 3 are the best. And of these 3, coconut oil stands out the most. It is composed of 66% medium chain fatty acids which helps in the process of excess calorie burning and weight loss while keeping you fuller longer.
Nuts like almonds, avocado, hazelnut, macadamia and pecans are some of the best type of nuts to keep you fuller longer while providing your body with healthy loads of monounsaturated fat.

Eat more cold water fishes like salmon, herring, blue fin tunas and sardines instead of chicken or beef as the fish’s omega-3 fat is healthier than the red meat’s saturated fat.

Soluble fiber is, well, ‘soluble’ in water. When ingested and mixed with water it forms a gel like substance and swells in your tummy keeping you full. Apple is the common fruit with the highest amount of fiber, requires more chewing and gives your body time to register the fact that you’re
no longer hungry. Other good sources of soluble fiber include oat bran, psyllium husks, all sorts of fruits and vegetables.

Insoluble fiber does not absorb or dissolve in water. It passes through our digestive system in close to its original form, sweeping your intestines clean on the way out. Most of it’s health benefits are related to intestinal health. Get your insoluble fibers from whole grains, oatmeal, legumes (like peas, beans, lentils) and barley. Be smart and make better food choices. If you’re from Asia, you’re most likely a rice person. Swap white rice with brown rice. If not, use whole grain pasta instead of the usual. Whole wheat pizza crusts, whole grain tortillas, catch my drift?

7. Lemon/Lime

What lime or lemon does is pleasing the taste buds while filling the stomach with liquid, creating satiety. A teaspoon of lemon per 33 ounce (1 liter) of water should taste just about right. Moreover, people who have been drinking lime mixed with water reported a surge in liquid intake, which is obviously good to keep your body functioning properly.

8. Protein

Protein keeps you full longer than carbohydrate or fats. What happens is, the ingestion of protein stimulates the synthesis of glucose by the intestine and thus generates a satiety signal to the brain. Popular diets like the Atkins and South Beach Diet recommend ingesting protein packed, low carbs food. The reason those diets work is because of the protein producing the sense of satiety resulting in disinterest in consuming food.
Lean meat, poultry, fish, dairy products and especially eggs are rich sources of protein. Have them for breakfast! (Not as many as depicted in the picture above though. 2 is more of the ideal number)

You can also get protein from plants like nuts, seeds, beans, and legumes. Quinoa is a higher-protein grain. Pine nuts especially, contain a natural polyunsaturated fat called pinolenic acid that stimulates 2 effective hunger suppressing hormones that tells the brain that you are no longer hungry.

The 3 Hour diet

The 3 Hour diet is all about meal frequency. By eating every 3 hours, blood sugar levels will be more consistent and the body’s metabolism will remain in a heightened state.

For most people this will equate to about 5 meals per day – breakfast, lunch, and dinner – with two snacks in between. The 3-Hour diet addresses processed and fast foods – and much of the sales pitch of the book is about being able to lose weight and still eat some “junk” foods.

Food groups should always be combined – i.e. protein should be eaten with carbohydrates and fat (and fruit and vegetables where possible). Our Staff recommends drinking 8 glasses of water per day.

3 Hour Diet Plan sample

- Breakfast
  McDonalds Egg McMuffin, 1% milk & apple
- Lunch
  red rice with tofu, side salad with nonfat dressing
- Dinner
  1 small baked yam, 3oz grilled chicken, 1tsp butter, 1 cup green beans

- Treat
  1 fruit rollup
- Sample Snacks – fructose snack
  Freebies – 1 coffee, dilute fruit juice

Another example

For breakfast, a ham and cheese omelet, bread and lots of fruit.
Three hours later, a fruit bar. Three hours later, a lunch of beef enchilada, rice and a salad with regular dressing. Three hours later, a snack like fruit or a few cookies. Three hours later, dinner; salmon, rice, veggies, and three hours later, dessert, like fruit sorbet.

Diet, Exercise, and Eat Often

The principles of correct nutrition, appropriate exercise, and frequent eating are an effective strategy for losing weight. However the 3-Hour diet tries to be too popular at times. The book describes a method to pick appropriate portion sizes – rather than rigidly counting calories – but later goes on to restrict portion sizes to certain calories!

The 3-Hour Diet will be useful to many who are just beginning the journey of understanding nutrition and weight management – but it is only a beginning.

Many feel that the inclusion of so many processed foods is a sell-out – as healthy nutrition often includes only the most un-processed foods. Weight loss and nutrition are two separate but related issues. Fast food should always be a last-resort food – not a daily staple.

However for many people a diet like this is far more approachable than one that suddenly restricts food or calls for dramatic changes.

You probably already know the math: You have to cut 3,500 calories to drop one pound. To lose a healthy pound a week, that’s 500 calories a day! But you don’t have to deprive yourself or add an hour to your exercise routine to reach your weight loss goals. Here are 24 no-sweat tips for torching calories anytime, anyplace.
Quantum Weight Loss

At Breakfast

Make a trade. Swap your bagel for an English muffin to slash 220 calories, a glass of whole milk for skim to save 70 calories, and a three-egg omelet for one egg and two egg whites, or pork sausage for turkey sausage to cut about 125 calories each.

Measure portions. “It’s so easy to eat a whole cup of cereal rather than a half-cup serving,” says Susan Kleiner, RD, PhD, co-author of The Good Mood Diet and The Power Food Nutrition Plan. “Simply measuring out one serving can save you up to 200 calories.” Keep in mind that a cup of granola can have up to 600 calories, while a cup of high-fiber cereal has only about 120.

At Lunch

Move on your lunch hour. “A brisk 15-minute walk burns about 100 calories, and it gives you less time to eat,” says Marjorie Nolan, RD, CND, CPT and national spokesperson for the American Dietetic Association. Walk during your lunch for five days and burn 500 extra calories. Or try wearing a pedometer to measure out 10,000 steps a day, or about 5 miles—you’ll automatically burn 500 calories without even hitting the gym.

Order wisely. Use hummus or mustard instead of mayo, and a roll for sliced bread on your sandwich, and cut about 200 calories. Opt for a salad instead of fries to save another 300 calories for a total of 500 saved.

Chew your food. An easy way to slash calories is to slow down when you eat. Women who chewed at least 20 times before swallowing ate up to 70 calories less at mealtime, according to the American Journal of Clinical Nutrition. Since it takes 20 to 30 minutes for your body to register that you are full, researchers believe eating more slowly allows you to get to the point where you feel satiated on fewer calories than if you’re shoveling it in.

At Dinner

Downsize your plates. Rather than depriving yourself of food to drop pounds, simply use smaller plates. “People eat as much as is on their dish rather than the amount that their body actually needs,” says Jacob Teitelbaum, MD, author of Beat Sugar Addiction Now! “If you shrink the size of your dishes by a quarter, such as going from a 12-inch plate to a 9-inch plate, you’ll cut 500 calories without feeling deprived.” The research backs it up: People serving themselves ice cream in larger bowls ate 31 percent more than their counterparts eating from smaller bowls—and both groups reported feeling full, according to the American Journal of Preventative Medicine.

Wait to have seconds. Once you’ve downsized to smaller plates, Dr. Teitelbaum recommends giving yourself permission to eat as much as you want, but waiting 20 to 30 minutes to have a second helping. “You almost never go back because you’ve given your body time to register that you’re feeling full, so you easily save hundreds of calories.” Even if you do opt for seconds, you’re likely to get a smaller helping because hunger hormones won’t be driving your appetite.

Slim your sides. Instead of dipping chips in fat-packed sour cream, try serving baked tortilla chips or whole wheat pita wedges with low-fat refried beans and chunky salsa. It’s a tasty way to sneak in an extra serving of veggies and cut 109 calories. Or trade a side of traditional potato salad for sliced tomatoes, cucumbers, and onions tossed with fat-free Italian dressing to cut 258 calories.

Eating Dessert

Make over your sweets. You won’t miss belt-busting peach cobbler or banana splits if you have other good-for-you options to choose from. Save up to 400 calories by making grilled fruit kebabs: Slice one peach and one small banana into quarters, thread four pieces fruit each onto two skewers, and brush with one tbsp honey each. Grill each side for about 4 minutes, or until flesh is tender but still firm. Sprinkle on cinnamon. Or, if you want to have your cake, cut a thin slice of pound cake, layer on berries and top with light whipped cream for a decadent-tasting dessert for less than 150 calories.

Skip the oil. Replace oil with applesauce when baking to slim down. “Two tablespoons of oil is about 200 calories, while 4 tablespoons of applesauce is only 40—you have to double the applesauce to oil ratio in recipes,” says Marjorie Nolan, RD, CND, CPT and national spokesperson for the American Dietetic Association. Make the switch and save 160 calories without sacrificing flavor, and top your treat with a dollop of light whipped cream instead of premium vanilla ice cream to save another 220 calories.

Dining Out

Leave something on your plate. Restaurant dishes are up to 250 percent larger than a normal portion size, so simply leaving a quarter of the meal on your plate can save up to 500 calories. Leaving a few bites of any potato or noodle dish cuts up to 100 calories alone because they almost always have added butter, oils or other fats, says Susan Kleiner, RD, PhD, co-author of The Good Mood Diet. And skip the extras, such as the bread basket, to keep from breaking your calorie bank. Or, if you’re at a Mexican restaurant, forgo the tortilla chips—they can equal more calories than your entire meal.

Know before you go. Before you head to a chain restaurant, check out the nutrition information on its web site – diners who saw nutrition information before selecting their meals ate an average of 52 fewer calories, according to the American Journal of Public Health. Moreover, you’ll be able to make smarter meal choices. Instead of having Chili’s Steak and Portobello Fajitas for 1130 calories, you can choose Chili’s Classic Chicken Fajitas for just 360 calories—a savings of almost 800!

At the Office

Take a stand. “You can burn up to an extra 500 calories a day without doing a lot of activity simply by standing rather than sitting,” says John Timmerman, a certified personal trainer at Trillium Fitness in Syracuse, New York. “It can make the difference between burning 120 calories an hour versus 60 calories.” If you can’t get away from your desk, try standing to make a phone call or read a report. Even shutting your office door to squeeze in 5 minutes of pushups or jumping jacks can burn another 50 calories.

Have a ball. “Trading your desk chair for a stability ball helps you burn extra calories because you’re forced to use your core muscles to stay stable,” says Marjorie Nolan, RD, CND, CPT and national spokesperson for the American Dietetic Association. “You could burn up to 350 extra calories over an eight-hour workday while helping to tone your stomach and boost circulation.”
Drink up. It’s no secret that swapping water for soda can save you hundreds of calories—about 300 a day if you drink two cans. But drinking 20 to 60 ounces of water daily might also help boost your metabolism so you burn even more calories, says Greta Blackburn, founder of FitCamps and co-author of the new book, The Immortality Edge. “If you’re not getting enough water, your kidneys turn to your liver for help, which takes away from your fat-burning ability and slows metabolism.” To make water more appealing, try adding sliced cucumbers, or low-calorie flavor packets that offer fizz and a shot of vitamins, such as the new orange-flavored eBoost.

Watching TV

Don’t eat and watch. “People who snack in front of the television consume an average of 288 extra calories a day because they’re eating mindlessly,” says Dr. Teitelbaum. If you want to snack, turn off the TV, serve yourself on a dish, and really pay attention to what you’re putting in your mouth to slash calories.

Try commercial cardio. “Doing some kind of cardio, such as jumping rope or jogging in place, burns about 10 calories a minute,” says Marjorie Nolan, RD, CND, CPT and national spokesperson for the American Dietetic Association. “If you watch an hour of TV a night and add cardio moves during the 10 commercial breaks that typically air, you could blast up to 300 extra calories without missing your favorite shows.” Adding “commercial cardio” and nixing mindless snacking cuts more than 500 calories.

On a Saturday

Sleep in. “Studies show people who get less than 6 hours of sleep eat up to 300 calories more during the day because a lack of sleep triggers the production of the hunger hormone, ghrelin,” says Marjorie Nolan, RD, CND, CPT and national spokesperson for the American Dietetic Association. Each extra hour of sleep could save you 100 calories. So don’t set your alarm on Saturday, and if you snooze, you lose.

Clean house. Spend 2 hours getting organized by cleaning your garage or vacuuming and dusting the house to slash about 408 calories. Wear extra layers and switch the hands you use to sweat even more.

Get foot loose. Go out with your friend and move to some live music, or just blast your favorite tunes and dance around your house. Rocking out like this for an hour torches 445 calories—and you’ll be having fun so it won’t feel like exercise.

Go for a ride. Biking is great impact-free cardio—plus you have to engage your core muscles to stay balanced. One hour of biking at an easy pace blasts 272 calories—pedal just twice a week, and that’s more than 6 pounds dropped in a year. To find a bike trail near you, check out traillink.com.

Run some errands. Spend an afternoon food shopping and unloading groceries to burn close to 500 calories. Cook dinner to burn 136 more.
During Your Workout

Switch it up. You can burn up to an additional 250 calories in a half-hour, or 500 in an hour, by incorporating intervals versus exercising at the same pace, says Nolan. Whether you’re swimming laps, running, riding a stationary bike, or using the treadmill, you can increase the calorie burn by picking up the pace to the point where you are so out of breath that you can’t even talk for 30 seconds, then slow down for one and half minutes to recover. “You know you’re doing the 30-second pushes right when you’re grunting or you want to scream,” says Blackburn. Start with a 5-minute warm up, repeat these 30-second intervals eight times, and then recover for 10 minutes.

Take 15. “Even if you’re really pressed for time, you can usually find 15 minutes in your day to exercise,” says Nolan. For the days when you don’t have time to spare, try doing three 5-minute circuits using free weights. “The key is to get your heart rate up while using as many muscle groups as possible to torch up to 250 calories in just 15 minutes.” If you can find two 15-minute chunks in your day to do these moves, you can blast up to 500 calories. Do three sets of this circuit:

90 Seconds: Squat with a bicep curl, and stand to go straight into an overhead shoulder press. Repeat. 90 Seconds: Lunge forward with right leg while raising weights out to side to shoulder level, hold for one second, bring leg back and arms down to return to starting position. Alternate legs and repeat. 120 Seconds: Do a row while standing on right leg to engage your core muscles, repeat for one minute then switch to left leg.

Pick Pistachios

Researchers from University of Eastern Illinois say that when people eat Pistachios twice a week, they’re less likely to gain weight than those who don’t. There are a group of special fatty acids in nuts that have very positive effects on blood flow. People who eat just a small handful of nuts each week will have dramatically less heart attacks.

In a nutshell, the study also found that people who snacked on in-shell pistachios ate 50 percent less than those who ate the shelled kind, yet they reported feeling just as full and satisfied.

Slice Your Food

Can good manners help you slim down? Exhibit A for why table manners ought to make a comeback: Cutting your food into smaller portions slows down your food intake, and it also visually tricks you to think that you’re eating more. Researchers from Japan’s National Food Research Institute found that people thought piles of sliced meats and veggies were 27 percent larger than when the food
was kept in one piece. Satiety is affected by visual cues, so making your portions appear larger will help you feel satisfied with less. Research has found that simply using a smaller plate will help to trick the mind into believing it has eaten everything as our parents taught us. And the starving children in India are still starving no matter how fat you get. So cleaning your plate is not helpful to the children of India or to you.

Weigh Yourself Daily, Your Scale is a powerful biofeedback device.

Think you can guesstimate how well you’re losing weight? Study after study shows that regularly stepping on the scale can help you drop pounds. How much more weight? People who log weekly and daily weigh-ins lose about 12 to 18 pounds more than those who check less frequently, concludes a review study in the International Journal of Behavioral Nutrition and Physical Activity.

Just Add Flax

Sprinkle this healthy extra on your oatmeal, casserole, or soup for a light, nutty kick, says Sari Greaves, RD, spokesperson for the American Dietetic Association and Nutrition Director at Step Ahead Weight Loss Center in Bedminster, NJ. The extra fiber will help fill you up for only 35 calories a tablespoon, and you’ll get the added benefits of heart-healthy omega-3 fatty acids. Fiber helps to stimulate the brush border effect and increase nutritional absorption as well as increase motility of foods and detox of bowels.

Dress Down

Take advantage of Casual Friday. Relaxation ad not trying to be someone you are not helps reduce the psychological need to eat and increase the need to do. A University of Wisconsin, La Crosse study found that people who wear jeans to work take 491 more steps a day than those in business wear. How many calories could you burn if you walked for 30 minutes a day?

Brush Immediately After Dinner

Tap into years of Pavlovian training (watch videos of Pavlov’s theories), and brush your teeth soon after you’ve finished supper. Traditionally, brushing your teeth is a signal to stop eating, explains...
Blatner, so you’re primed to resist after-hours snacking. The essence of peppermint has been reported to suppress appetite, and cleaning your chompers with strong-tasting toothpaste may help distract your taste buds from craving another flavor, and it dramatically decrease your visits to the dentist.

Add Air

Whipped versions of classic foods contain more air per volumetric unit, so you’re eating fewer calories per serving. (Bing: Can high-water foods help?) Choose whipped yogurt over the regular kind (save 30 calories) or whipped butter over sticks (save 50 calories). But remember, this doesn’t mean whipped cream is a health food.

Make Your Own Salad Dressing

Bottled dressings can be a nutritional nightmare—even 2 tablespoons of blue cheese dressing packs about 140 calories and 14 grams of fat. Instead, mix together a quick dressing that’s 2 parts lemon juice to 1 part oil. (Bing: What’s the calorie count for your favorite dressing?) Pour your homemade vinaigrette into a spray bottle and spritz on your salad for extra portion control.

Prof. Nelson’s salad Oil: to get all of your fatty acids you must use cold processed oils of many types. Blend sesame, safflower, soybean, sunflower, olive, and avocado oil in equal parts, to get some of the high end fatty acids soak finely crushed nutmeg, cloves, mustard seed and parsley in canola oil or sesame oil. Blend this into the oil and this will make a fine source of all your fatty acids. If you can get nutmeg, parsley, mustard, or clove oil all the better then you won’t have to make it.

Try Acupressure on Your Ear

Place your hunger on hold: The next time you have a hankering for a Mars bar, take your thumb and forefinger and squeeze The tragus the flap of skin that juts out by your ear canal (the tragus not your earlobe). Activating this pressure point may help curb cravings, says Blatner.
Switch Seats at the Dinner Table
Cornell researchers examined the eating habits of diners at a Chinese buffet and found that the fattest patrons tended to sit facing the serving area, while the skinniest sat with their backs to the food. Just seeing that you can get seconds may encourage you to eat more, so sit strategically during mealtime. Same goes for when you’re mixing and mingling at a party—talk facing away from the tables of food. Need more tips on how to avoid overeating at a party?

Trade Mayonnaise for Hummus
Hold the mayo and slap on some hummus instead, advises Greaves. The chickpea spread is just as creamy as mayonnaise, but you’ll save yourself about 70 calories per tablespoon.

Place a Measuring Cup in Your Pantry, under do not over do
Rather than eyeball portions, place a measuring cup in your pantry so that you’ll know exactly how much you’re doling out, recommends Blatner. Keep a serving of cereal to one cup, a portion of dry macaroni to ¼ cup. Check out these portion size examples.

Phone a Friend, Network instead of eating
Reach for the phone, not the potato skins, the next time you’re feeling blue. Emotional eating can spiral out of control really fast, so instead of turning towards food for a pick-me-up, dial a friend to vent or schedule some Frisbee to blow off some steam. (Bing: Tips on how controlling emotional eating.)
Lose Weight without Feeling Deprived!

The old way to a flat belly involved nothing but cardio, counting calories, and control. The new thinking: Relax and live a little! You’re more likely to stick to a plan that allows you some indulgences and actually fits in your life. Plus, recent research shows that you can shrink your stomach while drinking wine, eating carbs, and logging less time at the gym. These six gut-busting strategies will help you melt away the pounds so that you can say goodbye to belly fat for good.

Have a Glass of Wine with Dinner

Tossing back little booze doesn’t doom you to a beer belly, says Harvard School of Public Health researchers. In fact, you might experience the opposite. Although wine, beer, and cocktails have long been synonymous with “empty calories,” a recent study found that women who drank one to two servings of alcohol a day, regardless of type, gained less weight and were less likely to become overweight compared to their teetotaling counterparts.

You’re not going to lose weight drinking, but this attenuating effect may be explained by a combination of factors. Women tend to cut back on other parts of their diet when they drink, and there’s evidence that their bodies break down alcohol inefficiently, which can burn a few more calories, says Lu Wang, MD, PhD, lead researcher and instructor of medicine at Brigham and Women’s Hospital.

This isn’t a green light for adopting liquid diet, however. Moderation is key, and the weight loss effects of light drinking probably don’t extend to men, as guys usually eat just as much, if not more, when they drink.

Skip Situps

Science confirms what you’ve long suspected: Those hundreds of sit-ups before bed aren’t getting you any closer to a toned stomach. Not only do crunches put your lower back at risk for injury, but they work only a tiny portion of your core. For a smarter, more effective abs routine, try the Swiss-ball rollout and the Swiss-ball pike. A new Journal of Orthopedic and Sports Physical Therapy study compared ten different abs exercises and found that your core works harder performing these two moves than any other. Still, abs-centric workouts only get you so far. They primarily strengthen and tone your muscles, not decrease your waist size, so before you can reveal your six-pack, you’ll have to remove the layer of fat jiggling on your stomach. While it’s tempting to just amp up your cardio and watch your number of calories burned climb, take the time to hit up the weight room, too. After all, research suggests that resistance training may be more effective at torching fat than aerobic exercise. Melt your gut with our belly-busting routines for men and women.

Shorten Your Cardio Workout

The tortoise got it all wrong—slow and steady doesn’t always win the race. A 2009 study found that people who did 30 minutes of intense cardio, five days a week, lost more visceral fat than those who exercised for 50 minutes a session at a moderate pace, even though they burned the same number of total calories at the gym. “It’s kind of like, if you get in an automobile, and you drive faster, you burn more fuel in a shorter period of time,” explains lead researcher Robert H. Coker, PhD, associate professor at the University of Arkansas for Medical Sciences. Your body may burn more energy after an intense workout, since stressed muscles need more fuel to repair and replenish.

You don’t have to kill yourself on the stationary bike to get the benefits of high-intensity workouts, either. The study participants in the high-intensity group were still able to talk and hold brief conversations while exercising.

Get More Sleep

It’s called beauty sleep for good reason. Canadian researchers looked at the relationship between sleep and weight gain over 6 years and found that people who slept 5 to 6 hours a night gained about 4.5 pounds more than those who rested for 7 to 8 hours. Light snoozers were also 27 percent more likely to develop obesity than regular sleepers.

Rest regulates your hunger hormones ghrelin and leptin, and lack of shut-eye simultaneously stimulates your appetite while suppressing feelings of satiety. Stop giving sleep the short shrift and try turning off your electronics and turning down your thermostat. Optimal temperatures for sleep hover around 60°F to 68°F.

Eat 3 Servings of Dairy Every Day

Dairy occasionally gets a bad rap for being fatty, but eating pro-biotic yogurt, pro-biotic milk may help you lose that stubborn spare tire. An International Journal of Obesity study found that that people who were on a reduced-calorie diet and ate about 3 cups of yogurt a day for 12 weeks lost more weight than those who cut calories and took calcium pills. What’s more, the extra chub was cinched primarily from their stomachs: Yogurt eaters lost about an inch and a half from their waists, while the calcium pill poppers lost less than a quarter of an inch.

“Fat cells make their own cortisol, which begets more belly fat,” explains Michael B. Zemel, professor of nutrition and medicine and director of the Nutrition Institute at the University of Tennessee, Knoxville. “There are components in milk and yogurt, such as calcium, that interrupt that cycle, reducing the drive to store more fat in the belly.” Dairy products are also sources of conjugated linoleic acid, another belly fat-busting compound.
Eat Carbs (But Choose Wisely) eat complex natural carbs not processed

Studies show that you don’t have to go all-Atkins in order to lose your gut. On the contrary, noshing on the right carbs can actually help you lose weight. A 2009 Journal of Nutrition study found that those who stocked up on whole grains (dark bread, brown rice, popcorn, bulgur wheat, couscous) and cereal fiber tended to have less overall body fat and belly fat than those who ate less of the stuff. We need fiber.

Adding more whole grains to your diet may encourage you to cut back on other foods. Whole grains are loaded with fiber, which adds bulk to your meals without adding calories, and are harder to digest. Translation: You’ll feel fuller, longer eating whole grains instead of the refined kind.

Prof. Nelson’s better butter:

For those of you who are not ready to give up the taste of butter, this is an excellent way to reduce your saturated fats. It combines the saturated fats in butter with the polysaturated fats in sunflower oil. By using cold pressed oil, you are giving yourself the essential fatty acids your body needs so much. If you eat the same amount of Better Butter as plain butter, you are cutting your saturated fat intake by half.

- ¼ pound all natural butter at room temperature
- 1/3 cup cold pressed oil combo from above

Blend with a fork and refrigerate. Makes ¼ pound. It will soften quickly in the heat so use fresh from the fridge and replace into fridge quickly when done.

Prof. Nelson’s SALSA: take one cup (mixed germinated soybeans, jackbeans, peas, snow peas, red kidney bean) and one cup onion, two cups tomatoes, and one cup of fresh sprouts. Season with paprika or other spice to taste. Put into a food processor and mix into a salsa. Use corn chips unless there is candida or fungus (candida grows best on or with corn meal). Use oat or wheat bran crackers to eat this nutritious and immune stimulating meal.
The Women's Health Diet isn’t about eating less; it’s about eating more—more nutrient-dense food, to crowd out the empty calories and keep you full all day. That’s important, because restricting food will kill your metabolism. It sends a signal to your body that says, "I’m starving here!" And your body responds by slowing your metabolic rate to hold on to existing energy stores. (Video: See how to calculate perfect portion sizes.)

What’s worse, if the food shortage (meaning, your crash diet) continues, you’ll begin burning muscle tissue, which just gives your enemy, visceral fat, a greater advantage. Your metabolism slows further, and fat goes on to claim even more territory.

Go to Bed Earlier

A study in Finland looked at sets of identical twins and discovered that in each set of siblings, the twin who slept less and was under more stress had more visceral fat.

Eat More Protein

Your body needs protein to maintain lean muscle. In a 2006 article in the American Journal of Clinical Nutrition, researchers argued that the current recommended daily intake for protein, 0.36 grams per pound of body weight, is woefully inadequate for anyone doing resistance training and recommend that women get between 0.54 and 1 gram per pound of body weight. (If you want to lose weight, use your goal body weight as your guide.)

Add a serving, like 3 ounces of lean meat, 2 tablespoons of nuts, or 8 ounces of low-fat yogurt, to every meal and snack. Plus, research shows that protein can up post-meal calorie burn by as much as 35 percent.

Go Organic When You Can

Canadian researchers report that dieters with the most organo-chlorines (pollutants from pesticides, which are stored in fat cells) experience a greater-than-normal dip in metabolism as they lose weight, perhaps because the toxins interfere with the energy-burning process. In other words, pesticides make it harder to lose pounds.

Of course, it’s not always easy to find—or afford—organic produce. But in general, conventionally grown items that you peel—avocado, grapefruit, bananas—are fine. But choose organic when buying celery, peaches, strawberries, apples, blueberries, nectarines, sweet bell peppers, spinach, kale and collard greens, cherries, potatoes, and imported grapes; they tend to have the highest levels of pesticides.
Get Up, Stand Up

Whether you sit or stand at work may play as big a role in your waistline as your fitness routine. Missouri University researchers discovered that inactivity (4 hours or more) causes a near shut-down of an enzyme that controls fat and cholesterol metabolism. To keep this enzyme active and increase your fat-burning, break up long periods of downtime by standing up—for example, while talking on the phone.

Drink Cold Water

German researchers found that drinking 6 cups of cold water a day (that’s 48 ounces) can raise resting metabolism by about 50 calories daily—enough to shed 5 pounds in a year, with essentially zero additional effort. The increase may come from the work it takes to heat the water to body temperature.

Eat the Heat

It turns out that capsaicin, the compound that gives chile peppers their heat, can also fire up your metabolism. Eating about 1 tablespoon of chopped peppers (red or green) boosts your sympathetic nervous system (responsible for your fight-or-flight response), according to a study published in the Journal of Nutritional Science and Vitaminology. The result: a temporary metabolism spike of about 23 percent. Stock up on chile peppers to add to salsas, and keep a jar of red-pepper flakes on hand for topping pizzas, pastas, and stir-fries.

Rev Up in the Morning

Eating breakfast jump-starts your metabolism so it’s no accident that those who skip this meal are 4 1/2 times as likely to be obese. The heartier your first meal is, the better. In one study published by the American Journal of Epidemiology, volunteers who got 22 to 55 percent of their total calories at breakfast gained only 1.7 pounds on average over 4 years. While those who got zero to 11 percent gained nearly 3 pounds.
Drink Coffee or Tea

Caffeine is a central nervous system stimulant, so your daily java jolts can rev your metabolism by 5 to 8 percent—burning about 98 to 174 calories a day. A cup of brewed tea can raise your metabolism by 12 percent, according to one Japanese study. Researchers believe antioxidants called catechins in tea provide the boost.

Fight Fat with Fiber

Research shows that some fiber can fire up your fat burn by as much as 30 percent. Studies find that those who eat the most fiber gain the least weight over time. Aim for about 25 grams a day—the amount in about three servings each of fruits and vegetables.

Eat Iron-Rich Foods

Iron is essential for carrying the oxygen your muscles need to burn fat. Unless you restock your stores, you run the risk of low energy and a sagging metabolism. Shellfish, lean meats, beans, fortified cereals, and spinach are excellent sources.

Get More Vitamin D

Vitamin D is essential for preserving muscle tissue. Get 90 percent of your recommended daily intake (400 IU) in a 3.5-ounce serving of salmon. Other good sources: tuna, fortified milk and cereal, and eggs.

Eat Watermelon

The amino acid arginine, abundant in watermelon, might promote weight loss, according to the Journal of Nutrition. In a laboratory study, adding this amino acid to the diet of obese mice...
enhanced the oxidation of fat and glucose. Snack on watermelon and other arginine sources, such as seafood, nuts, and seeds, year-round.

Stay Hydrated
All of your body’s chemical reactions, including your metabolism, depend on water. If you are dehydrated, you may be burning up to 2 percent fewer calories, according to researchers at the University of Utah. Drink at least eight to twelve 8-ounce glasses a day.

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Understanding Your BMI

Body mass index (BMI), which was established in 1998 by The National Institute of Health, estimates a person's body fat and health risks. For most people, BMI provides a more accurate estimate of body weight-related health risks over standard height and weight tables or weight alone. The BMI estimates your percentage of body fat using your height and weight. Based on this estimate, if your BMI numbers are at or above 25, you are considered unhealthy and could be at an increased risk of having higher blood fats, higher blood pressure, diabetes, and risk of heart disease and stroke. Please keep in mind that BMI is only a guide and is not perfect. BMI does not consider factors such as bone or muscle mass to provide a more accurate assessment of overall health. For example, if you are physically fit, your BMI may be high or if you have low muscle mass, BMI may underestimate your body fat. Also, if you have excess abdominal fat, BMI may inadequately evaluate health risks. Therefore, please use the BMI as an estimate only of your body fat and health risks. We recommend you consult with your doctor to receive a more accurate evaluation.

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Body mass index

A graph of body mass index is shown above. The dashed lines represent subdivisions within a major class. For instance, the "Underweight" classification is further divided into "severe", "moderate", and "mild" subclasses.

Based on World Health Organization data here.

The body mass index (BMI), or Quetelet index, is a heuristic proxy for human body fat based on an individual's weight and height. BMI does not actually measure the percentage of body fat. It was invented between 1830 and 1850 by the Belgian polymath Adolphe Quetelet during the course of developing "social physics".[1] Body mass index is defined as the individual's body weight divided by the square of his or her height. The formula universally used in medicine produces a unit of measure of kg/m2. BMI can also be determined using a BMI chart, which displays BMI as a function of weight (horizontal axis) and height (vertical axis) using contour lines for different values of BMI or colors for different BMI categories.

\[
\text{BMI} = \frac{\text{mass (kg)}}{(\text{height (m)})^2}
\]

Imperial/US Customary units

\[
\text{BMI} = \frac{\text{mass (lb) \times 703}}{(\text{height (ft)})^2}
\]

\[
\text{BMI} = \frac{\text{mass (st) \times 9840}}{(\text{height (in)})^2}
\]

METABOLISM FOR ENERGY AND THE RESPIRATORY QUOTIENT

Introduction: Animal cells obtain energy in the form of ATP by oxidizing food molecules through the process of respiration. The hydrolysis of ATP supplies energy needed for cellular processes, such as the transport of molecules or cellular movement. Carbohydrates and fatty acids are the most important fuels for generating ATP in animal cells. Respiration in animal cells depends on oxygen. Electrons from the chemical bonds of the fuel source combine with oxygen and hydrogen ions to form water and carbon dioxide. Cells couple this reaction to the production of ATP.

Importance: We can understand a great deal about animal metabolism by comparing the volume of oxygen consumed by an organism to the volume of carbon dioxide produced. These volumes will change depending on the energy source the animal is using.

Question: How can we quantify metabolism? How does the energy source affect the volume of O2 consumed and volume of CO2 produced? How do they differ among animals and how are they affected by environmental conditions?
Variables:
- RQ: respiratory quotient
- Vc: volume of carbon dioxide released
- Vo: volume of oxygen consumed

Methods: One ratio that is particularly useful for understanding animal metabolism is the respiratory quotient. The respiratory quotient (RQ) measures the ratio of the volume of carbon dioxide (Vc) produced by an organism to the volume of oxygen consumed (Vo). This is represented by the following equation:

\[ RQ = \frac{V_c}{V_o} \]

This quotient is useful because the volumes of CO2 and O2 produced depend on which fuel source is being metabolized. Measuring RQ is a convenient way to gain information about the source of energy an animal is using. We can then compare the metabolism of animals under different environmental conditions by simply comparing RQ.

Carbohydrates, such as glucose, are an important source of fuel. The general formula for a carbohydrate is CnH2nOn. For example, if we take n = 6 we have the formula for glucose, C6H12O6. We can describe the metabolic reaction of a carbohydrate by the following equation:

\[ C_nH_{2n}O_n + nO_2 \rightarrow nCO_2 + nH_2O \]

Now compare the number of molecules of O2 to the number of molecules of CO2. We have a ratio of 1 to 1, since there are n O2 and n CO2 molecules.

In order to find the respiratory quotient, we must convert the number of molecules into gas volumes. At standard temperature (273 K) and pressure (760 mmHg), Avogadro's Law says the number of molecules in a given volume of any gas is constant. So we can convert number of molecules to volume by dividing by Avogadro's number (1019 molecules / cm3):

\[ \text{Volume} = \frac{\text{Number of molecules}}{10^{19}} \]

However, since the conversion factor appears in both the numerator and denominator, we can simply use the number of molecules as a substitute for volume. Therefore we can calculate the respiratory quotient for a carbohydrate under standard conditions as

\[ RQ = \frac{V_c}{V_o} = 1 \]

For glucose, RQ = 6 / 6 = 1.

In humans, the use of fats as a fuel source is quantitatively more important than glucose. The general formula for a saturated fat is (CH2O)3(CH2)n(CO2H)3. For example, if we take n = 17 we have the formula for the fat glycerol tristearate. We can simplify the formula for a fat to write the following respiration equation:

\[ C_3n+6H_{6n+9}O_9 + (4.5n + 3.75)O_2 \rightarrow (3n + 6)CO_2 + (3n + 4.5)H_2O \]

We can now calculate the respiratory quotient for a saturated fat. Since n is generally quite large, we will approximate the respiratory quotient as
RQ = \frac{(3n + 6)}{(4.5n + 3.75)} \rightarrow RQ = 0.667

Therefore the metabolism of fat consumes a great deal more oxygen relative to the production of carbon dioxide than the metabolism of carbohydrates.

Example: The value of the respiratory quotient clearly depends on the fuel source being metabolized. By measuring RQ, we can gain insight into properties of animal metabolism under different environmental conditions.

For endotherms, metabolic heat production depends on heat exchange with the environment. Solar radiation can produce physiological effects in small animals, even those possessing insulating coats. One way to determine how metabolism is affected by solar radiation is to look at the respiratory quotient at different air temperatures (Walsberg et al 1997).

First Walsberg et al measured changes in oxygen consumption and carbon dioxide production for the Siberian hamster approximately 1 hour after food access was removed.

The type of food given the hamster did not change. Their graph of average consumption or production is reproduced below. The error bars give the 95% confidence interval.

Oxygen consumption and carbon dioxide production both declined with increasing air temperature. Notice that the slope for oxygen is somewhat steeper than the slope for carbon dioxide. This implies that the rate of oxygen consumption decreased more strongly with increasing temperature than the rate of carbon dioxide production.

We are less interested in the fact that these rates decrease than in how they affect the respiratory quotient. We can see how these volumes of oxygen and carbon dioxide affect the respiratory quotient by calculating RQ and plotting the values.

Interpretation: We can see that RQ was generally around 0.76 for temperatures below 20° C. Above this temperature, however, the respiratory quotient increased slightly. This is not surprising when we consider the graph of oxygen consumption and carbon dioxide production. At higher temperatures, the rates become more similar, so we expect RQ to get closer to 1.

We can interpret this change in RQ as a change in the energy sources the Siberian hamster uses as temperature increases. At higher temperatures, the hamster is metabolizing about 55% carbohydrates and 45% lipids. At lower temperatures, however, the animal relies more heavily on lipid stores (about 70%) than on the carbohydrates provided by its diet. At lower temperatures, this animal may have increased metabolic demands and rely on body lipid stores.

Conclusions: The energy source an animal is using could be very difficult to measure. Because the chemical content of carbohydrates and lipids is different, the way they are metabolized is different. However, using general rules about oxygen consumption and carbon dioxide production allow us to gain insight into this very thing. It is clear that the respiratory quotient is a fairly simple and informative way to quantify aspects of animal metabolism.
Additional Questions:

1. The respiratory quotient for some animals can change depending on their activity. At rest, a Desert Locust has an RQ of about 1.0. During flight, however, the RQ decreases to about 0.7. How would you interpret this?

2. In rare circumstances, proteins may be used as a source of energy. Proteins are made of amino acids and generally have the structure NH2COOHCH2. The respiration equation for protein is generally given by the following:

\[ \text{C}_2\text{H}_5\text{O}_2 + (x)\text{O}_2 \rightarrow (y)\text{CO}_2 + (z)\text{H}_2\text{O} \]

Balance this chemical equation and calculate the respiratory quotient for the metabolism of a protein.

3. In the Siberian hamster experiment, Walsberg et al. found the hamster’s diet consisted of 26.6% protein, 4.8% lipid, and 68.6% carbohydrate. What would you estimate the respiratory quotient to be if the animal was metabolizing energy sources in direct proportion to their abundance in the diet? How does this compare to the RQ actually found?

Sources:

Cellular respiration, also known as ‘oxidative metabolism’, is one of the key ways a cell gains useful energy. It is the set of the metabolic reactions and processes that take place in organisms’ cells to convert biochemical energy from nutrients into adenosine triphosphate (ATP), and then release waste products. The reactions involved in respiration are catabolic reactions that involve the oxidation of one molecule and the reduction of another.

Nutrients commonly used by animal and plant cells in respiration include glucose, amino acids and fatty acids, and a common oxidizing agent (electron acceptor) is molecular oxygen (O2). Bacteria and archaea can also be lithotrophs and these organisms may respire using a broad range of inorganic molecules as electron donors and acceptors, such as sulfur, metal ions, methane or hydrogen. Organisms that use oxygen as a final electron acceptor in respiration are described as aerobic, while those that do not are referred to as anaerobic[1].

The energy released in respiration is used to synthesize ATP to store this energy. The energy stored in ATP can then be used to drive processes requiring energy, including biosynthesis, locomotion or transportation of molecules across cell membranes.
Aerobic respiration (red arrows) is the main means by which both plants and animals utilize energy in the form of organic compounds that was previously created through photosynthesis (green arrow).

Aerobic respiration requires oxygen in order to generate energy (ATP). Although carbohydrates, fats, and proteins can all be processed and consumed as reactant, it is the preferred method of pyruvate breakdown from glycolysis and requires that pyruvate enter the mitochondrion in order to be fully oxidized by the Krebs cycle. The product of this process is energy in the form of ATP (Adenosine Triphosphate), by substrate-level phosphorylation, NADH and FADH2.

Simplified reaction:

<table>
<thead>
<tr>
<th>( C_6H_{12}O_6 \text{(aq)} + 6 O_2 \text{(g)} \rightarrow 6 CO_2 \text{(g)} + 6 H_2O \text{(l)} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \Delta G = -2880 \text{ kJ per mole of } C_6H_{12}O )</td>
</tr>
</tbody>
</table>

The negative \( \Delta G \) indicates that the products of the chemical process store less energy than the reactants and the reaction can happen spontaneously; in other words, without an input of energy.

The reducing potential of NADH and FADH2 is converted to more ATP through an electron transport chain with oxygen as the "terminal electron acceptor". Most of the ATP produced by aerobic cellular respiration is made by oxidative phosphorylation. This works by the energy released in the consumption of pyruvate being used to create a chemiosmotic potential by pumping protons across a membrane. This potential is then used to drive ATP synthase and produce ATP from ADP.

Biology textbooks often state that 38 ATP molecules can be made per oxidised glucose molecule during cellular respiration (2 from glycolysis, 2 from the Krebs cycle, and about 34 from the electron transport system). However, this maximum yield is never quite reached due to losses (leaky membranes) as well as the cost of moving pyruvate and ADP into the mitochondrial matrix and current estimates range around 29 to 30 ATP per glucose.

Aerobic metabolism is 19 times more efficient than anaerobic metabolism (which yields 2mol ATP per 1mol glucose). They share the initial pathway of glycolysis but aerobic metabolism continues with the Krebs cycle and oxidative phosphorylation. The post glycolytic reactions take place in the mitochondria in eukaryotic cells, and in the cytoplasm in prokaryotic cells.

ESTIMATING YOUR CALORIE NEEDS

Let’s take a look at how many calories your body needs each day. First, you need to calculate your ideal weight.

Second, determine your exercise level and then multiply your ideal body weight with the number corresponding to your exercise level:

- If you are totally inactive, multiply your ideal body weight by 11.
- If you exercise two to three times a week, multiply your ideal weight by 13.
- If you exercise four to five times a week, multiply your ideal weight by 15.
- If you exercise six to seven times a week, multiply your body weight by 18.

Now you know how many calories your body needs each day. From here, you can easily figure out how much fat you can eat. Most nutritionists recommend that your limit daily intake of fat to 30 per cent of your total calories. However, if you want to lose weight, limit your daily fat intake to 20 per cent of your total calories.

To help you with calculations, here is an example:

Diana’s ideal body weight is 150 pounds. She exercises two to three times a week, so ideal weight multiplied by the number that matches her activity level is 1950 (150 x 13 = 1950). The number of calories that her body needs each day, therefore, is 1950.

If we take 20 per cent of 1950, we get 390 (1950 x 0.20 = 390). To translate fat calories into fat grams, we need to divide 390 by 9 because one gram of fat is equal to 9 calories. In order to lose weight, Diana will need 43 grams of fat per day (390/9=43).
### Breads & Cereals

<table>
<thead>
<tr>
<th>Breads &amp; Cereals</th>
<th>Portion size *</th>
<th>per 100g (3.5 oz)</th>
<th>Energy Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bagel (1 average)</td>
<td>140 cals (45g)</td>
<td>310 cals</td>
<td>Medium</td>
</tr>
<tr>
<td>Biscuit digestives</td>
<td>86 cals (per biscuit)</td>
<td>480 cals</td>
<td>High</td>
</tr>
<tr>
<td>Jaffa cake</td>
<td>48 cals (per biscuit)</td>
<td>370 cals</td>
<td>Med-High</td>
</tr>
<tr>
<td>Bread white (thick slice)</td>
<td>96 cals (1 slice 40g)</td>
<td>240 cals</td>
<td>Medium</td>
</tr>
<tr>
<td>Bread wholemeal (thick)</td>
<td>88 cals (1 slice 40g)</td>
<td>220 cals</td>
<td>Low-med</td>
</tr>
<tr>
<td>Chapatis</td>
<td>250 cals</td>
<td>300 cals</td>
<td>Medium</td>
</tr>
<tr>
<td>Cornflakes</td>
<td>130 cals (35g)</td>
<td>370 cals</td>
<td>Med-High</td>
</tr>
<tr>
<td>Crackerbread</td>
<td>17 cals per slice</td>
<td>325 cals</td>
<td>Low Calories</td>
</tr>
<tr>
<td>Cream crackers</td>
<td>35 cals (per cracker)</td>
<td>440 cals</td>
<td>Low/portion</td>
</tr>
<tr>
<td>Crumpets</td>
<td>93 cals (per crumpet)</td>
<td>198 cals</td>
<td>Low-Med</td>
</tr>
<tr>
<td>Flapjacks basic fruit mix</td>
<td>320 cals</td>
<td>500 cals</td>
<td>High</td>
</tr>
<tr>
<td>Macaroni (boiled)</td>
<td>238 cals (250g)</td>
<td>95 cals</td>
<td>Low-calorie</td>
</tr>
<tr>
<td>Muesli</td>
<td>195 cals (50g)</td>
<td>390 cals</td>
<td>Med-high</td>
</tr>
<tr>
<td>Naan bread (normal)</td>
<td>300 cals (small plate size)</td>
<td>320 cals</td>
<td>Medium</td>
</tr>
<tr>
<td>Noodles (boiled)</td>
<td>175 cals (250g)</td>
<td>70 cals</td>
<td>Low-calorie</td>
</tr>
<tr>
<td>Pasta (normal boiled)</td>
<td>330 cals (300g)</td>
<td>110 cals</td>
<td>Low-calorie</td>
</tr>
<tr>
<td>Pasta (wholemeal boiled)</td>
<td>315 cals (300g)</td>
<td>105 cals</td>
<td>Low-calorie</td>
</tr>
<tr>
<td>Porridge oats (with water)</td>
<td>193 cals (350g)</td>
<td>55 cals</td>
<td>Low-calorie</td>
</tr>
<tr>
<td>Potatoes** (boiled)</td>
<td>210 cals (300g)</td>
<td>70 cals</td>
<td>Low-calorie</td>
</tr>
<tr>
<td>Potatoes** (roast)</td>
<td>420 cals (300g)</td>
<td>140 cals</td>
<td>Medium</td>
</tr>
<tr>
<td>Rice (white boiled)</td>
<td>420 cals (300g)</td>
<td>140 cals</td>
<td>Low-calorie</td>
</tr>
<tr>
<td>Rice (egg-fried)</td>
<td>590 cals</td>
<td>200 cals</td>
<td>High in portion</td>
</tr>
<tr>
<td>Rice (Brown)</td>
<td>405 cals (300g)</td>
<td>135 cals</td>
<td>Low-calorie</td>
</tr>
<tr>
<td>Rice cakes</td>
<td>28 Cals = 1 slice</td>
<td>373 Cals</td>
<td>Medium</td>
</tr>
<tr>
<td>Ryvita Multi grain</td>
<td>37 Cals per slice</td>
<td>331 Cals</td>
<td>Medium</td>
</tr>
<tr>
<td>Ryvita + seed &amp; Oats</td>
<td>180 Cals 4 slices</td>
<td>362 Cals</td>
<td>Medium</td>
</tr>
<tr>
<td>Spaghetti (boiled)</td>
<td>303 cals (300g)</td>
<td>101 cals</td>
<td>Low-calorie</td>
</tr>
</tbody>
</table>

### Calories

<table>
<thead>
<tr>
<th>Milk &amp; Dairy</th>
<th>Portion Size</th>
<th>Per 100g (3.5 oz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheese average</td>
<td>110 cals (25g)</td>
<td>440 cals</td>
</tr>
<tr>
<td>Cottage cheese</td>
<td>49 cals (40g)</td>
<td>96 cals</td>
</tr>
<tr>
<td>Cream cheese</td>
<td>200 cals (47g)</td>
<td>428 cals</td>
</tr>
<tr>
<td>Eggs (1 average size)</td>
<td>90 cals (60g)</td>
<td>150 cals</td>
</tr>
<tr>
<td>Ice cream</td>
<td>200 cals (111g)</td>
<td>180 cals</td>
</tr>
<tr>
<td>Milk whole</td>
<td>175 cals (250ml/half pint)</td>
<td>70 cals</td>
</tr>
<tr>
<td>Milk semi-skimmed</td>
<td>125 cals (250ml/half pint)</td>
<td>50 cals</td>
</tr>
<tr>
<td>Milk skimmed</td>
<td>95 cals (250ml/half pint)</td>
<td>38 cals</td>
</tr>
<tr>
<td>Trifle with cream</td>
<td>290 cals (1 trifle)</td>
<td>190 cals</td>
</tr>
<tr>
<td>Yogurt natural</td>
<td>90 cals (1 small pot)</td>
<td>60 cals</td>
</tr>
<tr>
<td>Yogurt reduced fat</td>
<td>70 cals (1 small pot)</td>
<td>45 cals</td>
</tr>
</tbody>
</table>

### Breads & Cereals

<table>
<thead>
<tr>
<th>Breads &amp; Cereals</th>
<th>Portion Size</th>
<th>Per 100g (3.5 oz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bagel</td>
<td>140 cals (45g)</td>
<td>310 cals</td>
</tr>
<tr>
<td>Bread white (thick slice)</td>
<td>96 cals (1 slice 40g)</td>
<td>240 cals</td>
</tr>
<tr>
<td>Bread wholemeal (thick)</td>
<td>88 cals (1 slice 40g)</td>
<td>220 cals</td>
</tr>
<tr>
<td>Noodles (boiled)</td>
<td>175 cals (250g)</td>
<td>70 cals</td>
</tr>
<tr>
<td>Pasta (normal boiled)</td>
<td>330 cals (300g)</td>
<td>110 cals</td>
</tr>
<tr>
<td>Pasta (wholemeal boiled)</td>
<td>315 cals (300g)</td>
<td>105 cals</td>
</tr>
<tr>
<td>Porridge oats (with water)</td>
<td>193 cals (350g)</td>
<td>55 cals</td>
</tr>
<tr>
<td>Potatoes** (boiled)</td>
<td>210 cals (300g)</td>
<td>70 cals</td>
</tr>
<tr>
<td>Potatoes** (roast)</td>
<td>420 cals (300g)</td>
<td>140 cals</td>
</tr>
<tr>
<td>Rice (white boiled)</td>
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<td>140 cals</td>
</tr>
<tr>
<td>Rice (egg-fried)</td>
<td>590 cals</td>
<td>200 cals</td>
</tr>
<tr>
<td>Rice (Brown)</td>
<td>405 cals (300g)</td>
<td>135 cals</td>
</tr>
<tr>
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<td>373 Cals</td>
</tr>
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<td>Ryvita Multi grain</td>
<td>37 Cals per slice</td>
<td>331 Cals</td>
</tr>
<tr>
<td>Ryvita + seed &amp; Oats</td>
<td>180 Cals 4 slices</td>
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</tr>
<tr>
<td>Spaghetti (boiled)</td>
<td>303 cals (300g)</td>
<td>101 cals</td>
</tr>
</tbody>
</table>

### MEATS & FISH

<table>
<thead>
<tr>
<th>MEATS &amp; FISH</th>
<th>Portion Size</th>
<th>Per 100g (3.5 oz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bacon average fried</td>
<td>250 cals (2 rashers)</td>
<td>500 cals</td>
</tr>
<tr>
<td>Beef (roast)</td>
<td>300 cals (107g)</td>
<td>280 cals</td>
</tr>
<tr>
<td>Chicken</td>
<td>220 cals (110g)</td>
<td>200 cals</td>
</tr>
<tr>
<td>Ham</td>
<td>6 cals (2.5g)</td>
<td>240 cals</td>
</tr>
</tbody>
</table>
### Calories in Chinese Food

Below are the calories in Chinese food.

<table>
<thead>
<tr>
<th>Food</th>
<th>Calories (cal)</th>
<th>Total Fats (g)</th>
<th>Carbs (g)</th>
<th>Protein (g)</th>
<th>Per</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appetizers: Dim Sims, fried</td>
<td>100</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>1 dim sim</td>
</tr>
<tr>
<td>Appetizers: Prawn Crackers, large</td>
<td>45</td>
<td>2</td>
<td>5</td>
<td>1.8</td>
<td>3 large</td>
</tr>
<tr>
<td>Appetizers: Spring Roll, Deep Fried</td>
<td>115</td>
<td>4.5</td>
<td>13.8</td>
<td>3.8</td>
<td>1 small</td>
</tr>
<tr>
<td>Appetizers: Wantons, Medium, fried</td>
<td>110</td>
<td>8</td>
<td>6.5</td>
<td>3</td>
<td>wonton, medium</td>
</tr>
<tr>
<td>Beef: Braised w. Chinese Vegetables</td>
<td>250</td>
<td>12</td>
<td>-</td>
<td>-</td>
<td>1 cup</td>
</tr>
<tr>
<td>Beef: Chow Mein</td>
<td>320</td>
<td>19.5</td>
<td>16.1</td>
<td>18.4</td>
<td>1 cup</td>
</tr>
<tr>
<td>Chicken: Lemon Chicken</td>
<td>412</td>
<td>23.1</td>
<td>17.9</td>
<td>33.8</td>
<td>1 cup</td>
</tr>
<tr>
<td>Chicken: Crispy Skin</td>
<td>408</td>
<td>22.9</td>
<td>9.3</td>
<td>39.9</td>
<td>1 cup</td>
</tr>
<tr>
<td>Combination Meals: High Fat (fried rice, noodles, spring roll, lemon chicken, sweet &amp; sour pork)</td>
<td>900</td>
<td>40</td>
<td>-</td>
<td>-</td>
<td>1 plate</td>
</tr>
<tr>
<td>Combination Meals: Medium-Low Fat (steamed rice, vegetables, chicken &amp; almond, beef black bean sauce)</td>
<td>550</td>
<td>13</td>
<td>-</td>
<td>-</td>
<td>1 plate</td>
</tr>
<tr>
<td>Duck: Peking Duck</td>
<td>650</td>
<td>55</td>
<td>-</td>
<td>-</td>
<td>1 serving</td>
</tr>
<tr>
<td>Pork: Barbecued</td>
<td>543</td>
<td>34.5</td>
<td>8.0</td>
<td>49.4</td>
<td>1 cup</td>
</tr>
<tr>
<td>Pork: Chop Suey</td>
<td>271</td>
<td>19.6</td>
<td>4.4</td>
<td>19.6</td>
<td>1 cup</td>
</tr>
<tr>
<td>Rice: Fried Rice</td>
<td>363</td>
<td>14.0</td>
<td>48.7</td>
<td>9.1</td>
<td>1 cup</td>
</tr>
<tr>
<td>Prawn: Sweet &amp; Sour</td>
<td>257</td>
<td>8.8</td>
<td>28.6</td>
<td>16.5</td>
<td>1 cup</td>
</tr>
<tr>
<td>Soup: Crab</td>
<td>160</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>1 medium bowl</td>
</tr>
<tr>
<td>Soup: Chicken &amp; Corn</td>
<td>160</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>1 medium bowl</td>
</tr>
<tr>
<td>Soup: Shark's Fin (w. Eggs)</td>
<td>220</td>
<td>10</td>
<td>-</td>
<td>-</td>
<td>1 medium bowl</td>
</tr>
<tr>
<td>Soup: Wanton Soup</td>
<td>240</td>
<td>13</td>
<td>-</td>
<td>-</td>
<td>1 medium bowl</td>
</tr>
</tbody>
</table>

### Fruits & Vegetables

<table>
<thead>
<tr>
<th>Food</th>
<th>Portion Size</th>
<th>Per 100g (3.5 oz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lamb (roast)</td>
<td>300 cals (100g)</td>
<td>300 cals</td>
</tr>
<tr>
<td>Lunch meat</td>
<td>300 cals (75g)</td>
<td>400 cals</td>
</tr>
<tr>
<td>Prawns</td>
<td>180 cals (180g)</td>
<td>100 cals</td>
</tr>
<tr>
<td>Pork</td>
<td>320 cals (110g)</td>
<td>290 cals</td>
</tr>
<tr>
<td>Salmon fresh</td>
<td>220 cals (122g)</td>
<td>180 cals</td>
</tr>
<tr>
<td>Sausage pork fried</td>
<td>250 cals (78g)</td>
<td>320 cals</td>
</tr>
<tr>
<td>Trout fresh</td>
<td>200 cals (167g)</td>
<td>120 cals</td>
</tr>
<tr>
<td>Turkey</td>
<td>200 cals (125g)</td>
<td>160 cals</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fruits &amp; Vegetables</th>
<th>Portion Size</th>
<th>Per 100g (3.5 oz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple</td>
<td>44 cals (100g)</td>
<td>44 cals</td>
</tr>
<tr>
<td>Banana</td>
<td>107 cals (165g)</td>
<td>65 cals</td>
</tr>
<tr>
<td>Broccoli</td>
<td>27 cals (84g)</td>
<td>32 cals</td>
</tr>
<tr>
<td>Cucumber</td>
<td>3 calories (30g)</td>
<td>10 calories</td>
</tr>
<tr>
<td>Grapes</td>
<td>55 calories (89g)</td>
<td>62 cals</td>
</tr>
<tr>
<td>Lettuce</td>
<td>4 cals (27g)</td>
<td>15 cals</td>
</tr>
<tr>
<td>Peas</td>
<td>210 cals (142g)</td>
<td>148 cals</td>
</tr>
<tr>
<td>Spinach</td>
<td>8 cals (100g)</td>
<td>8 cals</td>
</tr>
<tr>
<td>Strawberries</td>
<td>10 cals (33g)</td>
<td>30 cals</td>
</tr>
</tbody>
</table>
If fat loss were as simple as "calories in vs. calories out", then how come some overweight people eat less yet STILL can't lose an ounce? If it were that simple, then those on 1200 calories per day should be losing some weight, right?

Well, it’s your body’s starvation response that warps the math so, low calorie dieting only works at the beginning.

Your body cannot tell the difference between dieting and starvation, so it changes its physiology to adapt.

During starvation mode, many experts agree that fat-storing hormones become active, and fat-burning enzymes decrease quickly, resulting in slowed fat loss!

Thus, continuous fat loss requires you to avoid starvation mode altogether. You need to burn off the fat, but feed your muscles!

Tom’s Program targets these issues by Burning the Fat & Feeding the Muscle - Click Here!

The 272 Fast Food Items Highest In Calories

Despite the many gimmicks, fad diets and seemingly infinite sources of bad information, the single biggest factor in weight control is calories. More specifically, the relationship between how many calories your body burns per day and how many calories you consume (as in eat or drink) per day.

What I mean is...

• Consuming more calories than you burn = weight gain
• Burning more calories than you consume = weight loss
• Consuming and burning the same number of calories = weight maintenance
So, if you currently have weight to lose or just want to prevent yourself from ever having weight to lose, the most important and all around useful thing you can do diet-wise is pay attention to your calorie intake.

The thing is, one of the most common food choices for the average person is fast food. That's a fact. And, as if this is going to be a shock to anyone on the planet, fast food is one of the worst high calorie offenders. That's another fact. The combination of these two facts is... well... not-so-good.

Now, while I can't stop fast food restaurants from selling foods that are laughably high in calories, and I certainly can't stop people from eating fast food (it's convenient, cheap and yummy, I know), what I can attempt to do is assist in the making of better choices. Or, in this case, prevent the making of the worst ones.

To do this, I went through the nutrition facts of literally every single item from the menus of 25 popular fast food restaurants (full list of included restaurants can be found at the end of this) to put together a list of what ended up being the 272 Fast Food Items Highest In Calories. Here we go...

Fast Food Items With 1000+ Calories
1. White Castle Chocolate Shake - Large (Louisville region)
   Calories: 1680
2. Nathan's Fish N Chips
   Calories: 1537
3. Carl's Jr. Double Six Dollar Burger
   Calories: 1520
4. Hardee's Monster Thickburger
   Calories: 1420
5. Dairy Queen Large Choc. Chip Cookie Dough Blizzard
   Calories: 1320
6. Hardee's Double Bacon Cheese Thickburger
   Calories: 1300
7. Dairy Queen Large Chocolate Malt
   Calories: 1300
8. Nathan's Chicken Tender Platter
   Calories: 1300
9. Jack In The Box OREO Cookie Ice Cream Shake (24oz)
   Calories: 1290
10. Dairy Queen Chicken Strip Basket (6 piece)
    Calories: 1270
11. Hardee's Double Thickburger
    Calories: 1250
12. Burger King TRIPLE WHOPPER Sandwich With Cheese
    Calories: 1230
13. Jack In The Box Chocolate Ice Cream Shake (24oz)
    Calories: 1230
14. White Castle Chocolate Shake - Large (New Jersey region)
    Calories: 1230
15. Hardee's Big Country Breakfast Platter - Breaded Pork Chop
    Calories: 1220
16. Jack In The Box Strawberry Ice Cream Shake (24oz)
    Calories: 1220
17. Jack In The Box Egg Nog Shake (24oz)
    Calories: 1210
18. Nathan's FRENCH FRIES (SUPER SIZE)
    Calories: 1188
19. White Castle Vanilla Shake - Large (New Jersey region)
    Calories: 1180
20. Del Taco Macho Beef Burrito
    Calories: 1170
21. McDonald's Chocolate Triple Thick Shake (32oz)
    Calories: 1160
22. Hardee's Big Country Breakfast Platter - Country Steak
    Calories: 1150
23. McDonald's Deluxe Breakfast (Large Size Biscuit) w/o Syrup & Margarine
    Calories: 1140
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<thead>
<tr>
<th>Number</th>
<th>Item Description</th>
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<tr>
<td>24</td>
<td>Carl's Jr. Guacamole Bacon Six Dollar Burger</td>
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<td>25</td>
<td>Hardee's Big Country Breakfast Platter - Chicken</td>
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<tr>
<td>26</td>
<td>White Castle Vanilla Shake - Large (Cincinnati region)</td>
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<td>27</td>
<td>Burger King TRIPLE WHOPPER Sandwich</td>
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<td>28</td>
<td>White Castle Chicken Rings (20)</td>
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<td>29</td>
<td>White Castle Chocolate Shake - Large (Cincinnati region)</td>
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<td>30</td>
<td>Carl's Jr. Western Bacon Six Dollar Burger</td>
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<td>31</td>
<td>Dairy Queen Large Chocolate Shake</td>
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<tr>
<td>32</td>
<td>Jack In The Box Bacon 'n' Cheese Ciabatta Burger</td>
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<td>33</td>
<td>Jack In The Box Sirloin Bacon 'n' Cheese Burger</td>
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<td>34</td>
<td>McDonald's Vanilla Triple Thick Shake (32oz)</td>
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<td>35</td>
<td>McDonald's Strawberry Triple Thick Shake (32oz)</td>
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<td>36</td>
<td>Del Taco Macho Nachos</td>
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<td>37</td>
<td>McDonald's Deluxe Breakfast (Reg. Size Biscuit) w/o Syrup &amp; Margarine</td>
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<td>38</td>
<td>White Castle Chocolate Shake - Large (Nashville region)</td>
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<tr>
<td>39</td>
<td>White Castle Strawberry Shake - Large (Minneapolis region)</td>
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<td>40</td>
<td>White Castle Vanilla Shake - Large (Nashville region)</td>
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<td>McDonald's Breakfast (Reg. Size Biscuit) w/o Syrup &amp; Margarine</td>
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<td>42</td>
<td>Jack In The Box Sirloin Cheese Burger</td>
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<td>43</td>
<td>Carl's Jr. Bacon Cheese Six Dollar Burger</td>
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<td>Hardee's Six Dollar Burger</td>
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<td>45</td>
<td>Hardee's Big Country Breakfast Platter - Sausage</td>
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<td>46</td>
<td>Del Taco Macho Combo Burrito</td>
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<td>47</td>
<td>Jack In The Box Vanilla Ice Cream Shake (24oz)</td>
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<tr>
<td>Item Description</td>
<td>Calories</td>
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<tr>
<td>49. Dairy Queen Large Reese's Peanut Butter Cup Blizzard</td>
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<tr>
<td>50. Del Taco Macho Bacon &amp; Egg Burrito</td>
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<tr>
<td>51. Dairy Queen FlameThrower GrillBurger (1/2lb)</td>
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<td>52. Dairy Queen Chicken Strip Basket (4 piece)</td>
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<td>53. Dairy Queen Medium Choc. Chip Cookie Dough Blizzard</td>
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<td>54. Hardee's Grilled Sourdough Thickburger</td>
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<td>55. White Castle Chocolate Shake - Large (New York region)</td>
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<td>56. White Castle Strawberry Shake - Large (Columbus &amp; Detroit regions)</td>
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<td>57. Jack In The Box Ultimate Cheeseburger</td>
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<td>58. Sonic Peanut Butter Shake - Large (20oz)</td>
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<td>59. Carl's Jr. Original Six Dollar Burger</td>
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<td>60. Burger King BK Quad Stacker</td>
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<td>61. Arby's Meatball Toasted Sub</td>
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<tr>
<td>62. Dairy Queen Large Oreo Cookies Blizzard</td>
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<tr>
<td>63. Boston Market Boston Sirloin Dip Carver</td>
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<tr>
<td>Fast Food Items With 900-999 Calories</td>
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</tbody>
</table>

64. Burger King DOUBLE WHOPPER Sandwich with Cheese
Calories: 990

65. Sonic Chocolate Cream Pie Shake - Large (20 oz)
Calories: 990

66. Dairy Queen Large Strawberry CheeseQuake Blizzard
Calories: 990

67. White Castle Vanilla Shake - Large (New York region)
Calories: 990

68. Wendy's Triple w/Everything and Cheese
Calories: 980

69. Sonic Super Sonic Cheeseburger (with mayo)
Calories: 980

70. Hardee's Big Country Breakfast Platter - Bacon
Calories: 980

71. White Castle Onion Chips - Sack
Calories: 980

72. Carl's Jr. Double Western Bacon Cheeseburger
Calories: 970

73. Hardee's Big Country Breakfast Platter - Country Ham
Calories: 970

74. Arby's Sausage Gravy Biscuit
Calories: 961

75. Burger King OREO Sundae Shake - Chocolate - Medium
Calories: 960

76. Burger King Chocolate Milk Shake - Large
Calories: 950

77. White Castle Chocolate Shake - Large (St Louis region)
Calories: 950

78. Jack In The Box Sourdough Ultimate Cheeseburger
Calories: 950

79. Nathan's Chicken Breast Platter
Calories: 943
80. Boston Market Boston Meatloaf Carver
Calories: 940
81. Sonic FRITOS Chili Pie
Calories: 940
82. Sonic Peanut Butter Fudge Shake-Large (20oz)
Calories: 940
83. Burger King OREO Sundae Shake - Strawberry - Medium
Calories: 940
84. White Castle Vanilla Shake - Large (Minneapolis region)
Calories: 940
85. Carl’s Jr. Super Star (with cheese)
Calories: 930
86. Del Taco Macho Chicken Burrito
Calories: 930
87. Burger King Strawberry Milk Shake - Large
Calories: 930
88. Sonic Chicken Strip Dinner (4)
Calories: 930
89. Sonic Strawberry Cream Pie Shake - Large (20 oz)
Calories: 930
90. Hardee's Thickburger
Calories: 910
91. Hardee's Bacon Cheese Thickburger
Calories: 910
92. Jack In The Box OREO Cookie Ice Cream Shake - 16oz
Calories: 910
93. Burger King DOUBLE WHOPPER Sandwich
Calories: 900
94. Sonic Super Sonic Cheeseburger (with ketchup)
Calories: 900
95. Sonic M&M's Sonic Blast - Large (20oz)
Calories: 900
96. Dairy Queen Medium Chocolate Malt
Calories: 900
97. Sonic Super Sonic Cheeseburger (with mustard)
Calories: 890
98. Sonic Super Sonic Jalapeno Cheeseburger
Calories: 890
99. Pizza Hut Meat Lover's 6" Personal Pan Pizza (whole pizza)
Calories: 890
100. White Castle Chocolate Shake - Large (Columbus & Detroit regions)
Calories: 890
101. White Castle Chocolate Shake - Medium (New Jersey region)
Calories: 890
102. Jack In The Box Strawberry Ice Cream Shake (16oz)
Calories: 880
103. Jack In The Box Chocolate Ice Cream Shake (16oz)
Calories: 880
104. KFC Chicken and Biscuit Bowl
Calories: 870
105. Sonic Butterfinger Sonic Blast - Large (20oz)
Calories: 870
106. Sonic Hot Fudge Shake - Large (20oz)
Calories: 870
107. Jack In The Box Egg Nog Shake (16oz)
Calories: 870
108. Jack In The Box Single Bacon n’ Cheese Ciabatta Burger
Calories: 870
109. Nathan’s SUPER BURGER
Calories: 863
110. Subway Double Meatball Marinara
Calories: 860
111. White Castle Chocolate Shake - Medium (Nashville region)
12. White Castle Vanilla Shake - Large (Columbus & Detroit regions)  
Calories: 860
13. White Castle Vanilla Shake - Medium (New Jersey region)  
Calories: 860
14. Sonic Banana Cream Pie Shake - Large (20oz)  
Calories: 860
15. Nathan's BURGER WITH CHEESE  
Calories: 850
16. White Castle Chocolate Shake - Large (Indianapolis region)  
Calories: 850
17. Sonic Coconut Cream Pie Shake - Large (20oz)  
Calories: 850
18. Arby's Mozzarella Sticks - Large (8)  
Calories: 849
19. Arby's Chicken Parmesan Toasted Sub  
Calories: 843
20. Taco Bell Fiesta Taco Salad  
Calories: 840
21. White Castle Mozzarella Cheese Sticks (10)  
Calories: 840
22. White Castle Vanilla Shake - Medium (Cincinnati region)  
Calories: 840
23. White Castle Strawberry Shake - Large (Cincinnati region)  
Calories: 840
24. Dairy Queen Mocha MooLatte (24oz)  
Calories: 840
25. Dairy Queen Caramel MooLatte (24oz)  
Calories: 840
26. Sonic Chocolate Malt - Large (20oz)  
Calories: 840
27. Sonic Reese's Peanut Butter Cups Sonic Blast - Large (20oz)  
Calories: 840
28. Arby's Roast Turkey Ranch & Bacon Sandwich  
Calories: 834
29. Wendy's Baconator  
Calories: 830
30. Carl's Jr. Philly Cheesesteak Burger  
Calories: 830
31. Carl's Jr. Breakfast Burger  
Calories: 830
32. Jack In The Box Fish & Chips (Large)  
Calories: 830
33. Subway 8" Pizza (Sausage)  
Calories: 830
34. Burger King OREO Sundae Shake - Vanilla - Medium  
Calories: 830
35. White Castle Strawberry Shake - Large (Chicago region)  
Calories: 830
36. White Castle Chocolate Shake - Medium (Cincinnati region)  
Calories: 830
37. Arby's Classic Italian Toasted Sub  
Calories: 828
38. Arby's Onion Petals - Large  
Calories: 828
39. Dairy Queen GrillBurger™ with Cheese (1/2lb)  
Calories: 820
40. Carl's Jr. Loaded Breakfast Burrito  
Calories: 820
41. Burger King Vanilla Milk Shake - Large  
Calories: 820
42. White Castle Chocolate Shake - Large (Chicago region)  
Calories: 820
43. Del Taco Shredded Beef Combo Burrito
Calories: 815
144. Sonic Chocolate Shake - Large (20oz)
Calories: 810
145. White Castle Chocolate Shake - Medium (Louisville region)
Calories: 810
146. Dairy Queen Large Banana Split Blizzard
Calories: 810
147. Burger King BK Triple Stacker
Calories: 810
148. Dunkin Donuts Sausage Egg Cheese Biscuit Sandwich
Calories: 810
149. Hardee’s Big Chicken Fillet Sandwich
Calories: 800
150. A&W Original Bacon Double Cheeseburger
Calories: 800
151. Taco Bell Chicken Fiesta Taco Salad
Calories: 800
Fast Food Items With 700-799 Calories
152. Burger King TENDERCRISP Chicken Sandwich
Calories: 790
153. McDonald’s Big Breakfast (Large Size Biscuit)
Calories: 790
154. Subway 8” Pizza (Pepperoni)
Calories: 790
155. Jack In The Box Vanilla Ice Cream Shake - 16oz
Calories: 790
156. Jack In The Box Sirloin Steak & Egg Burrito (no salsa)
Calories: 790
157. Jack In The Box Sirloin Steak & Egg Burrito with Fire Roasted Tomato Salsa
Calories: 790
158. White Castle Strawberry Shake - Medium (Minneapolis region)
Calories: 790
159. White Castle Vanilla Shake - Medium (Nashville region)
Calories: 790
160. White Castle Homestyle Onion Rings - Sack
Calories: 790
161. Sonic Oreo Sonic Blast - Large (20oz)
Calories: 790
162. Chick-Fil-A Hand-Spun Milkshake (Cookies & Cream)
Calories: 790
163. Dairy Queen Medium Reese’s Peanut Butter Cup Blizzard
Calories: 790
164. Carl’s Jr. OREO Cookie Malt
Calories: 790
165. Nathan’s CHEESESTEAK (SUPREME)
Calories: 786
166. Del Taco Shredded Beef Breakfast Burrito
Calories: 785
167. Del Taco Deluxe Taco Salad
Calories: 780
168. Hardee’s Loaded Breakfast Burrito
Calories: 780
169. Hardee’s Chocolate Malt (Hand-Dipped)
Calories: 780
170. Sonic Strawberry Malt - Large (20oz)
Calories: 780
171. Sonic Bacon Cheeseburger
Calories: 780
172. Sonic Java Chiller, Chocolate/Caramel (20oz)
Calories: 780
173. Dairy Queen DQ Ultimate Burger
Calories: 780
174. Dairy Queen FlameThrower GrillBurger (1/4lb)
Calories: 780
175. Dairy Queen Medium Chocolate Shake
Calories: 780
176. Carl’s Jr. Vanilla Malt
Calories: 780
177. Carl’s Jr. Chocolate Malt
Calories: 780
178. Boston Market Pastry Top Chicken Pot Pie
Calories: 780
179. Arby’s Ultimate BLT Sandwich
Calories: 779
180. Arby’s Roast Beef & Swiss Sandwich
Calories: 777
181. Hardee’s Strawberry Malt (Hand-Dipped)
Calories: 775
182. KFC Chicken Pot Pie
Calories: 770
183. Hardee’s Loaded Biscuit ‘N’ Gravy Breakfast Bowl
Calories: 770
184. Hardee’s Vanilla Malt (Hand-Dipped)
Calories: 770
185. Jack In The Box Sirloin Steak ‘n’ Cheddar Ciabatta
Calories: 770
186. Taco Bell Nachos BellGrande
Calories: 770
187. Dairy Queen French Vanilla MooLatte (24oz)
Calories: 770
188. McDonald’s Chocolate Triple Thick Shake (21oz)
Calories: 770
189. Carl’s Jr. Strawberry Malt
Calories: 770
190. Boston Market Boston Turkey Carver
Calories: 770
191. Boston Market Boston Turkey Dip Carver
Calories: 770
192. Arby’s Chicken Salad w/ Pecans Sandwich
Calories: 769
193. Burger King WHOPPER Sandwich with Cheese
Calories: 760
194. Sonic Pineapple Malt - Large (20oz)
Calories: 760
195. Sonic Java Chiller, Caramel (20oz)
Calories: 760
196. Sonic Java Chiller, Chocolate (20oz)
Calories: 760
197. Chick-Fil-A Hand-Spun Milkshake (Chocolate)
Calories: 760
198. Dunkin Donuts Pastrami Supreme Sandwich
Calories: 760
199. Nathan’s FRENCH FRIES (LARGE)
Calories: 758
200. Jack In The Box Chipotle Chicken Ciabatta with Spicy Crispy Chicken
Calories: 750
201. Jack In The Box Sampler Trio
Calories: 750
202. Sonic Java Chiller, Caramel/Hazelnut (20oz)
Calories: 750
203. Sonic Java Chiller, Hazelnut (20oz)
Calories: 750
204. Sonic Strawberry Shake - Large (20oz)
Calories: 750
205. Sonic Java Chiller, Chocolate/Hazelnut (20oz)
Calories: 750
206. Subway Footlong Sweet Onion Chicken Teriyaki
Calories: 750
| #: | 207. Nathan's ONION RINGS (LARGE) | Calories: 744 |
| #: | 208. Nathan's CHEESESTEAK (ORIGINAL) | Calories: 740 |
| #: | 209. KFC Famous Bowls (Mashed Potato with Gravy) | Calories: 740 |
| #: | 210. McDonald's Double Quarter Pounder with Cheese | Calories: 740 |
| #: | 211. McDonald's Strawberry Triple Thick Shake (21oz) | Calories: 740 |
| #: | 212. McDonald's Vanilla Triple Thick Shake (21oz) | Calories: 740 |
| #: | 214. Subway 8" Pizza (Cheese & Veggies) | Calories: 740 |
| #: | 215. Dairy Queen Brownie Earthquake | Calories: 740 |
| #: | 216. A&W Reese's Polar Swirl (medium) | Calories: 740 |
| #: | 217. Jack In The Box Sausage, Egg & Cheese Biscuit | Calories: 740 |
| #: | 218. Sonic Chicken Club Toaster Sandwich | Calories: 740 |
| #: | 219. Del Taco Deluxe Chicken Salad | Calories: 740 |
| #: | 220. Arby's Philly Beef Toasted Sub | Calories: 739 |
| #: | 221. Burger King Enormous Omelet Sandwich | Calories: 730 |
| #: | 222. Chick-Fil-A Hand-Spun Milkshake (Strawberry) | Calories: 730 |

| #: | 223. White Castle Strawberry Shake - Medium (Columbus & Detroit regions) | Calories: 730 |
| #: | 224. Sonic Pineapple Shake - Large (20oz) | Calories: 730 |
| #: | 225. Dairy Queen Large French Fries | Calories: 730 |
| #: | 226. Dairy Queen DQ Homestyle Bacon Double Cheeseburger | Calories: 730 |
| #: | 227. Dairy Queen Medium Strawberry CheeseQuake Blizzard | Calories: 730 |
| #: | 228. Arby's Roast Turkey & Swiss Sandwich | Calories: 725 |
| #: | 229. Nathan's Chicken Tender Sandwich | Calories: 724 |
| #: | 230. McDonald's Big Breakfast (Regular Size Biscuit) | Calories: 720 |
| #: | 231. Hardee's Mushroom 'N' Swiss Thickburger | Calories: 720 |
| #: | 232. Dunkin Donuts Tropical Fruit Smoothie (Large) | Calories: 720 |
| #: | 234. Dairy Queen Small Choc. Chip Cookie Dough Blizzard | Calories: 720 |
| #: | 235. A&W Papa Burger | Calories: 720 |
| #: | 236. A&W Original Double Cheeseburger | Calories: 720 |
| #: | 237. A&W Vanilla Milkshake (medium) | Calories: 720 |
| #: | 238. Jack In The Box Bacon Cheddar Potato Wedges | Calories: 720 |
239. Sonic Cheeseburger (with mayo)  
Calories: 720
240. Sonic Dixie cheeseburger  
Calories: 720
241. Sonic Tater Tots w/chili & cheese (SONIC Size)  
Calories: 720
Calories: 720
243. Carl's Jr. Bacon Swiss Crispy Chicken Sandwich  
Calories: 720
244. Carl's Jr. OREO Cookie Shake  
Calories: 720
245. Subway Double Chicken Bacon Ranch  
Calories: 720
246. Hardee's Monster Biscuit  
Calories: 710
247. Hardee's Vanilla Shake (Hand-Dipped) (regular)  
Calories: 710
248. A&W M&M Polar Swirl (medium)  
Calories: 710
249. Jack In The Box Sourdough Jack  
Calories: 710
250. Pizza Hut Supreme 6" Personal Pan Pizza (whole pizza)  
Calories: 710
251. Del Taco Deluxe Chili Cheese Fries  
Calories: 710
252. Sonic Banana Malt - Large (20oz)  
Calories: 710
253. Jack In The Box Ciabatta Breakfast Sandwich  
Calories: 710
254. Dairy Queen Peanut Buster Parfait  
Calories: 710
255. Dairy Queen Cappuccino MooLatte (24oz)  
Calories: 710
256. Carl's Jr. Western Bacon Cheeseburger  
Calories: 710
257. Carl's Jr. Chicken Breast Strips (5 pieces)  
Calories: 710
258. Carl's Jr. Vanilla Shake  
Calories: 710
259. Carl's Jr. Chocolate Shake  
Calories: 710
260. Arby's Loaded Potato Bites - Large (10)  
Calories: 707
261. Nathan's BACON CHEESEBURGER  
Calories: 706
262. Arby's Roast Ham & Swiss Sandwich  
Calories: 705
263. Wendy's Double w/Everything and Cheese  
Calories: 700
264. Arby's Roast Turkey Ranch & Bacon Wrap  
Calories: 700
265. Hardee's Chocolate Shake (Hand-Dipped) (regular)  
Calories: 700
266. Hardee's Strawberry Shake (Hand-Dipped) (regular)  
Calories: 700
267. A&W Chocolate Milkshake (medium)  
Calories: 700
268. Jack In The Box Jack's Spicy Chicken with Cheese  
Calories: 700
269. White Castle French Fries - Sack  
Calories: 700
270. Sonic Vanilla Malt - Large (20oz)  
Calories: 700
271. Carl’s Jr. Strawberry Shake  
Calories: 700  
272. Boston Market Boston Chicken Carver  
Calories: 700

NOTE: The above list includes every single fast food item (from the 25 restaurants I looked at) that contained 700 or more calories per serving. I decided on using 700 as the calorie cut-off point for this list for a few reasons, the main one being that in my opinion, 700+ calories per item (not per entire meal, but just in one item of that meal) really represents the worst of the worst in terms of calories.  

Obviously this doesn’t mean that a 699 calorie (or lower) item can’t negatively affect your weight, it just means that for the purpose of showing the worst fast food items based solely on calories, I ended it at 700.

Health Food ... or Health Fraud?  
Use this guide to learn the science behind food-industry health claims.  
By David Zinczenko, Men’s Health

Beware of packaging propaganda: Food-industry health claims can be misleading, say researchers at the University of California, Davis. Case in point: Recently, Dannon settled a false advertising lawsuit—that will pay out up to $35 million—for claims made on the labels of Activia and DanActive yogurts. The suit alleged, among other things, that the company charged a premium for products that haven’t been shown to provide additional health benefits for already healthy people, as claimed. Dannon denies any wrongdoing, but agreed to make several changes to their packaging.  

You see, your supermarket’s shelves are packed with overhyped health claims. And while many of these claims may be factual, they may also be giving you the wrong impression about just how healthful a product really is. That’s because marketers highlight what they want you to notice.  

“Even if a food is fat free, it could be loaded with sugar,” says study author Clare Hasler, Ph.D. “Or a product that’s ‘made with whole grains’ may also contain a high amount of refined flour.” Your best strategy: Use this guide to learn the science behind the sales pitch. Call it the Eat This, Not That crib sheet for helping you to beat Big Food at its own game—and eat healthier for life.  

The product: Franken Berry  
The claim: “With Whole Grain”  
The claim: “With Whole Grain”  
What you should know: If it’s really “100% whole grain,” it’ll say so on the package. Even in a “whole grain” product, some of the flour can come from refined grains—and probably does. Check the ingredient list: Any flour that doesn’t start with the word “whole” isn’t. And remember, ingredients are listed in descending order of the amount used by weight. Another example: Reese’s Puffs touts “with whole grain” on the label. Of course, the label doesn’t boast that a three-quarter cup serving of the cereal also contains 3 teaspoons of dextrose sugar. 

Bonus tip: For even more examples of how you’re being tricked by the food industry, check out 30 “healthy” foods that aren’t.
Low calorie food list

The low calorie foods list shows some great everyday foods which are low in calories and ideal for weight loss diets. The calorie content is shown in the foods average portion. The low calorie foods list also gives calorie content in 100 grams so it can be compared with other foods you may normally eat.
We want the low calorie food list to grow larger so if you know of a good low calorie food for weight loss please let us know about it email us.

Apart from the low calorie food list below there are 5 other lists that show the calorie content of everyday foods use the links below to view these useful tables.

Low calorie food list category:

number of calories Meat & Fish | food calorie counter fruit & veg | calorie content Milk & Dairy produce | calories Fats & Sugar

<table>
<thead>
<tr>
<th>Low calorie food</th>
<th>Portion size *</th>
<th>100 grams (3.5 oz)</th>
<th>energy content</th>
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<tbody>
<tr>
<td>Beans mung dried boiled</td>
<td>100 cals</td>
<td>100 cals</td>
<td>Low</td>
</tr>
<tr>
<td>Beans runner boiled</td>
<td>15 cals</td>
<td>25 cals</td>
<td>Very low</td>
</tr>
<tr>
<td>Broccoli</td>
<td>20 cals</td>
<td>30 cals</td>
<td>Very low</td>
</tr>
<tr>
<td>Brussels sprouts</td>
<td>20 cals</td>
<td>32 cals</td>
<td>Low</td>
</tr>
<tr>
<td>Canderel sweetener</td>
<td>10 cals / tablet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cottage cheese low fat</td>
<td>80 cals</td>
<td>80 cals</td>
<td>Low</td>
</tr>
<tr>
<td>Fish any white fresh poached</td>
<td>150-200 / fillet</td>
<td>110 cals</td>
<td>Low</td>
</tr>
<tr>
<td>Fromage Frais low fat</td>
<td>65 cals</td>
<td>55 cals</td>
<td>Low-Med</td>
</tr>
<tr>
<td>Hunts bitter lemon drink</td>
<td>2 (125ml)</td>
<td>1 cal</td>
<td>Low-Med</td>
</tr>
<tr>
<td>Hunts bitter Ginger ale drink</td>
<td>2 (125ml)</td>
<td>1 cal</td>
<td>Low</td>
</tr>
<tr>
<td>Hunts bitter orange drink</td>
<td>2 (125ml)</td>
<td>1 cal</td>
<td>Low</td>
</tr>
<tr>
<td>Lentils</td>
<td>70 cals</td>
<td>50 cals</td>
<td>Low</td>
</tr>
<tr>
<td>Macaroni (boiled)</td>
<td>238 cals (250g)</td>
<td>95 cals</td>
<td>Low</td>
</tr>
<tr>
<td>Mayonnaise weight watchers</td>
<td>45 cals (1 Tbsp)</td>
<td>300 cals</td>
<td>Low</td>
</tr>
<tr>
<td>Muesli sugar-free</td>
<td>180 cals (50g)</td>
<td>360 cals</td>
<td>Low</td>
</tr>
<tr>
<td>Noodles (boiled)</td>
<td>175 cals (250g)</td>
<td>70 cals</td>
<td>Low</td>
</tr>
<tr>
<td>Pasta (normal boiled)</td>
<td>330 cals (300g)</td>
<td>110 cals</td>
<td>Low</td>
</tr>
<tr>
<td>Pasta (wholemeal boiled)</td>
<td>315 cals (300g)</td>
<td>105 cals</td>
<td>Low</td>
</tr>
<tr>
<td>Pear chink boiled</td>
<td>115 cals</td>
<td>115 cals</td>
<td>Low</td>
</tr>
<tr>
<td>Porridge oats (with water)</td>
<td>193 cals (350g)</td>
<td>55 cals</td>
<td>Low</td>
</tr>
<tr>
<td>Potatoes (boiled)</td>
<td>210 cals (300g)</td>
<td>70 cals</td>
<td>Low</td>
</tr>
<tr>
<td>Rice (white long grain)</td>
<td>420 cals (300g)</td>
<td>140 cals</td>
<td>Low</td>
</tr>
<tr>
<td>Rice (Brown)</td>
<td>405 cals (300g)</td>
<td>135 cals</td>
<td>Low</td>
</tr>
<tr>
<td>Spaghetti (boiled)</td>
<td>303 cals (300g)</td>
<td>101 cals</td>
<td>Low</td>
</tr>
<tr>
<td>Tofu</td>
<td>90 cals</td>
<td>73 cals</td>
<td>Low</td>
</tr>
<tr>
<td>Yogurt virtually fat-free</td>
<td>50 cals (1 small pot)</td>
<td>40 cals</td>
<td>Low</td>
</tr>
</tbody>
</table>

• Portion sizes will vary depending on the type and make of product purchased. Portion size is very often a subjective view and may again vary according to bowl, cup or plate size used. NB. The low calorie food list shows products in alphabetical order.

Most natural foods are calculated in tests and specific product values are calculated from their ingredients list or from manufacturers information. Some values may not be accurate and should only be used for general comparison purposes.

127 Foods That Fight Fat

Weight loss starts with shopping. Taking control of what you eat begins with taking control of what you buy.

Every time you toss a low-calorie food into the cart, you’re taking responsibility for losing weight—even before you sit down to a meal.

There’s a very simple formula for low-calorie eating: Stock up on low-calorie staples. These are the basic packaged, canned, and frozen ingredients that you’ll reach for to create tasty, healthful, low-calorie meals anytime.

The Picture Perfect Anytime List is a menu of the lowest-calorie produce, soups, sauces, condiments, marinades, dressings, dips, candies, desserts, and beverages available. Stuff your pantry, refrigerator, and freezer with them, and reach for them anytime. Feel free to go to the foods on the Anytime List when you want a snack or are planning a meal. Eat any amount of them for any reason. When the Anytime List becomes the core of your eating—in other words, the main dish around which you build your meals—you’ll have no trouble staying thin for life.

The Anytime List

Fruits and vegetables

All fruits and vegetables—raw, cooked, fresh, frozen, canned—belong on the Picture Perfect Anytime List. Avoid any packaged fruits that have added sugar. Otherwise, the more fruits and vegetables you eat, the better.

Soups

You’ve heard of value for your money. Soups give you very good value for the calories. They are filling; a bowl of soup can be an entire meal. They are satisfying. For many people, they are more satisfying than raw vegetables, while many give you all the benefits of veggies (if you choose the soups chock full of vegetables). They are inexpensive, convenient, easy, and quick to make. Soups don’t make you feel like you’re on a diet. Above all, soups are versatile. They can serve as a snack, as part of a meal, or as a cooking ingredient.

Sauces, Condiments, and Marinades

Put the following items at the very top of your shopping list. They’re invaluable for adding flavor, moisture, texture, and versatility to every food and every meal.

• Salad dressings: oil-free or low-calorie (light or lite)
• Mayonnaise: fat-free or light
• Sour cream and yogurt: fat-free, plain,
• Mustards: Dijon, Pommery, and others
• Tomato puree, tomato paste, and tomato sauce
• Clam juice, tomato juice, V8 juice, and lemon or lime juice
• Dr. Nelson's better Butter
• Cooking sprays (such as Pam) in butter, olive oil, garlic, or lemon flavors
• Vinegars: balsamic, cider, wine, tarragon, and others
• Horseradish: red and white
• Sauces: salsa, cocktail sauce, tamari, soy sauce, A1, Worcestershire sauce, barbecue sauce, ketchup, duck sauce, chutney, relish, and others
• Onion: fresh, juice, flakes, and powder
• Garlic: fresh, juice, flakes, and powder
• Herbs: any and all, including basil, oregano, tarragon, thyme, rosemary, marjoram, dill, chives, sage, and bay leaves
• Spices: any and all, including cinnamon, cloves, ginger, cumin, nutmeg, coriander, curry, paprika, and allspice
• Extracts: vanilla, almond, peppermint, maple, coconut, cocoa powder, and others

Dressings and Dips
I recommend fat-free or light dressings and dips. The light category—low-fat, reduced-fat, and low-calorie—is midway between totally fat-free and regular, and it’s often more pleasing to the palate than fat-free.

Dressings can be used as all-purpose condiments, dips, toppings, even cooking liquids. They already contain a mixture of ingredients, so just slather them on vegetables, seafood, and pretty much anything else. Or cook with them to make up for the lack of butter or oil.

I recommend keeping several varieties of dressings and dips on hand, including at least one creamy version. Try brushing a light creamy dressing on seafood, then broiling; the dressing adds moisture and flavor.

Candy
Yup, candy. The real thing—not the dietetic variety—is best when your sweet tooth starts aching. Dietetic candies have almost as many calories as regular candies, often lack flavor, and are an incentive to eat more. Stick to the real thing.

• Chewing gum or gum balls: any and all
• Use fruit derived candies

Frozen Desserts
Any fat-free frozen yogurt, frozen nondairy substitute, or sorbet is a fine addition to the freezer. Try the lower-calorie choices. Here are some examples:

• Soft serve: up to 25 calories per ounce, including Skimpy Treat; TCBY, Colombo nonfat frozen yogurt, and Tofutti
• Hard pack: up to 115 calories per 1/2-cup serving, including Sharon's Sorbet, Low-Fat Tofutti, all Italian ices, and Sweet Nothings
• Frozen bars: Popsicles made with fruit juice; any others containing up to 45 calories per bar, including Welch's Fruit Juice Bars, Weight Watchers Smart Ones Orange Vanilla Treats, Tofutti Chocolate Fudge Treats, Weight Watchers Smart Ones Chocolate Mousse, Dolly Madison Slender Treat Chocolate Mousse, and Yoplait
• Individually packaged frozen bars: up to 110 calories each, including FrozFruit, Hagen-Dazs bars, and Starbucks Frappuccino Blended Coffee Bars

Beverages
Avoid beverages labeled "naturally sweetened" or "fruit-juice sweetened," but help yourself to these:

• Unsweetened black coffees and teas
• Diet teas and juices: Crystal Light, Diet Snapple, Diet Natural Lemon Nestea, Diet Mistic, and others
• Noncaloric flavored waters: orange, chocolate, cream, cherry-chocolate, root beer, cola, and other flavors of bottled or filtered water
• Seltzer: plain or flavored, but check the calorie count if the product is labeled "naturally sweetened," since this usually means that the product has sugar in one form or another
• Hot cocoa mixes: 20 to 50 calories per serving, including Swiss Miss Diet and Fat-Free and Nestle Carnation Diet and Fat-Free; avoid cocoa mixes with 60 or more calories per serving

Let's Go Shopping
Today's supermarkets are filled with choices for the weight conscious. Here are some of the lowest-calorie choices for a variety of food categories that aren't covered in the Anytime List.

Cereals
• Cheerios: a whole grain cereal with 110 calories and 3 g fiber per cup
• Kellogg's All-Bran with Extra Fiber: 50 calories and 15 g fiber per 1/2 cup
• Original Shredded Wheat: 80 calories and 2.5 g fiber per biscuit
• Fiber One: 60 calories and 14 g fiber per 1/2 cup
• Wheaties: 110 calories and 2 g fiber per cup
• Whole Grain Total: 110 calories and 3 g fiber per 3/4 cup

Spreads
• Peanut butter
• Low-sugar or sugar-free jams and jellies with 10 to 40 calories per tablespoon

Breads
• Light breads with 40 to 45 calories per slice: oatmeal, premium white, wheat, rye, multigrain, sourdough, Italian
• Whole grain regular breads or rolls

Rice and Pasta
• Whole wheat/whole grain pastas: Hodgson Mill, Ancient Harvest
• Brown rice
• Whole wheat couscous
• Pearl or hulled barley
• Other whole grains: quinoa, whole grain cornmeal, kasha, bulgur, millet

Frozen Meals
• Low-calorie frozen breakfast foods such as those from Kellogg's, Aunt Jemima, and Pillsbury—and a special mention for the low-calorie, whole grain offerings from Van's
• Low-calorie, vegetable-focused frozen meals in the 150- to 350-calories-per-package range, especially the Amy's brand
Beans

- All beans, dried or canned
- Health Valley canned bean/chili combinations
- Low-fat or fat-free refried beans

Snacks

- Make it a point to eat starchy, crunchy snacks only in conjunction with a food from the Anytime List. For example, have fruit with popcorn or soup with crackers. Fill up on the former, and go easy on the starchy snack.

Protein Foods

- Legumes: beans, peas, lentils, chickpeas
- Soy products: bean curd/ tofu, meat-replacement products by Boca, Gardenburger, Yves, and Lightlife
- Seafood: fresh (do not fry!), smoked, canned, frozen

Note: Calorie counts in this story may vary depending on the brand of products used. Remember to check the labels.

Dr Desi Says:

In nature we need left handed amino acids in our cells, only right handed sugars will enter the cell, and we need many right handed fatty acids. The Handedness is very important to life.

Sugars and Sweetness

Many diseases are due to factors that are related to Big Sugar, Big Sugar for its corporate name. As people who get bad sugars and bad oils, trans-fatty acids and cooked oils. Factors of bad nutrition in America are making people sick, producing blood sugar problems, producing obesity, cardiovascular problems, and many, many things that the FDA could also affect. Limiting trans-fatty acids, making good sugars (Left handed Fructose), rather than bad sugars (right handed Dextrose).

The body needs right handed sugar (Blood Glucose) to enter the cell for energy. Right handed dextrose sugars such as sugar cane, beet sugar, grape sugar, corn sugar are right handed and they enter the cells too fast. This produces fat more easily, hyperglycemia (mild addiction) and then hypoglycemia (mild depression). This puts a burden on the pancreas and all other organs. There is also a well documented negative effect on the immune system from dextrose. If you use chemicals to strip away vitamins and minerals to make the sugar white, and it gets even worse.

Dextrose sugars are at the top of the Glycemic Index tables because they enter the blood stream and the cell so fast. Thus they are the main cause of obesity and all blood sugar disorders.

Fructose (levulose) revolves to the left and needs to be converted to the right. A process that takes time and thus allows for a more smooth delivery of the glucose. Less fat, less stress on organs, less craving, less depression, less blood sugar fluctuations. More hormonal and enzyme production thus it is an anti-aging therapy. Use fresh fruits as a sweetener; it will change your life.

Crazy food additives that have not been fully tested add to the food and drug problems. The synthetic foods and drugs have failed. Our society has learned to avoid and mistrust synthetic foods. We will not order them on a menu or buy them of the shelf. We have learned to be chemophobic. We know that synthetic foods create cancer and disease. Our society must learn that this is true of our medicines as well.

Our body needs good fatty acids. They make up the cell membrane of all of our cells. Stress sets them free. Cooking destroys most fatty acids. Meat and potatoes contain very little. In fact the fatty acids from an animal are saturated. Fresh and raw vegetable and unheated vegetable juice are the best source. Cooking oils destroys some of their nutritional value. Stress makes us fatty acid deficient. So fatty acid deficiency is the number one problem in the world of health care today.

People are made to be mostly vegetarian. Humans are not carnivores. But we are omnivores and some meat is good for the diet. Vegetarians will have to be careful and eat right and supplement to be healthy. As vegetarians we should mostly eat fruits and other foods that carry seeds. If we eat an apple, the apple tree does not die. In fact it wants us to eat its fruits and carry the seeds elsewhere. Fruits have no bad karma. Eating a cow has karma the cow must die. Eating a carrot has bad karma the carrot must die. But eating fruits have no bad karma.

We all have the instinct to like sweets for the reason to eat fruits (fructose). Our tongues are mainly proton detectors and sweet fruits the primary thing we crave for taste and health. But then came along the sugars from cane and other dextrose sugars that are problems for the body. The high glycemic foods with dextrose bring up blood sugar very fast we get addicted to the taste and the rush. And our sense of taste for fruit gets perverted to seek dextrose sugars. The high glycemic dextrose sugars drive out blood sugar way up, force the release of extra insulin, this makes the blood sugar go down and the cycle repeats. Immune-depression, nerval-irritation,
Bad food is a problem in degenerative disease. And this is also another industry - the FDA is not doing their job to protect the human beings of America. Big Sugar and cholesterol are leading to diseases that are killing over a million people a year.

For most of the history of man there was little meat consumption. Killing the pig was a yearly or semi-yearly celebration, and mostly for celebratory purposes. Only the rich king could eat pig everyday and when he did he got sick. As people got more affluent they ate more pig and ate more of the foods that in old were only used sparingly. But now...
that people eat them every day they are getting the diseases that used to be the King diseases.

Food is the source of the compounds that make us what we are. You are what you eat. The shift of sugars to dextrose was a major mistake for health care. The improper use of cooking and the destruction of the oils, too much meat consumption, too much processed foods, profits from fast foods, leaching of minerals and nutrients from the soil, lack of appreciation for the natural, all disobey the rules of the stomach and a medical system that believes it can fix anything when it can't, and we have a society where the diseases are rampant. Most disease has nutritional imbalance at it's root.

**Nutritional problems**

1. Dextrose not Fructose
2. too much meat
3. leaching of the soil of nutrients and minerals
4. disobey the rules of the stomach
5. SINthetic foods
6. Allopathy
7. too much cooking
8. Profit over People
9. Addiction to foods
10. Lack of maturity and vision
Sweetness travels under a variety of aliases. Just check out the label of your favorite cereal or beverage and you’re likely to see the flavor show up many times, in the form of high-fructose corn syrup, dextrose, cane syrup, maple syrup, fructose, molasses, honey—and even agave, the latest caloric sweetener, which is derived from a plant native to Mexico. (These are all in addition, of course, to plain old table sugar, or dextrose sucrose.)

You might also find some food labels or manufacturers hinting that their source of sweetness is more healthful than the others. Since the concept of “healthy” can be awfully fuzzy, let’s put it bluntly. “All of these are empty calories that offer you no relative nutrition,” says Dawn Jackson Blatner, a dietitian and spokesperson for the American Dietetic Association. That doesn’t mean they’re forbidden, just that they should be eaten in moderation, she says.

And many of us are not moderate in our consumption of added sugars. The World Health Organization recommends that we cap our intake at less than 10 percent of our day’s calories, yet the average American gets 400 calories a day from beverages, a lot of which come from sugar. (Many people, including obesity expert Barry Popkin, say one of the easiest ways to drop weight is to simply cut out all caloric beverages.) Assuming you take in 1,800 calories per day, a 10 percent limit translates to fewer than 180 calories, or 45 grams, of sugar daily. The real problem of dextrose versus fructose has not been really discussed because of the problem of the profits of Big Sugar, and their lobbyists.

So if you are following WHO’s guidance and eating a moderate amount of the sweet stuff, does it matter what form it takes? Some hypothesize that fructose, one of the components of sucrose, is a particularly bad kind of sugar. It may not suppress hunger or stimulate the natural feeling of fullness, says Kathleen Melanson, an assistant professor of food and nutrition at the University of Rhode Island in Kingston. And there is also a concern that when it’s consumed in very high amounts, fructose can’t be properly processed by the body, which translates to a fatty liver or raised levels of triglycerides in the blood. It can also lead to higher levels of uric acid, which some believe raises the risk of cardiovascular disease and diabetes, among other woes. So fructose cannot be used to excess either. Dilute the 100% natural juices you buy and use sugar sparingly even fructose.

But those hypotheses have not been proven, emphasizes Melanson, and there’s no take-home message for people in terms of the form of sugar they eat. Some mass production of white sucrose leaves less than 20% fructose. The mass de-naturalization of sugar is to remove the brown color and make it white. This was important over a hundred years ago as a social issue not a health issue. The use of mustard and nerve gases to strip away the minerals and nutrients that yield the color, all designed to make WHITE sugar, white Flour for a White biased society.

Sucrose is normally about 30% fructose and 70% glucose, while honey is about 40 to 45 percent fructose, and high-fructose corn syrup is about 55 percent. Unprocessed honey has lots of minerals and vitamins to support energy production. The amount of fructose in agave nectar can vary, with estimates starting at about 60 or 75 percent (some say it’s much higher, depending on the processing method). Fructose in the supermarket is still at best only 90% fructose.

There are tiny differences in the minerals in some sweeteners; the less processed, the more trace minerals, says Blatner. (Honey, for example, has some magnesium and calcium.) And there is some evidence that the levels of antioxidants in sweeteners can vary. One study, published earlier this year in the Journal of the American Dietetic Association, found that among sweeteners, dark and

Extra high levels of dextrose in the blood will diminish white blood cells and thus weaken immunity, irritate nerves, weaken cell membranes, lessen healing repair, and over-all decrease health.
blackstrap molasses had the most antioxidant activity. Maple syrup, brown sugar, and honey had a bit less, and refined sugar, corn syrup, and agave nectar had the least.

Still, it usually comes down to personal taste and preference, Blatner says. Some find agave so sweet that they use much less of it, which can mean fewer calories. Others find the taste of molasses vile. It’s up to you. Importantly, you shouldn’t let any fructose worries scare you away from fruit; while it’s true that tree fruits and berries contain a large percentage of fructose, the absolute amount is quite low, Melanson says. And it comes packaged with plenty of fiber and nutrients, which is more you can say for your average sweetened cereal or drink. Use fruit to satisfy you sweet tooth.

The sweet tooth or sugar craving is most often a sign of some disease. A weak or clogged gall bladder will create this. A blood sugar imbalance will also make this craving. Addiction to the glycemic rush of white sugar is a factor. Nerve damage, intestinal parasites, psychological imbalance also can be the cause of aggravate. If you were lost in the desert for 3 days and just came out and someone offered you an apple, you wouldn’t say “No, have you got a candy bar.” If the apple does not fit your hunger, you are not hungry you are addicted. Use fruit to satisfy you sweet tooth.

Low Glycemic Food List

Low glycemic food is very important for the weight loss plans that you have been trying to work on. Check out the low glycemic food list given below.

The glycemic index of the food is the numerical index that categorizes the carbohydrates according to their response to the glucose from the human body. It scales from 0 to 100, the higher the GI (Glycemic Index) count, the higher is the blood sugar counts. Glycemic index is usually counted by feeding a fixed portion of food to the test subject after an overnight fast and then calculating the blood sugar counts. The GI count is the best method to lower the blood glucose levels as well as the body weight.

The bottom row is the healthiest, rich in minerals and vitamins with fructose or levulose sugar for stable energy. You make more harmone with fructose than with dextrose. The bottom 2 rows limit disease and faster good health, the quick fix sugars of row 1 do not last and they upset the blood stability. They can cause or aggravate every disease known.

Low Glycemic Index

More than 80% patients of type 2 diabetes suffer from obesity and high cholesterol levels. Eating low Glycemic food is very helpful for the overall health of a person. It helps a person to control the body weight, increase the insulin resistance, lower the risk factors of heart diseases and Polycystic Ovarian Syndrome (PCOS), maintain normal cholesterol levels, reduce craving for food, prolong physical endurance and retain the carbohydrate counts after a rigorous exercise.

However, it doesn’t mean that all the high glycemic foods must be avoided because those who are not suffering from diabetes, may need a rapid increase in the blood sugar levels. This is the reason why many physical trainers advice the players to have high GI food immediately after a tiring workout or any other physical activity. More on glycemic index food list.

Low glycemic diet plan is actually a diet plan that a person needs to follow at least for 28 days, which will help him/her maintain the proper blood glucose levels. Low glycemic index diet generally consists of proteins, low glycemic carbohydrates and omega-3 fatty acids. After following this diet plan for a month, the person can either switch to a balanced diet plan or continue with the same GI diet: low glycemic index foods. Is there any low glycemic food list that one can follow for better results? Yes, given below is a list of low glycemic index foods that you can refer in order to manage your daily diet.
### Low Glycemic Index Food List: Vegetables

<table>
<thead>
<tr>
<th>Name</th>
<th>Glycemic Index</th>
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<tbody>
<tr>
<td>Artichoke</td>
<td>15</td>
</tr>
<tr>
<td>Asparagus</td>
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<tr>
<td>Broccoli</td>
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<tr>
<td>Cauliflower</td>
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</tr>
<tr>
<td>Celery</td>
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</tr>
<tr>
<td>Cucumber</td>
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<tr>
<td>Eggplant</td>
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</tr>
<tr>
<td>Green Beans</td>
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</tr>
<tr>
<td>Lettuce</td>
<td>15</td>
</tr>
<tr>
<td>Peppers</td>
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</tr>
<tr>
<td>Snow Peas</td>
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<td>Spinach</td>
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<tr>
<td>Summer squash</td>
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</tr>
<tr>
<td>Tomatoes</td>
<td>15</td>
</tr>
<tr>
<td>Soy beans</td>
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</tr>
<tr>
<td>Dried peas</td>
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<tr>
<td>Boiled beans</td>
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<tr>
<td>Boiled kidney beans</td>
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<tr>
<td>Boiled lentils</td>
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</tr>
<tr>
<td>Zucchini</td>
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<tr>
<td>Chickpeas</td>
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<tr>
<td>Black-eyed beans</td>
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<td>Boiled haricot beans</td>
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<tr>
<td>Carrots</td>
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<td>Yam</td>
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<td>Cabbage</td>
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### Low Glycemic Index Food List: Fruits

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</thead>
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<td>Apricots (dried)</td>
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<td>Avocados</td>
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<tr>
<td>Cherries</td>
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<td>Grapefruit</td>
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<td>Grapes</td>
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<td>Bananas</td>
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<td>Pear</td>
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<td>Plum</td>
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<td>Peach</td>
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<td>Oranges</td>
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### Low Glycemic Index Food List: Cereals

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<tr>
<td>Porridge</td>
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<tr>
<td>Pearl barley</td>
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<tr>
<td>Rye</td>
<td>34</td>
</tr>
<tr>
<td>Wheat kernels</td>
<td>41</td>
</tr>
<tr>
<td>Parboiled rice</td>
<td>48</td>
</tr>
<tr>
<td>Cracked barley</td>
<td>50</td>
</tr>
</tbody>
</table>

### Low Glycemic Index Food List: Others

<table>
<thead>
<tr>
<th>Name</th>
<th>Glycemic Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole grain bread</td>
<td>50</td>
</tr>
<tr>
<td>Multi grain bread</td>
<td>48</td>
</tr>
<tr>
<td>Low fat yogurt</td>
<td>14</td>
</tr>
<tr>
<td>Chocolate milk</td>
<td>24</td>
</tr>
<tr>
<td>Fat free milk</td>
<td>32</td>
</tr>
<tr>
<td>Whole milk</td>
<td>27</td>
</tr>
<tr>
<td>Skimmed milk</td>
<td>32</td>
</tr>
<tr>
<td>Low fat ice cream</td>
<td>50</td>
</tr>
<tr>
<td>Soy milk</td>
<td>31</td>
</tr>
<tr>
<td>Peanuts</td>
<td>15</td>
</tr>
<tr>
<td>Marmalades and jams</td>
<td>40</td>
</tr>
<tr>
<td>Canned tomato soup</td>
<td>38</td>
</tr>
<tr>
<td>Chocolate bar</td>
<td>49</td>
</tr>
<tr>
<td>Macaroni</td>
<td>45</td>
</tr>
<tr>
<td>Spaghetti</td>
<td>41</td>
</tr>
<tr>
<td>Fettuccine</td>
<td>32</td>
</tr>
<tr>
<td>Vermicelli</td>
<td>35</td>
</tr>
<tr>
<td>Pound cake</td>
<td>54</td>
</tr>
</tbody>
</table>
Along with the proper ratio of the above mentioned low glycemic foods, one must also concentrate on a low carb diet that will be helpful to maintain the low glycemic index. Relatively less amount of oil, salad dressings, mayonnaise, fresh fruits and green vegetables, cereals and beans and low fat dairy items always top the low glycemic food list. One might also like to consider this glycemic index chart before opting for a healthy diet. Hope you found this article about low glycemic index food list, useful! Take care!

Blood sugar

The fluctuation of blood sugar (red) and the sugar-lowering hormone insulin (blue) in humans during the course of a day with three meals. One of the effects of a sugar-rich vs a starch-rich meal is highlighted.

The blood sugar concentration or blood glucose level is the amount of glucose (sugar) present in the blood of a human or animal. Normally, in mammals the body maintains the blood glucose level at a reference range between about 3.6 and 5.8 mM (mmol/L). It is tightly regulated as a part of metabolic homeostasis.

Glucose is primarily a compact energy store, and is the primary source of energy for body cells, fats and oils (ie, lipids). It is transported from the intestines or liver to body cells via the bloodstream, and is absorbed by body cells with the intervention of insulin, which is a hormone normally naturally produced by the body.

The mean normal blood glucose level in humans is about 10 mM (10 mmol/L or 140 mg/dL) (since the molecular weight of glucose, C6H12O6, is about 180 g/mol). However, the glucose level fluctuates during the day. It rises after meals for an hour or two by a few grams and is usually lowest in the morning, before the first meal of the day (termed “the fasting level”). The total amount of glucose normally in human blood is only about 3.3 to 7 g (assuming an ordinary adult blood volume of 5 litres, plausible for an average adult male).

When a blood sugar level is outside the normal range, it may be an indicator of a medical condition. A persistently high level is referred to as hyperglycemia or if low as hypoglycemia. Diabetes mellitus is characterized by persistent hyperglycemia from any of several causes, and is the most prominent disease related to failure of blood sugar regulation. A temporary elevated blood sugar level may also result from severe stress, such as trauma, stroke, heart attack, or surgery; and also from illness. Alcohol, after an initial surge in blood sugar, tends to cause blood sugar to fall. Also, certain drugs can increase or decrease glucose levels.[1]

If blood sugar levels drop too low, a potentially fatal condition called hypoglycemia develops. Symptoms may include lethargy, impaired mental functioning, irritability, shaking, weakness in arm and leg muscles, sweating and loss of consciousness. Brain damage is even possible.
If levels remain too high, appetite is suppressed over the short term. Long-term hyperglycemia causes many of the long-term health problems associated with diabetes, including eye, kidney, heart disease and nerve damage.

**Low blood sugar**

Some people report drowsiness or impaired cognitive function several hours after meals, which they believe is related to a drop in blood sugar, or "low blood sugar". For more information, see:

- idiopathic postprandial syndrome
- hypoglycemia

Mechanisms which restore satisfactory blood glucose levels after hypoglycemia must be quick and effective, because of the immediately serious consequences of insufficient glucose; in the extreme, coma, but also less immediately dangerous, confusion or unsteadiness, amongst many other symptoms. This is because, at least in the short term, it is far more dangerous to have too little glucose in the blood than too much. In healthy individuals these mechanisms are generally quite effective, and symptomatic hypoglycemia is generally only found in diabetics using insulin or other pharmacological treatment. Such hypoglycemic episodes vary greatly between persons and from time to time, both in severity and swiftness of onset. For severe cases, prompt medical assistance is essential, as damage (to brain and other tissues) and even death will result from sufficiently low blood glucose levels.

**Dextrose Sugar Related Health Problems:**

- Acne
- Addiction to drugs, caffeine & food
- Adrenal gland exhaustion
- Alcoholism
- Allergies
- Anxiety
- Appendicitis
- Arthritis
- Asthma
- Behavior problems
- Binge eating
- Bloating
- Bone loss
- Cancer (cancer cells feed on sugar)
- Candidiasis
- Cardiovascular disease
- Cataracts
- Colitis
- Constipation
- Depression
- Dermatitis
- Diabetes
- Difficulty concentrating
- Diverticulitis & diverticulosis
- Eczema
- Edema
- Emotional problems
- Endocrine gland dysfunction
- Fatigue
- Food cravings
- Gallstones
- Gout
- Heart Disease
- High blood cholesterol
- High estrogen levels
- High triglyceride levels
- Hormonal problems
- Hyperactivity
- High blood pressure
- Hypoglycemia
- Impaired digestion of all foods
- Indigestion
- Insomnia
• Kidney stones
• Liver dysfunction
• Liver enlargement & fatty liver syndrome
• Low HDL cholesterol
• Menstrual difficulties
• Mental illness
• Mood swings
• Muscle pain
• Nearsightedness
• Obesity
• Osteoporosis
• Overacidity
• Parasitic infections
• Premature aging & wrinkles
• Premenstrual syndrome
• Psoriasis
• Rheumatism
• Shortened life span
• Tooth decay
• Ulcers
• Vaginal yeast infections

Sugar may not be the whole answer to why you are ill, but it could be an important part of the puzzle. Check out the following excellent resources and try a sugar reduction program. Then you’ll know how much sugar is influencing your illness by the way you feel.

**What to do for your Health**

1. Kick the addiction to the high glycemic foods, eat fruits and vegetables and other low glycemic foods.
2. More green tea (use fructose), licorice, and other natural factors for treatment of blood sugar disorders.
3. The fruit juice you buy should never have any processed sugar added, use only fructose.
4. The fruit juice you buy is too often too concentrated. Dilute it buy one third to half for taste.
Fructose, or levulose, is the form of sugar found in fruit and honey. It is a levorotatory monosaccharide with the same empirical formula as glucose but with a different structure. Although fructose is a hexose (6 carbon atoms), it generally exists as a 5-membered hemiketal ring (a furanose).

All fruit naturally contains a certain amount of fructose (often together with glucose), and it can be extracted and concentrated to make an alternative sugar.

Fructose is often used in food products designed for people with diabetes mellitus or who have problems with hypoglycaemia, because it is metabolised more slowly (GI 32) than cane sugar (dextrose sucrose) and is sweeter, so it has a smaller effect on blood-sugar levels. However, some people can react badly to fructose so it is not an option for those who need to restrict sucrose intake.
Eat at least five servings of fruits and vegetables a day, use vegetables as the center of the meal.

Remember: do not eat foods boiled in oil, get good cold processed vegetable oils and thus good fatty acids, not trans or cooked animal oils. Eat only Levulose (fructose fruit sugars) not Dextrose (cane, corn, potato, grape sugar). Wellness is your Reward. Remember to chew your food, fruits alone, fluids alone, and melons alone.

Make vegetable and fruit juice part of your daily Wellness Healthy Regime.

Healthy Eating starts on your shopping trip and Health makes the next step at the kitchen. The dinner table is the next step of Healthy Eating.

Food made with anger, fear or hate is Poison. Food made with love is nutrition. If made with extra love, the food is Medicine. Desire’s work on Medicine and Wellness has made her the World’s most famous medical naturopath alive.
Stick Out Your Tongue to Weight Loss!

What's the first thing that your good old doctor says once you hop onto that cold, steel table? After asking, "Do you have health insurance?" doc then asks, "Can you stick out your tongue for me?" Why? Because the tongue tells all, literally. Another tongue-twister is that the tongue can actually be one of your best weapons for weight loss.

To get a better grip of the importance of the tongue, let's peek in on Dieter Jack and Dieter Jill who have just sat down to a low calorie, roasted chicken, roasted veggie Diet Feast after taking a short walk up a tall hill.

Dieter Jack: "This meal tastes like shiitake mushrooms gone bad!"

Dieter Jill: "What's wrong with you? You didn't fall down and crack your crown again, did you? This is delicious! I can't believe I'm on a diet!"

Fed up but still hungry, Dieter Jack searches through his hidden stash of junk food that he had intended to toss out later that month.

Dieter Jack: "What's this? A chocolate cupcake? Yippie!" he yells out, just managing to rip off the wrapper before popping the cupcake into his mouth.

Dieter Jack: "YUCK! This cupcake tastes worse than lunch!" and then he abruptly sneezes and reaches for a lotion-laced tissue as he ponders, "Will I ever get over these springtime allergies?"

Allergies? Hum....could it be that Dieter Jack's sense of taste is a bit broken due to his sense of smell? My brain bone's connected to my nose bone and my nose bone's connected to my tongue bone? Bottom of Form

Oh yes! Our sense of smell and taste are closely connected - much like a partnership. When one partner is out of sinc, the partnership often becomes a sinking ship and the partner then parts with their partner.

Such is the sense of taste. When the old sniffer is out of sinc, the sense of taste may be distorted or departed. More about this later - but our point is to illustrate the importance of achieving a healthy sense of taste - dieting or not. A sense of taste brings more enchantment to our lives, as food is an embedded part of life - something that we can never escape alive, and the central reason why it's so hard to lose weight and keep it off.

I Smell Weight Loss - Scents enhance everything from libido to appetite. Just the smell of fresh bread baking or hot buttered popcorn popping can kick in our Feasting Desire.

The Taste Buds - Location, Location, Location

The human tongue contains 'there or about' 10,000 taste buds that are located chiefly on the tongue with a few scattered about in the throat and palate.

How Food Transforms Into Tasty or Untasty

- Foods - both liquids and solids, contain chemicals;
- Saliva in the mouth dissolves chemicals;
- Dissolved chemicals are absorbed by the tongue pores which are surrounded by taste buds (ie taste receptors);
- Taste buds notify the brain via nerves.
No? What do you mean, no? Ahhh, come on, Bertha. Open wide and let us see that beautiful tongue of yours. Nothing to be shy about. Okay? That’s a girl. Now open wide?

Lovely! All but the gingerbread boy......which of course, is our Sweet Taste Bud area. Thank you, Bertha. (No wonder Bertha didn’t want to open her mouth....)

**Things that Impact Taste**

Anosmia - A disorder that involves the sense of smell and may involve partial or complete loss of smell which may be temporary or permanent. The following conditions connected with Anosmia may distort our sense of smell/sense of taste sensations:

- smoking
- cold, flu
- allergies, hay fever
- olfactory nerve damage
- certain medications, psychological disorders, medical disorders such as epilepsy, neurological disorders
- poor dental health, carries, mouth diseases

**Best & Worst Foods for Your Cholesterol**

**Trans fat is the worst offender. Here’s how to avoid it.**

*By Dave Zinczenko and Matt Goulding, Men’s Health*

While nutritionists and researchers may disagree about how certain foods and fats affect our overall cholesterol levels, one universal truth that everyone can agree on is that trans fat is an ultimate evil lurking in our food chain, proven time and again to lower healthy HDL cholesterol, raise artery-clogging LDL cholesterol, and put us at increased risk for cardiovascular disease. In fact, this artificial fat is so hazardous to our bodies that in 2007 the New York City Department of Health banned its use in restaurants.

Which of course led to the destruction of all the city’s restaurants and caused New York to drop into the sea. Oh no, wait ... that didn’t happen. In fact, the effect on New York’s restaurants—including its fast-food joints—was pretty much zilch. That’s because there are plenty of suitable, and much healthier, options out there and plenty of industry titans are using them. But to this day, many chain restaurants and food manufacturers in most parts of the country are still clinging to hydrogenated oils and shortening, and putting you, the consumer, in danger as a result.

What’s so unfair about this ongoing disregard for our health is that many fats are actually good for us—having a positive impact on our cholesterol profiles while also helping us stay fuller longer. Monounsaturated fats, like those found in olive and canola oils and healthy foods like avocados and nuts, can be used to make most any food better for us.

Make it your mission to eat healthfully for every single meal. Check out the four worst—and four best—meals for your cholesterol. And for more great tips like these, order the latest, most up-to-date version of the best-selling weight-loss series: Eat This, Not That! The Best (& Worst!) Foods in America!

**The worst**

**Worst breakfast**

Bob Evans Stacked & Stuffed Caramel Banana Pecan Hotcakes

- 9 g trans fat
- 1,543 calories
- 77 g fat (26 g saturated)
- 109 g sugars
- 2,259 mg sodium

These problematic pancakes keep popping up on our worst lists for a reason: They have more calories, sugar, carbs, sodium and fat than nearly any other breakfast in America. Add to that list 4½ days’ worth of trans fat and you begin to wonder why Bob Evans doesn’t make you sign a waiver before applying the syrup. When ordering from Bob’s breakfast menu, stick with items labeled “Fit from the Farm”—aside from scrambled eggs or a plain bowl of oatmeal, they’re the only healthy breakfast foods Bob Evans offers.
Worst lunch
Boston Market Classic Chicken Salad Sandwich
- 5 g trans fat
- 800 calories
- 41 g fat (7 g saturated)
- 1,900 mg sodium

Chicken and tuna salad sandwiches might not be the models of health some purport them to be, but even we were surprised to see how bad this Boston Market sandwich really is. Where do they possibly find the room to cram 2½ days’ worth of trans fat into chicken, mayonnaise, lettuce and bread? The answer lies somewhere in the murky ingredient list, which, as with too many of their dishes, runs at more than 40 items long. Boston Market has a swath of solid entrées—from rotisserie chicken to slices of sirloin—and healthy sides on their menu. Get a sandwich stacked with lean white meat, minus the trans fat, with Boston Market’s line of open-faced sandwiches.

Worst snack
Pop-Secret Kettle Corn (4 cups popped)
- 6 g trans fat
- 180 calories
- 13 g fat (3 g saturated)
- 150 mg sodium

The only secret here is that the popcorn purveyor uses partially hydrogenated oil to pop their kernels, turning a reasonable snack into a nutritional nightmare of heart-wrenching proportions. This box has three bags of popcorn, which means every time you buy it, you’re bringing 54 grams of dangerous trans fat into your house. There’s not an easier—or more important—swap to make.

Worst dinner
Denny’s Double Cheeseburger
- 7 g trans fat
- 1,540 calories
- 116 g fat (52 g saturated)
- 3,880 mg sodium

There’s nothing redeeming about this atrocious cheeseburger—stacked between two buns is nearly three times your daily limit of trans fat, three-quarters of the calories you should consume in one day, and the sodium equivalent of 118 saltine crackers. Oh, and did we mention the 59 bacon strips’ worth of saturated fat? Aside from the Fit Fare Boca, you’re not going to find a reasonable burger on the Denny’s menu, so it’s either this or a grilled chicken sandwich.

Bests
Best breakfast
Starbucks Perfect Oatmeal with Nut Medley
- 240 calories
- 11 g fat (1.5 g saturated); 0 mg sodium

Best lunch
Baja Fresh Grilled Mahi Mahi Tacos (2)
- 460 calories
- 18 g fat (3 g saturated)
- 600 mg sodium

Best snack
Wholly Guacamole Classic (2 Tbsp)
- 50 calories
- 4 g fat (0.5 g saturated)
- 75 mg sodium

Best dinner
Uno Chicago Grill Lemon Basil Salmon with Steamed Broccoli
- 510 calories
- 39 g fat (5 g saturated)
- 1,030 mg sodium

Don’t spoil a day of perfect eating with calorie-packed beverages. Avoid all items on this list of the 20 worst drinks in America.

The 20 Unhealthiest Drinks in America - Exposed!
Avoid gulping down an entire day’s worth of calories
- 1. The Worst Drink in America
- 2. Worst Milkshake
- 3. Worst Smoothie
- 4. Worst Frozen Coffee Drink
- 5. Worst Blended Fruit Drink
- 6. Worst Hot Coffee
- 7. Worst Coffee Alternative
- 8. Worst Summer Cocktail
- 9. Worst Kid’s Hot Beverage
- 10. Worst Chai Tea Drink
- 11. Worst Chocolate Milk
- 12. Worst Juice Imposter
- 13. Worst Iced Tea
- 14. Worst Energy Drink
- 15. Worst Tea-Like Substance
- 16. Worst Lemonade
- 17. Worst Beer
- 18. Worst Soda
- 19. Worst “Healthy” Drink
- 20. Worst Light Beer
Weight Loss

By: David Zinczenko and Matt Goulding

My buddy, Bill, came to me a while back looking for advice on how to banish the bulging belly he had acquired in his later years. I skipped the diet lecture and instead gave him a copy of the book, Eat This, Not That!, and a single piece of advice: Start with the drinks chapter.

Four months later, Bill has adopted the simple food swap philosophy and dramatically altered his calorie intake without giving up the foods and drinks he loves. His reward: 25 pounds and three inches off of his waistline—in around six weeks!

I told Bill to start with beverages because between soda, coffee drinks, smoothies, and booze, he was sipping away more than a quarter of his daily calories. He’s not the only one. A study from the University of North Carolina found that we consume 450 calories a day from beverages, nearly twice as many as 30 years ago! This increase amounts to an extra 23 pounds a year that we’re forced to work off—or carry around with us.

There’s good news and bad news when it comes to liquid calories. The bad news is they are the most difficult calories for us to gauge, because we have none of the greasy, cheesy visual cues we get when we go face-to-face with a plate of loaded nachos or a triple cheeseburger. The good news is that they are the easiest calories to cut from your diet. Just ask Bill.

I’ve identified the most bloating beverages in gas stations, bars, smoothie counters, and coffee shops across America and replaced them with sensible and satisfying stand-ins for a fraction of the caloric cost. So you can sip what you want, skip the diet, and still lose lots of weight this year.

You Must Skip Cola (Even Diet)

Scientists in Boston found that drinking one or more regular or diet colas every day doubles your risk of metabolic syndrome—a cluster of conditions, including high blood pressure, elevated insulin levels, and excess fat around the waist, that increase your chance of heart disease and diabetes. Controlling blood pressure and cholesterol levels, preventing diabetes, and not smoking can add 6 to 9 1/2 healthy years to your life.

One culprit could be the additive that gives cola its caramel color, which upped the risk of metabolic syndrome in animal studies. Scientists also speculate that soda drinkers regularly expose their tastebuds to natural or artificial sweeteners, conditioning themselves to prefer and crave sweeter foods, which may lead to weight gain, says Vasan S. Ramachandran, MD, a professor of medicine at Boston University School of Medicine and the study’s lead researcher.

Better choices: Switch to tea if you need a caffeine hit. Green tea is better. If it’s fizz you’re after, try sparkling water with a splash of juice.

Healthier fries? Trans fat limits are working

Analysis: Manufacturers didn’t just swap one bad ingredient for another

By ALICIA CHANG

updated 5:40 p.m. ET May 26, 2010

All designed to detect + reduce Electro-stress and Balanace the Body Electric Automatically
Los Angeles - Holy fish sticks! Scientists finally have some good news about fat in our foods. Contrary to fears, most food manufacturers and restaurants did not just swap one bad ingredient for another when they trimmed artery-clogging trans fats from products and menus, an analysis finds.

Even the french fry, a longtime dietary scourge, got a healthier remake. But there's still room for improvement, particularly for some items sold in supermarkets, which replaced heart-damaging trans fat with its unhealthy cousin, saturated fat.

A Harvard researcher and a consumer advocacy group examined 83 foods that had a makeover since 2006. That year the federal government began requiring food labels to list the amount of trans fat in packaged products and New York City became the first of several cities to phase them out in restaurants.

Trans fats are created when hydrogen is added to liquid oils to harden them for baking or to extend shelf life. With trans fat under attack, food makers and restaurants tinkered with various cooking oil and fat substitutes, trying not to compromise taste and texture. But how healthy are the reincarnations?

Harvard researcher Dr. Dariush Mozaffarian and the Center for Science in the Public Interest checked grocery products and restaurant chow for fat content. Items studied included margarine, junk food, baked goods and fast food from five popular chains.

The researchers did not do their own chemical testing, but instead used Food and Drug Administration databases, nutrition labels and industry brochures to determine trans fat and saturated fat levels.

Results were published in a letter in Thursday's New England Journal of Medicine. Nearly all of the foods analyzed were free or mostly free of trans fat. And many companies and restaurants did not spike their saturated fat content when they cut trans fat — 65 percent of supermarket products and 90 percent of restaurant fare contained saturated fat levels that were lower, unchanged or only slightly higher than before.

"Companies almost always can reformulate their food to have a healthier balance of fats," said CSPI executive director Michael Jacobson.

2010's Top 5 Diet Pills for Fast Weight Loss
Confused About Which Diet Pills Really Work? Let Us Help...

DietRatings.org is an independent consumer resource designed to help you compare the many diet pills available to consumers and learn about diet pills that are actually worth your money.

On a yearly basis, we provide in-depth analysis on the top diet pills on the market, providing consumers with the most complete diet pill comparisons and recommendations.

Our industry-leading 3-Step Review Process will help you find the market's best diet products that aren't just clinically proven but also consumer recommended for fast, safe weight loss and fat reduction.

Combining customer reviews and in-depth expert analysis, our mission is to provide the most complete and up-to-date information on the most popular diet pills to help educate each of our visitors with information that will help them make smart buying decisions.

You can be assured that with every review, we cut through the marketing hype to help you find the best diet products at the best prices.

1 Moyoberry Irvingia Gabonensis

Today Only Special: Save 10% Off Your Entire Order - At Checkout, Use Coupon Code: 2277

Moyoberry has soared up the charts with its impressive clinical research results and glowing customer reviews.

The active ingredient in Moyoberry is a unique nutrient called Irvingia Gabonensis, which is extracted from a rare mango fruit native to the rainforests of Cameroon, West Africa.

According to a new study published in the medical journal Lipids in Health and Disease, this extract was shown to cause an average weight loss of 12.3 pounds in 30 days without additional diet or exercise.

What's more, subjects taking this extract experienced a significant decrease in bad LDL cholesterol, triglycerides, and glucose levels. No negative side effects were reported in the clinical research.

In our 17 years of reviewing clinical research, no other diet pill has facilitated such a large weight loss within 30 days without additional diet or exercise.

After interviewing 250 Moyoberry customers, as well as reviewing the clinical research studies, this product is our runaway #1 recommendation for 2010.

Special for Our Readers: Save 10% off your entire order of Moyoberry today only. At checkout, use Coupon Code: 2277 (Coupon Code guaranteed only until 12:00 midnight EST, May 27, 2010.)
**Phosphacore**

Phosphacore Extra-Strength Abdominal-Fat Oxidizer is also soaring up the charts for its clinically proven belly-fat-fighting benefits.

The active ingredient in Phosphacore is an extract from the plant species Carthamus tinctorius, a unique plant native to North-Central Africa. According to a new 28-day study from scientists at the Department of Public Health at Sweden's Uppsala University, subjects taking this nutrient lost an average 600% more abdominal fat than people taking a placebo--this amounted to an average abdominal fat loss of nearly 1 inch every 28 days.

In another new study published in The American Journal of Clinical Nutrition, scientists from the University of Wisconsin found that people taking this nutrient lost on average 900% more total body fat per week relative to subjects who consumed a placebo. This included excess fat from the abdominal region, legs, buttocks, and arms.

After interviewing 250 Phosphacore customers, as well as reviewing the clinical research studies, this product is our #2 recommendation for 2010--and a top recommendation for people wanting to lose belly fat specifically.

Special for Our Readers: Save 10% off your entire order of Phosphacore today only. At checkout, use Coupon Code: 2288 (Coupon Code guaranteed only until 12:00 midnight EST, May 27, 2010.)

**Organic Ethiopian Coffee**

Organic Ethiopian Coffee, while not technically a diet pill, makes our ratings for its potent fat-fighting benefits.

Researchers say the secret to this coffee's mysterious slimming properties is found in the coffee beans used to make this delicious brew. The bean is found only in the secluded mineral-rich Red Mountains of Ethiopia. The rich red soils in which this rare bean is grown is the same soils which give the Red Sea its mysterious "ruddy complexion."

This coffee has been consumed for centuries among the village people of Africa's ancient Red Mountains and Great Rift Valley along the Biblical Red Sea. The coffee is uniquely rich in phytonutrients, antioxidants and one curious compound called cholorgenic acid.

According to a new study published in the scientific journal Complementary and Alternative Medicine, this nutrient caused a 35% reduction in body fat.

Organic Ethiopian Coffee is a hundreds-year-old beverage just now being introduced to the mainstream, and it's our #3 recommendation for 2010--a perfect choice for coffee and tea drinkers. We've received many letters from customers who've achieved even greater body fat loss by using this coffee in conjunction with Phosphacore and/or Moyoberry Irvingia Gabonensis.

**Alli**

Alli was our #2 rated diet pill in 2008 and #3 in 2009, but drops to #4 in this year's ratings, primarily because of its unpleasant side effects.

Research shows Alli may help people lose weight by helping block the absorption of 25 percent of the dietary fat ingested. The fat that isn't absorbed is passed through the bowels.

Consuming meals with more than 15 grams of fat while using Alli may lead to gastrointestinal upset, gas, and oily discharge, which is often too uncomfortable for many users.

With that said, we still rate Alli within our top 5 because its FDA approved and clinically tested. You may see good results using Alli, depending on your threshold for the above-noted side effects.
Lipo-6 is a diet-pill formula that combines 6 thermogenic compounds, including synephrine, caffeine, guggulsterones, yohimbine, and bioprene. It has gained particular popularity among bodybuilders and fitness enthusiasts who are looking to rev up the metabolism and increase fat burning.

Clinical research shows each of the ingredients in Lipo-6 may increase fat oxidation and metabolism; however, a few clinical research studies show side effects related to the fruit extract synephrine, including increased blood pressure.

This product should be used with caution and may cause sleeplessness and jitters.

You are overweight for the most simple of reasons -- because you’re eating the wrong foods, the wrong types of calories per meal, and you’re also eating meals in the wrong patterns each day.

Think closely about what we’re about to tell you, since it’s going to change the way you think about dieting...

FOOD is more powerful than any prescription weight loss pills, because the FOOD that you eat can either make you THIN or FAT. You don’t get fat because of a lack of exercising, that’s a myth. You get fat because you don’t eat the right foods at the right intervals each day.

Also, the pattern that you choose to eat your meals each day is more powerful than any prescription weight loss pills. This is true because your body is like an "engine" and it only needs certain foods at certain intervals each day, and if you don’t eat the right foods at the right times then it won’t burn those calories -- and you’ll wind up storing those calories as fat tissue. (Hint: You need to eat more than 3 times per day to lose weight, but we’ll show you the details later).

You have gotten overweight by eating the wrong foods, that much is a fact. And guess what? You can get SLIM by eating the RIGHT FOODS at the RIGHT INTERVALS each day.

It’s not really any more complicated than that, and the way to start losing weight has nothing to do with starving yourself or jogging.

**Low Calorie Diets Do NOT Work**

The reason you cannot lose weight by starving yourself (using a low calorie diet) is because your metabolism will detect any major drop in calories and it will then ADJUST ITSELF by burning fewer calories each day.

For example:

If you begin eating 2,500 calories per day then your metabolism will adjust itself so that your body begins burning 2,500 calories per day.

If you try to starve yourself by suddenly eating 1,000 calories per day then your metabolism will again ADJUST ITSELF so that your body begins to burn only 1,000 calories per day. That’s why you have failed in your past dieting attempts, that’s why you always seem to fail when you try and starve yourself.

Now you know the reason why you can eat 1,000 calories per day and not lose any weight while your friends can eat 2,500 calories per day and not gain any weight.

**Low FAT Diets Do NOT Work**

Also, virtually every person in today’s society is buying mostly “low fat” or “non fat” food at the grocery store, everybody is conscious of the “fat grams” inside the food they buy. However, people are getting fatter than ever by doing this and people are not losing weight by switching to the “low fat lifestyle”.

**Low CARB Diets Make You Miserable**

Low carb diets have certainly become popular in recent years, but such diets often leave you feeling miserable each day (since they drain most of your energy and can leave you feeling quite awful each day).

Check out these facts below...

Did you know that several popular low carb diets are so strict that you cannot even eat a large apple during the first couple weeks? It’s true.

Also, many low carb diets won’t even let you enjoy a ‘normal’ restaurant meal (ordered without any carb restrictions) for many months after you begin.

Therefore, low carb diets can leave you feeling MISERABLE each day, which is not the answer.

Tips on good abs

1. **Trade crunches for Pilates.**

   To firm up the muscles beneath your love handles—known as the external obliques—try the Pilates “100s.” This exercise was found to challenge more overall muscle in one shot (specifically, the muscles spanning the waist) than traditional crunches, according to a new study by Michele Olson, Ph.D., at Auburn University in Montgomery, Ala. To do the 100s, sit on a mat and make a V with your body (your butt forms the bottom of the V). Reach your hands past your knees, arms...
parallel to the floor. Pump your arms up and down 100 times, inhaling and exhaling every five counts.

2. **Grab a ball.**

Women who did their ab workouts with a stability ball beneath their glutes and lower back got bonus benefits, in a study from the Journal of Strength and Conditioning Research. The women used both their abs and their back muscles, key for making you stand tall and look slender.

If you’re not doing abs now, don’t start on the ball—this can damage your spinal disks, says abdominal-training expert Stuart McGill, Ph.D., author of Ultimate Back Fitness and Performance. Build strength and stability off of the ball first.

Try “Crossover Crunches”: In the standard crunch position, bring one shoulder toward your opposite knee. Hold for two to three counts. Start with five to 10 reps on each side. Progress to 10 counts and 20 reps. Do this three times a week, and you can move to the ball after three weeks.

3. **Let your back come off the floor.**

When lying on your back with your knees bent, you should be able to get your fingers under the hollow of your lower back. Maintaining your back’s normal curve lets you work your abs without straining your spine, according to McGill. Instead of sucking your navel to the floor, “brace” your abs as if someone were about to punch you in the stomach. Keep that tension (and the arch) while doing ab work.

4. **Add weight, not repetitions.**

Your abs are just like your biceps: To make them stronger and tighter, you don’t need 500 reps. Instead, try grabbing a three- or five-pound weight. Place it behind your head or on your chest and do one set of eight to 15 sit-ups, working up to more sets as you get stronger.

5. **Slow down.**

You’ll get the body you want faster by doing 10 slow repetitions instead of 20 fast ones. Moving slowly—two counts up and two counts down—allows you to use more precise form, which can stimulate your muscles better and make them stronger, says Rodney Corn of the National Academy of Sports Medicine. (The faster you go, the more likely you are to use momentum instead of your abs.) Your muscles should feel tired in 15 reps.

6. **Lift weights one arm at a time.**

Your core muscles get a workout when you exercise on an unstable base—like when you’re standing on one leg or on top of a wobbly rubber disk—because your weight is off-center, causing your core to kick in a little harder. Similarly, when you do upperbody moves one arm at a time, the off-centeredness gives ab and back muscles an extra challenge.

7. **Invest in cardio.**

To show off the abs of steel you’ve been building, 30 minutes of cardio gets you farther than 30 minutes of crunches. To burn off the layer of fat that’s hiding your muscles, ab-specific contractions just don’t do the trick, says Len Kravitz, Ph.D., professor of exercise physiology at the University of New Mexico. Ab moves burn about two to six calories per minute, while cardio blasts 10 or 12.
8. Try Chinese food.
A standard turkey sandwich on whole wheat has a measly four grams of fiber. The problem? Studies show that people who eat more fiber tend to be leaner and have smaller waistlines than people who don’t eat as much of it. Better: A serving of chow mein with extra broccoli and brown rice has about 10 grams of fiber. Worried about the sodium in Chinese food? It’s a myth that sodium noticeably changes the appearance your abs, says Liz Applegate, Ph.D., director of sports nutrition at University of California, Davis.

9. Choose the cookie with Natural fruit.
Many sugar-free cookies are sweetened with sugar alcohols, which can cause gas and bloating, says Leslie Bonci, director of sports nutrition at the University of Pittsburgh Medical Center. To skip these sweeteners, avoid ingredients ending in “-ol,” including sorbitol, lactitol, and maltitol. Many sugarfree versions, by the way, have almost as many calories as the originals. Other artificial sweeteners, such as sucralose (Splenda) and aspartame (NutraSweet), cause nerve damage. Chose the ones with natural fruit.

10. Have three seltzers this week.
Swapping alcohol for seltzer or another beverage can slim your waist. That’s because calories metabolized from alcohol are more prone to be stored as fat around the belly, says Applegate. Of course, going low-cal is even more slimming: Skipping three pomegranate martinis a week trims about 2300 calories a month. That’s eight pounds of fat per year.

What is the best exercise to burn fat? Any exercise that gets your heart rate into your targeted heart range. If you want to lose weight, you need to exercise hard enough to increase your pulse rate enough to burn fat more efficiently.

The exercises that get your heart rate into your targeted heart range will increase your metabolism and that’s what burns fat. So if you find the best exercise to burn fat you’ll lose weight.

Losing weight has more health benefits other than just making you look better. By losing 10-15% of your body weight you can reduce your risk of heart attack, reduce your cholesterol level, and get healthier overall. So how do you start?

Your first hurdle that you will need to overcome is commitment. If you want to lose weight, then you have to commit to a good cardio workout routine.

This means that you will have to exercise at least three to four times a week for 30 minutes to 1 hour. If you commit to one month of regular exercise, you will find that at the end of that month you will have more energy, be in a better mood and you will probably have lost a few pounds. Commitment is one of the keys to finding the best exercise to burn fat.

Mix it up. Keep your exercise routine exciting and vary it so you will keep interest in your workout routine. Finding an exercise that burns fat is not that difficult. Any exercise can burn fat if you get your heart rate in the targeted zone. This can include running, walking, hiking, playing basketball, spinning, interval training, or anything else that you can think of.

Make it fun and you will enjoy it and have a much better chance of sticking to it. Changing your routine around will help you to stay interested and committed. Make sure that you work your entire body for maximum results.

A full body exercise workout can include adding some weight training into your workout. If you enjoy walking and jogging, then you could add some weight training for your arms and shoulders.

Regular exercise has a positive effect on the general health of people with diseases or chronic conditions, and can lessen the severity of emotional disorders by giving the person a sense of greater control.
SOUPS Why no cream; High levels of hidden salt in soup 'can increase the risk of cancer'

High levels of ‘hidden’ salt in soup can increase the risk of cancer, experts have warned.

By Kate Devlin, Medical Correspondent
Published: 12:01AM GMT 31 Jan 2009

People who regularly sit down to a warming bowl of soup could inadvertently be doing themselves long-term damage, according to Dr Rachel Thompson, science program manager for the World Cancer Research Fund (WCRF).

She warned that servings of some well-known brands contained half the recommended daily limit of salt intake.

Rather than a healthy comforting meal, soup was one of the "worst offenders" for high levels of hidden salt in food, she added.

Doctors have long warned that salt can increase the body's blood pressure and contribute to a stroke or a heart attack.

But recent research has suggested that too much salt could also be a factor in the development of stomach cancer.

The Food Standards Agency recommends that adults take in no more than 6g a day.

Dr Thompson said: "Soups are one of the worst culprits for hidden salt. Some brands of soup have as much as half the recommended daily intake per serving.

"Fresh vegetable-based soups tend to have less salt than tinned cream-based soups that include bacon or ham, but even some of the healthier brands of vegetable soups still contain over a third of our recommended daily intake. This is why it's so important for people to always check the labels of products.

"Our daily intake should be no more than 6g but we actually need far less than this.

"This is why we need to get the message across that limiting salt intake is an important part of having a healthy diet.

"It is commonly known that salt increases risk of high blood pressure, but people are less aware that it also probably increases risk of stomach cancer.

"Even taking small steps to reduce your salt intake, such as always checking food labels or even
making your own soup from scratch rather than buying ready-made, is something positive you can do to help reduce your risk of cancer."

According to research by the WCRF a serving of Batchelors Soupfulls contains up to 3g of salt, The Green Giant Farm Harvest Mushroom Soup 2.5g, Heinz Classic Vegetable soup 2g, Covent Garden’s Carrot and Coriander, Lentil and Bacon, Wild Mushroom and Chicken soups 2.3g, and Simply Organic Chunky Vegetable Soup 2.1g. Shoulder cancer is the fifth most common form of the disease in Britain, with more than 8,000 people a year diagnosed.

Pumpkin Soup Recipes

Pumpkin Soup Recipes for Everyone

If you are using cream or milk to add creaminess to your soup, always add it at the end of cooking, else you risk scalding it.

There are some types of soup that some people love and others not so much, but pumpkin soup is different because there are so many diverse recipes for it. For example, chunky soups are great for kids and the creamy, sweet flavor of pumpkin is very appealing to them.

For a classy summer appetizer, what about making chilled pumpkin soup? This is an elegant dish, which you can prepare beforehand, freeing up time to make the main course. A hot pumpkin soup can also be sophisticated, especially with some cream swirled on the top and a few snipped chives or a dash of gourmet pumpkinseed oil.

Making Authentic Pumpkin Soup Recipes at Home

Once you have some pumpkin you can start experimenting with recipes for creamy pumpkin soups. Making soup at home is always preferable to using soup mixes or canned soups because it tastes fresher. Also, you control exactly what goes into your pumpkin soup recipe. There are often lots of undesirable additives found in canned soups and soup mix powders.

Ingredients such as chili sauce and lime can be used for an Asian spin on classic pumpkin soup recipes, rather than the more traditional ingredients of cream or milk and broth. You can really spice up a pumpkin soup recipe with chili powder or chili sauce and it actually suits the pumpkin flavor.

This is a great idea if you are trying to get over a cold or the flu or if it is very cold, outside and you want to warm up with a hot, tasty soup recipe.

Delicious Pumpkin Soup through History

Pumpkins date back thousands of years and, like most vegetables, they have been used to make soup in various cultures. Modern pumpkin soup recipes are very refined and there are plenty of exciting ingredients available to make any kind of pumpkin soup you fancy, from classic pumpkin soup to a canned pumpkin soup recipe and pretty much any recipes for creamy pumpkin soups you want to create.

The Easiest Pumpkin Soup Recipes

A pumpkin soup recipe can be as easy or as complicated as you want to make it. There are lots of easy pumpkin soup recipes and you can simply boil some pumpkin in broth, throw in a few herbs or spices, simmer it for a while, and puree the results. This will be quite a plain, basic soup but it is also an example of an easy pumpkin soup recipe, which you can make if you are in a rush.

Another easy way to cook pumpkin before using it to make pumpkin soup is to wash it well, cut it into two halves, and discard the seeds. Cook it in an uncovered pressure cooker until soft or boil it in a pan full of water until it is tender. Then you can chop it up or puree it and add it to the other pumpkin soup ingredients.

Healthy pumpkin soup recipes tend to be very easy as well. Skim milk and pumpkin puree can be combined for a quick, easy, and healthy soup recipe and you can add some pumpkin pie spice if you like, to boost the flavor. Splenda or sugar adds sweetness or you can omit this if the pumpkin is sweet enough for your taste already. These are just a few ways to create delicious pumpkin soup recipes yourself at home.

So, enjoy browsing our extensive collection of the best pumpkin soup recipes ever and happy cooking!

Scalding Milk: Is It Really Necessary?

Every so often, we come across a recipe that asks us to scald the milk before adding it to whatever custard or bread recipe we happen to be making. This always seems like an annoying extra step without an obvious function in the recipe, so we started wondering: is it really necessary?

In a lot of recipes, especially older ones passed down from family members, scalding the milk is...
Weight Loss
is the end-product caused by the breakdown of
in the connective tissue, the joint
Quantum
Musculoskeletal and Skin Diseases (NIAMS):
Gout can progress through four stages according to the National Institute of Arthritis and
The Stages of Gout
•
•
•
•
What Causes Gout?
Uric acid
in the body which causes the formation of uric acid crystals. Excess uric acid (hyperuricemia) in
the body can be caused by:
• an increase in production of uric acid by the body
• under-elimination of uric acid by the kidneys
• increased intake of foods high in purines
The Stages of Gout
Gout can progress through four stages according to the National Institute of Arthritis and
Musculoskeletal and Skin Diseases (NIAMS):
• Asymptomatic gout - There is elevated uric acid levels in the blood but no other symptoms. Typically, at this stage no treatment is required.
• Acute gouty arthritis - Hyperuricemia causes deposit of uric acid crystals in the joint spaces. The intense symptoms of pain and inflammation are experienced. Early, acute attacks usually subside within 3-10 days even without treatment.
• Interval gout - The period between acute gout attacks when there are no symptoms and there is normal joint function.
• Chronic tophaceous gout - The most disabling stage of gout which occurs after many years, associated with permanent damage to the affected joints and sometimes the kidneys.
• Is It Gout or Pseudogout?
Gout Treatment
With proper treatment, people who have gout do not usually progress to the chronic tophaceous phase of gout. What is the proper treatment of gout? Medications can be prescribed to help control gout and there are lifestyle recommendations. People with gout are advised to:
• Avoid alcohol or drink alcohol in moderation
• Drink plenty of water and other fluids
• Maintain an ideal body weight
• Lose weight if overweight but avoid fasting or quick weight loss schemes
• Avoid eating foods high in purines
• How To Treat Gout With Diet And Medication
What Should You Eat?
Dietary restrictions suggest what people should not eat, but what should people eat? What foods will help control gout attacks? The American Medical Association recommends the following dietary guidelines for people with gout, advising them to eat a diet:
• high in complex carbohydrates (fiber-rich whole grains, fruits, and vegetables)
• low in protein (15% of calories and sources should be soy, lean meats, or poultry)
• no more than 30% of calories in fat (with only 10% animal fats)
Recommended Foods To Eat
• Fresh cherries, strawberries, blueberries, and other red-blue berries
• Bananas
• Celery
• Tomatoes
• Vegetables including kale, cabbage, parsley, green-leafy vegetables
• Foods high in bromelain (pineapple)
• Foods high in vitamin C (red cabbage, red bell peppers, tangerines, mandarins, oranges, potatoes)
• Drink fruit juices and purified water (8 glasses of water per day)
• Low-fat dairy products
• Complex carbohydrates (breads, cereals, pasta, rice, as well as aforementioned vegetables

Gout Diet: Foods To Eat
What Should You Have In Your Shopping Cart To Help Prevent Gout Attacks?
By Carol & Richard Eustice, About.com Guide
Updated June 03, 2006
What Is Gout?
Gout is one of the most painful types of arthritis, and accounts for 5 percent of all cases of arthritis. Gout is characterized by sudden, severe bouts of redness, swelling, warmth, pain, and inflammation in one or more joints. Most commonly the big toe is the initial joint involved, but other joints may be involved initially or become involved in recurring attacks of gout.
What Causes Gout?
Gout results from the deposit of needle-like uric acid crystals in the connective tissue, the joint space between two bones, or both. Uric acid is the end-product caused by the breakdown of purines. Purines are naturally found in the body and are found in many foods. It is excess uric acid in the body which causes the formation of uric acid crystals. Excess uric acid (hyperuricemia) in the body can be caused by:
• an increase in production of uric acid by the body
• under-elimination of uric acid by the kidneys
• increased intake of foods high in purines

Are there any other reasons you know of to scald milk?
In bread making, scalding the milk serves a more scientific purpose. The whey protein in milk can weaken gluten and prevent the dough from rising properly. Scalding the milk deactivates the protein so this doesn’t happen.

But are there some other reasons why you still might want to scald the milk going into a recipe!
Milk is an excellent carrier of flavors, and in many recipes, the real purpose of the milk-scalding step is to infuse it with flavor - and therefore bring the flavor into the final dish. Vanilla beans, fresh mint, lavender buds, cinnamon, and any number of other dried and fresh ingredients can be used. You’ll see this technique used a lot in ice cream recipes, pastry cream, and other dessert recipes.
Scalding the milk can also help cut down on cooking time. Milk is an easy and relatively forgiving ingredient to heat, and when making a sauce or custard, it can help jump-start the cooking process. Be careful though - if you’re mixing the milk into something with eggs, be sure the milk isn’t so hot that it will cook the eggs.

In bread making, scalding the milk serves a more scientific purpose. The whey protein in milk can weaken gluten and prevent the dough from rising properly. Scalding the milk deactivates the protein so this doesn’t happen.

Are there any other reasons you know of to scald milk?
Purines are nucleotide bases found in plant and animal cells. Purines comprise adenine, guanine, hypoxanthine, and xanthine. They make up important components of the genetic materials, DNA and RNA, and energy molecules such as ATP, GTP and coenzyme A. Therefore, purines are essential constituents of life.

Purine Rich Diet and Gout

In the body, purines are metabolized to uric acid, for instance when cells die. Purines are among the factors that are causes of elevated uric acid in the blood. With the consumption of high purine foods, serum uric acid may rise above the normal level. Even though uric acid acts as an antioxidant and has a free-radical scavenging effect, when it accumulates to a high level in the blood it can cause gout and other health problems. Gout is a form of arthritis caused by the accumulation of uric acid in joints, especially in the big toe.

In a 12-year study that followed eating habits and gout incidence in large number of men it was found that eating food rich in purine, such as meat and seafood, was associated with high risk of gout, whereas a higher level of consumption of dairy products was associated with a reduced risk.
### Table 1: High or low purine food sources

<table>
<thead>
<tr>
<th>Food Sources of Purine</th>
<th>Total purine content (mg of purine/100 g food)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicken</td>
<td>288.4</td>
</tr>
<tr>
<td>Kidney</td>
<td>233.9</td>
</tr>
<tr>
<td>Poultry</td>
<td>159.7</td>
</tr>
<tr>
<td>Lamb, roasted, lean</td>
<td>127.6</td>
</tr>
<tr>
<td>Pork, bacon, bone</td>
<td>119.0</td>
</tr>
<tr>
<td>Pork, white, lean</td>
<td>115.9</td>
</tr>
<tr>
<td>Mushroom, fresh</td>
<td>48.9</td>
</tr>
<tr>
<td>Bread, crust</td>
<td>13.7</td>
</tr>
<tr>
<td>Oat, white, milk</td>
<td>12.2</td>
</tr>
<tr>
<td>Wheat flour</td>
<td>11.5</td>
</tr>
<tr>
<td>Cottage cheese</td>
<td>8.0</td>
</tr>
<tr>
<td>Plain yogurt</td>
<td>7.0</td>
</tr>
<tr>
<td>Rice, cooked</td>
<td>5.0</td>
</tr>
</tbody>
</table>

### Table 2: Purine content in meat, organos, seafoods (fresh and canned), and vegetables (legumes).

<table>
<thead>
<tr>
<th>Purine food sources</th>
<th>Total purine content (mg/100 gram food)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organ meats</td>
<td></td>
</tr>
<tr>
<td>Pork liver</td>
<td>289</td>
</tr>
<tr>
<td>Chicken liver</td>
<td>243</td>
</tr>
<tr>
<td>Chicken heart</td>
<td>223</td>
</tr>
<tr>
<td>Beef kidney</td>
<td>213</td>
</tr>
<tr>
<td>Beef liver</td>
<td>197</td>
</tr>
<tr>
<td>Pork meat</td>
<td>171</td>
</tr>
</tbody>
</table>

| Fish seafood        |                                        |
| Anchovies           | 411                                    |
| Sandeens            | 345                                    |
| Salmon              | 250                                    |
| Mackerel             | 184                                    |
| Clams               | 136                                    |

| Canned seafoods     |                                        |
| Sardines            | 349                                    |
| Herring             | 374                                    |
| Anchovies           | 321                                    |
| Mackerel            | 246                                    |
| Shad                | 234                                    |
| Turbot              | 142                                    |
| Oysters             | 197                                    |
| Goitit              | 68                                     |
| Clams               | 62                                     |

| Dried legumes       |                                        |
| Blackeye peas       | 230                                    |
| Lambryo             | 222                                    |
| Great northern beans| 215                                    |
Weight Loss

According to a study that compared the total purine content in meat products, poultry, fish, and vegetables, it appears that the level of total purine content may also be higher in meat products than in other foods. Total purine content is based on the sum of all the four purine bases.

Table 3: Purine content in raw and cooked foods

<table>
<thead>
<tr>
<th>Meat products</th>
<th>Total purine content (mg of purine/fish)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liver, raw</td>
<td>252.2</td>
</tr>
<tr>
<td>Liver, cooked</td>
<td>237.9</td>
</tr>
<tr>
<td>Liver, broiled</td>
<td>238.1</td>
</tr>
<tr>
<td>Steak, raw</td>
<td>105.9</td>
</tr>
<tr>
<td>Steak, broiled</td>
<td>137.8</td>
</tr>
<tr>
<td>Steak, baked</td>
<td>124.0</td>
</tr>
<tr>
<td>Haddock, raw</td>
<td>141.7</td>
</tr>
<tr>
<td>Haddock, baked</td>
<td>94.7</td>
</tr>
<tr>
<td>Haddock, broiled</td>
<td>118.7</td>
</tr>
</tbody>
</table>

Table 4: Purine content in chicken and other high-protein foods

<table>
<thead>
<tr>
<th>Purine sources</th>
<th>Total purine content (mg of purine/food)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liver, chicken</td>
<td>252.1</td>
</tr>
<tr>
<td>Seminal, chicken</td>
<td>182.2</td>
</tr>
</tbody>
</table>

Alcohol drinks also contribute purines. There is strong evidence that high consumption of alcoholic drinks and alcoholic beverages may increase the purine content in the blood. Below are estimates of purine content in alcoholic drinks analyzed by British researchers.

Table 5: Purine content in alcoholic drinks (beer)

<table>
<thead>
<tr>
<th>Alcohol drink</th>
<th>Total purine content (mg of purine/litre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional British beer</td>
<td>20.2 - 27.6</td>
</tr>
<tr>
<td>Guinness</td>
<td>23.5</td>
</tr>
<tr>
<td>Lager beer</td>
<td>17.7</td>
</tr>
<tr>
<td>Home-made beer</td>
<td>3.8</td>
</tr>
<tr>
<td>Gin</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Purine content in different foods is not uniform. Uric acid, a product of purine metabolism, is a natural antioxidant. Uric acid accumulates in tissues until the threshold level is reached when the body produces and excretes it. Total purine level is low in the body. Food high in purine include meat, fish, and poultry. The following table is a list of foods ranked by the amount of purine content, which is the level of uric acid content. Foods high in uric acid content are listed at the top. Foods and vegetables have generally reduced levels of uric acid. Meat products, especially internal organs, seem to have elevated levels of uric acid.

<table>
<thead>
<tr>
<th>Food source of purine acid</th>
<th>Uric acid level (mg of uric acid /100 g food)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yeasts, brewers</td>
<td>186</td>
</tr>
<tr>
<td>Sheep’s shank</td>
<td>373</td>
</tr>
</tbody>
</table>
Uric acid, a product of purine metabolism, is a natural antioxidant. Uric acid accumulates in tissues and the blood. Uric acid accumulates to a high level when one consumes food high in purines; and when the uricase level is low in the body. Food high in purines include meat and meat products and some vegetarian food stuffs, even though to varying levels.

Uric acid eventually crystallizes, especially at low temperature. Uric acid crystal makes its way to the joints, such as the big toe, ankle, and knees. Therefore, when the uric acid level is high level in the blood, tissues, and joints, it causes gout. Uric acid causes uric kidney stones as well.

In the following table is a list of food stuffs and estimates of their uric acid content. Foods high in uric acid content are listed at the top of the table while foods with low uric acid content are at the bottom. Fruits and vegetables have generally reduced level of uric acid. Meat products, especially internal organs seem to have elevated levels of uric acid.

### PURINE CONTENT OF FOODS

Purine from food accounts for only 15% of uric acid; 85% is endogenous, formed from purine metabolism in the body independent of diet. Certain dietary restrictions are still helpful. Alcohol, especially binge drinking, increases production and decreases excretion of uric acid. During acute bouts of gout, most of the protein in the diet should come from cheese, milk, eggs, and low purine vegetables.

#### PURINE-RICH FOODS

- Anchovies
- Beer and other alcoholic beverages
- Bouillon
- Broth
- Consomme
- Goose
- Gravy
- Herring
- Legumes
- Meat extracts
- Mince meat
- Organ meats (brain, kidney, liver, sweetbreads)
- Patridge
- Roe (fish eggs)
- Sardines
- Scallops
- Yeast (as supplement) and yeast extracts

<table>
<thead>
<tr>
<th>Food</th>
<th>Uric Acid Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuna fish</td>
<td>267</td>
</tr>
<tr>
<td>Anchovy</td>
<td>229</td>
</tr>
<tr>
<td>Mango horn seed</td>
<td>223</td>
</tr>
<tr>
<td>Soybean seed</td>
<td>1.50</td>
</tr>
<tr>
<td>Chicken (breast with skin)</td>
<td>1.75</td>
</tr>
<tr>
<td>Salmon</td>
<td>1.70</td>
</tr>
<tr>
<td>Piki fish</td>
<td>1.50</td>
</tr>
<tr>
<td>Ham, cooked</td>
<td>1.31</td>
</tr>
<tr>
<td>Beef</td>
<td>1.16</td>
</tr>
<tr>
<td>Broccoli</td>
<td>0.81</td>
</tr>
<tr>
<td>Tom</td>
<td>0.66</td>
</tr>
<tr>
<td>Banana</td>
<td>0.57</td>
</tr>
<tr>
<td>Sweet corn</td>
<td>0.52</td>
</tr>
<tr>
<td>Grapes</td>
<td>0.27</td>
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<tr>
<td>Plum</td>
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<td>Asparagus</td>
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<td>Strawberry</td>
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<tr>
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<tr>
<td>Apple</td>
<td>0.14</td>
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<tr>
<td>Cucumber</td>
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MODERATE-PURINE FOODS
Asparagus
Beans (dried)
Fish
Lentils
Mushrooms
Peas (dried)
Shellfish
Spinach

LOW-PURINE FOODS
Bread
Butter, polyunsaturated margarine, & other fats
Cereals
Cheese
Chocolate
Coffee
Cream soups made of low purine vegetables
Eggs
Fruit and fruit juices
Milk, milk products and eggs
Noodles
Nuts
Olives
Peanut butter
Rice
Salt
Sugars, sweets and gelatin
Cherries contain an enzyme that helps to break down and cause the excretion of uric acid. Eat one cup cherries every day to relieve the pain and cup daily to prevent future attacks. Look for fresh raw cherries first. Frozen or canned unsweetened cherries or 100% pure cherry juice may work too.

Risk factors and symptoms to avoid
Gout commonly strikes between the ages of 30 and 50, usually occurring in men and, less often in women in menopause. ~Avoiding certain foods high in purine and keeping weight down are cornerstone risk factors.

Causes
Gout is caused by high blood levels of uric acid that crystallize and form painful deposits in the joints. Traditional thinking tells us that gout is the result of excessive amounts of alcohol, protein, heavy foods, coffee and soft drinks in your diet. These foods cause uric acid levels to rise. Other foods that increase uric acid are anchovies, asparagus, legumes, mushrooms, meat, organ meat, and shellfish. Reduction in consumption of these foods is very often successful in reducing or eliminating gout.

While gout is a hereditary metabolic disorder in some people, usually something else actually causes uric acid levels to rise and trigger gout attacks. With approximately one million people suffering from gout, it is certainly a fairly common ailment. However, with understanding of its causes you can eliminate those painful attacks.

Food allergies may lead to gout. When people who are sensitive to certain foods eliminate them from their diet many find that their gout goes away, too.

Gout is more common in overweight people. Nearly half of the people with gout are at least 15% above their recommended weight. As mentioned below, dieting can trigger gout attacks.

Some other causes:
• Stress raises uric acid levels
• Surgery
• Injury
• Candida or use of antibiotics
• Vitamin deficiency, especially B5, A and E
• Chemotherapy - uric acid is released in extreme amounts due to the cellular destruction.
• Hypothyroidism is often involved with gout. See our Thyroid section for more information.
• A drop in barometric pressure may trigger an attack.
• Kidney failure may make it more difficult to rid the body of uric acid, thereby triggering gout.
• Diseases such as leukemia, multiple myeloma and psoriasis are associated with gout.

While traditional thinking is that certain foods cause gout, recent research, however, indicates that lead poisoning may be another possible cause. The lead poisoning makes the aldosterone system insensitive to potassium concentration and increases the potassium content of the blood. A potassium deficiency can increase urate levels in the blood. Aldosterone is a hormone secreted by the adrenal cortex (part of the adrenal gland) that is important in the control of blood pressure and the regulation of sodium and potassium concentration. It would be very interesting for us to know how many people with gout have high blood pressure. To test for lead poisoning you can either have a hair analysis or a heavy metals blood test done. Possibly the best way to test lead levels is to have an EDTA mobilization test done. If the results indicate that you are high in lead (or other heavy metals) a heavy metals detoxification clay bath may be helpful.

There are other causes for potassium loss that may trigger gout:

• Fasting
• Surgery
• Diuretics - lead to reduced sodium and potassium. Other short-term effects may include increases in cholesterol and glucose levels and biochemical changes that affect the levels of magnesium and calcium in the body. They may also increase uric acid levels, triggering gout.

This effect is especially important for people who use diuretics continually for either dieting or hypertension.

To correct the lack of potassium (the recommended intake is 3,500 mg, but it is safe to take considerably more) take supplements or eat foods high in potassium, such as baked potato, with skin (844), 1 cup cooked spinach (838), 1/2 cup dried peas (784), 1/2 medium avocado (604), 1 cup cantaloupe (496), 1/2 cup boiled lima beans (478), medium banana (451), 1 cup orange juice (436), 15 raw baby carrots (420), 1 cup of skim milk (406), 1 cup nonfat yogurt (390), 1/2 cup non-salted tomato sauce (350), 4 oz. lean hamburger (349), 1/2 cup canned kidney beans (329), yams, dried prunes, etc. If you eat enough of these fruits and vegetables you will not need to take a potassium supplement. Potassium makes the acid crystals go into solution so they can be eliminated.

Some Possible Causes of Elevated Uric Acid Levels

Medication Diuretics used for weight loss or heart disease, insulin, some antibiotics, medication for rheumatoid arthritis, or an overdose of B vitamins can cause uric acid levels to rise. Diuretics reduce sodium, magnesium, calcium and potassium (among other things) levels. If you need to use a diuretic, see our natural herbal products for ones with fewer side effects. One customer reported getting gout when he took beta-blockers for his high blood pressure. Poor kidney function when kidneys are not functioning at optimum levels, they lose their ability to excrete uric acid from the body. This situation may be due to various kidney problems or over-consumption of alcohol. When alcohol is metabolized, lactic acid is produced, which hinders uric acid excretion by the kidneys.

Dieting Severe dieting or fasting can cause excess lactic acid, which hinders uric acid excretion by the kidneys. Crash and severe calorie restriction diets shock your metabolism and can trigger a gout attack. Dieting may also cause a loss of potassium, which can increase urate levels in the blood. As mentioned above, some dieters also use diuretics to speed the process, and they can rob the body of potassium and other minerals, triggering a gout attack. It seems to be a vicious circle! However, a proper diet that is done slowly is recommended because losing weight will reduce serum levels of uric acid.

Diet Traditional thinking tells us that gout is the result of excessive amounts of alcohol, protein, heavy foods, coffee and soft drinks in your diet. Certain foods contain high levels of purine which can cause uric acid levels to rise. Purine is a protein substance that is transformed into uric acid during digestion. Reduction in consumption of these foods is very often successful in reducing or eliminating gout.

A potassium deficiency can increase urate levels in the blood. This is very important, and ways to correct it are discussed above and under the diuretics section.

Foods and Other Things to Avoid

• Meat: organ meats, offal, meat extracts, veal, bacon, sweetbreads, meat gravies and broths, consommé/bullion
• Poultry: turkey, goose
• Seafood: salmon, mackerel, trout, cod, herring, sardines, anchovies, mussels, crab, shrimp
• Vegetables: peas, beans, lentils, asparagus, mushrooms, cooked spinach, rhubarb, cauliflower
• Yeast products: baked goods, beer
• Alcohol - it increases the production of uric acid and inhibits its excretion by the kidneys
• Coffee - it accelerates the breakdown of protein into uric acid
• All fried foods - they cause a depletion of vitamin E, which can cause uric acid to rise
• Cream and ice cream
• Rich desserts
• Spices
• Pastries
• Simple sugars, simple carbohydrates and saturated fats - they increase your body’s production of uric acid and impair your kidneys’ ability to get rid of it. Eliminate fructose (found in food and drinks, like sodas)
• White flour
• Aspirin can raise uric acid levels. If you need to use pain killers, only use ones with ibuprofen.
• Oatmeal
• Whole grains
• Caffeine - it impairs kidney function, which is needed to get uric acid out of the body.

Prevention

• One of the best ways to prevent gout is to drink at least 6-8 eight ounce glasses of water, fresh juices or herb tea daily, especially at the first signs of gout. This will keep your urine diluted and will help your body excrete uric acid and prevent crystals from forming.
• Eat foods high in potassium, as mentioned above.
• Eating generous amounts of other fruits and vegetables helps keep uric acid crystals in solution.
• Take the flavonoid quercetin - see below under Folk Remedies. This should be part of your permanent gout-prevention diet.
• Having sex prevents men from getting gout. It seems that increased sexual activity reduces uric acid levels in fertile men.
• Lemon juice prevents gout attacks by stimulating the formation of calcium carbonate in the body. Calcium carbonate neutralizes acids in the body, including uric acid that triggers gout attacks. After each meal drink the juice of one freshly squeezed lemon in a glass of lukewarm water. To get more juice out of the lemon, bring it to room temperature, then roll it around on the counter with the palm of your hand.
• Taking 1/2 teaspoon of baking soda with meals will prevent gout attacks. This will help alkalize the body.
• Keep the leg elevated.
• A high fiber diet also aids in the elimination of uric acid by absorbing bile acids formed in the liver. These bile acids can act as a precursor to uric acid.

Supplements

Low-purine diets are low in vitamins B, E and other antioxidants, so supplementation will be necessary to prevent damage from free radicals that can intensify gouty problems.

• B complex One to three 50 mg tablets of the complete B complex daily, plus 500 mg of pantothenic acid (B5) in divided doses to assist the body’s conversion of uric acid into harmless compounds.
• Bromelain 500 mg twice daily as an anti-inflammatory.
• Fish oil Take 2 grams of fish oil capsules 2x a day to reduce the chances of gouty inflammation.
• L-glutamine 500 mg four times daily on an empty stomach - is an antacid.
• L-glutathione 500 mg twice daily on an empty stomach - increases renal cleansing of uric acid.
• L-glucose 400 mg four times daily between meals - acts as an antacid.
• Magnesium citrate 250 mg twice daily on an empty stomach - detoxifies purines.
• L-methionine 250 mg twice daily on an empty stomach - detoxifies purines.
• Magnesium citrate 400 mg three times a day - an antispasmodic to relieve pain.
• Shark cartilage used on a daily basis of 3-6 capsules/day can make the pain disappear and allow you to eat previously forbidden foods within one week without experiencing pain in the affected joint. After approximately one month of continuous use, you may stop taking the cartilage until the pain reoccurs. At this point you will probably only need to take the cartilage (3-6 capsules) for a week or two. You may continue this on/off cycle as needed. Your uric acid level may return to normal, but even if it doesn’t, the pain will go away.
• Tissue salts To prevent the formation of uric acid crystals, take two tablets of 6X Silica three times a day. During a gout attack, increase the dosage to three tablets and add an equal amount of Nat. Phos. and Nat. Sulph.
• Vitamin C 1,000 mg per hour at the very outset of a gout attack, then reduce to 500-3,000 mg daily for maintenance. Vitamin C helps lower serum uric acid levels.
• Vitamin E Low-purine diets are low in vitamin E and fried foods deplete it, so supplementation will be necessary as a deficiency can contribute to the formation of excess uric acid. Begin with 100 IU of natural vitamin E, and slowly increase to 6-800 IU daily.

Acupressure

• Press just below the center of the nose toward the upper lip.
• Press and massage between the ball of the foot and the bottom of the big toe on each foot; then on the left foot only, stimulate a point halfway between the base of the little toe and the heel pad.
• Press inward and upward on the underside of the protuberance at the base of the skull.
• On both hands, press and massage a point on the inside of the pad at the base of the thumb directly beneath the index finger; then on the left palm only, stimulate a point halfway between the base of the little finger and the wrist.

Remedies

Folk

Alfalfa is a good source of minerals and other nutrients that help reduce serum uric acid.

Apple cider vinegar (ACV) Add some rose hips to vinegar and boil; dab on affected area. You may need to apply this mixture several times a day for a few weeks. The vinegar changes the blood pH so that the crystals will go into solution and be excreted.

• Mix two teaspoons each of apple cider vinegar and raw honey in a glass of water and drink at mealtime.
• Soak the foot in a mixture of 1/2 cup of ACV and three cups of hot water. Bilberry is high in anthocyanosides and flavonoids, which are helpful in overcoming gout.

Black cherry juice Get some natural, concentrated black cherry juice and drink several tablespoons of the concentrate daily. You should expect relief in 48 hours.

Black cohosh moderates blood acidity.

Blueberries are high in anti-inflammatory compounds called anthocyanins, which help ease the pain of gout.

Buchu tea helps dissolve and flush out uric acid crystals.

Castor oil packs Soak a piece of white flannel in warm castor oil, wrap it around the affected area; cover with plastic wrap and apply a heating pad. Do this for one hour twice daily.

Cayenne pepper Boil one tablespoon of pepper in 1 cup of vinegar and 1 cup of water and dab onto the painful joint.

• Mix cayenne with enough wintergreen oil to make a paste and apply to the affected area.

Celery seeds These seeds are quite effective in relieving gout by eliminating uric acid from the body. According to James Duke, Ph.D., a medical botanist formerly with the U.S. Department of Agriculture, celery seeds contain about twenty different anti-inflammatory agents. Although there is little scientific research on celery seeds, according to Kerry Bone, a leading expert on herbal remedies in Australia, “it (sic) works brilliantly in patients.” Recommended dosage is 500 mg (standardized to 450 mg of celery seed extract) 2x daily. Note: This remedy is not to be used by pregnant women because of its diuretic effect and the fact that it can encourage uterine contractions, or those with kidney disease because of its potential diuretic effect and that the plant’s oils can worsen kidney inflammation.
- Cook a tablespoon of celery seeds in two cups of water until they are soft; strain and drink 1/2 cup four times a day.
- Charcoal Take 1/2 - 1 teaspoon of activated charcoal daily.
- Make a poultice using 1/2 cup of activated charcoal, 3 tablespoons of ground flaxseed and warm water to draw out the toxins.

Cherries
If you are lucky enough to have fresh cherries, eating 6-8 cherries daily will relieve the symptoms of gout. This remedy was reported in 1950 by Dr. Ludwig W. Blau who cured his own gout. Frozen and canned cherries may also be used. When you feel an attack coming on, eat 20-30 cherries immediately. Cherries are rich in compounds that prevent the destruction of collagen, which the body uses to form connective tissue. The connective tissue is damaged by gout. Cherries also have an enzyme that neutralizes uric acid and are high in anthocyanins which have high antioxidant properties as well as anti-inflammatory action. For greatest effectiveness eat them between meals.

Devil's claw reduces uric acid levels and is a natural cleansing agent for toxic impurities. Take 400 mg of the dried extract 3x a day for as long as desired.

DMSO (dimethylsulfoxide) is very effective in relieving pain and swelling caused by inflammation. It helps dissolve crystalline deposits.

Garlic
Eat several cloves of raw garlic daily. Mince the garlic and add it to black cherry juice for a potent remedy.

Ginger
Put 1/3 cup of ground ginger (buy in bulk to keep the cost down) in a bathtub of water and soak for 30 minutes. This will cause you to sweat (a good thing) which will help eliminate the uric acid from your tissues. When you are finished the bath be sure to rinse off thoroughly, as the ginger can cause skin irritation if it dries on your skin.

Grapes are high in alkalines which lessen the acidity of uric acid and aid in its elimination from the body.

Hawthorn is high in anthocyanosides and flavonoids, which are helpful in overcoming gout.

Hydrangea is an anti-inflammatory.

Ice
Apply an ice pack for ten minutes, then alternate with a moist hot-towel compress, to soothe and numb the pain.

Mullein
Soak mullein leaves in a hot vinegar/water mixture. Pack the leaves on the affected area.

Nettle contains alkaloids which neutralize uric acid.

Parsley acts as a natural diuretic.

Quercetin
The flavonoid quercetin inhibits uric acid production in a similar fashion to commonly prescribed drugs for gout. Take 1000 mg of quercetin along with 1,000-1,500 mg of the enzyme bromelain (to enhance absorption) two to three times daily between meals. Bromelain also help reduce the inflammation.

Red clover has traditionally been one of the standard remedies for gout, as well as removing toxins from the body, and treating psoriasis, eczema, and hot flashes. Studies have shown that red clover may thin the blood, so it should not be used by patients who are also taking an anticoagulant medication. While red clover is high in isoflavones, the reason it is helpful in treating gout has not
Bhastrika Pranayama is also called Bellows Breath as it mimics the working of a bellows used to flame a fire. It pumps air and life-force (prana) vigorously and dynamically throughout the entire system. When practicing this champion of pranayamas be ready for a workout!

**Benefits of Bhastrika Yoga Pranayama (Bellows Breath):**

**Primary:**
- Boosts your metabolic rate so your body burns fat faster promoting natural weight loss.
- Purifies your gross and subtle body by eliminating toxins and waste.
- Generates heat in your body and opens up your energy pathways.
- Builds lung capacity and helps clear and strengthen the respiratory system.

**Secondary:**
- Expands and fortifies your nervous system.
- When done forcefully, the pulsating of the diaphragm massages the internal organs, thus improving your digestive system.

**Cautions for Practicing Bhastrika Yoga Pranayama (Bellows Breath):**
- If you feel dizzy or nauseous you should slow down the pace of bhastrika pranayama or stop entirely and return to normal breathing. If you suffer from vertigo, you should use caution in practicing this breathing exercise.
- If you are menstruating you should not practice this breathing exercise.
- You should be careful practicing Bhastrika Pranayama if you have high blood pressure, heart disease or suffer from stroke or epilepsy. Also, if you have acid or heat related gastric issues such as ulcers you should use caution.

**Guided Beginner’s Breath of Bhastrika Yoga Pranayama (Bellows Breath):**

- To practice this breathing exercise sit up in a comfortable position. You may also practice it lying down or standing up, but, sitting is best.
- Elongate your spine upwards, lengthen your neck and subtly bring your chin back and in like a soldier at attention. This will align the spine with the back of your head.
- Close your eyes.
- Place your hands on your knees.
- Relax your stomach muscles.
- Now begin to breathe as forcefully as comfortable through the nose with equal emphasis on the inhalation and exhalation. The diaphragm should expand and contract in conjunction with your breathing. All the breaths should be deep and powerful and you should try to establish a steady rhythm. The pace should be about 1 second for inhalation and about the same for exhalation.
- Do a round of 10 repetitions and then inhale completely, hold your breath in for 1-5 seconds and then exhale completely. This completes 1 round. Take a short break.
- Work your way up to doing 5 rounds.

**Guided Intermediate Bhastrika Yoga Pranayama (Bellows Breath):**

- Once you feel comfortable with the Beginner’s version of Bellows Breath perform the breathing exercise at a faster pace now, about 1 breath per second. Also, breathe more forcefully if...
Weight Loss

Quantum possible.
• Increase the number of repetitions slowly till you reach about 50 repetitions per round.
• At the end of every round, don’t forget to inhale completely and hold your breath. Build up this period of breath retention as well to about 15 seconds.
• You should still take a short break between rounds.

Guided Advanced Bhashrika Yoga Pranayama (Bellows Breath):
• Build up the pace and power with which you do this breathing exercise to almost 2 breaths per second.
• Increase the period of breath retention at the end of every round to 30 seconds. Still continue to take a break between rounds though.

Secret of Bhashrika Yoga Pranayama (Bellows Breath):
The final goal of Yoga is to awaken Kundalini Shakti (latent human potential energy) and Bhashrika Pranayama is one of the most effective breathing exercises for stimulating and raising this energy in you. Think of Kundalini as smoldering embers deep within you and think of Bhashrika as waves of prana stoking and igniting these embers. Be ready to handle the inferno!

Breathing Exercise (Pranayama) - Bhashrika (Bellows)

- Bhashrika (Bellows) is the most powerful of all Breathing Exercises for raising Kundalini Bhashrika. Bhashrika or Bells are series of pumping followed by the retention of breath like Kapalabhati.

Warning in Performing the Bhashrika (Bellows)

- You should exercise caution against the temptation of pushing too far in your initial practice of Bells. If you have the tendency to push the limit, lie down when doing this exercise since there is a risk for you to lose consciousness and fall on the floor. Forced breathing makes you relaxed and ventilated. Excessive ventilations may induce dizziness, drowsiness and loss of consciousness. No harm can come from hyperventilation as long as you are in bed. If you happen to lose consciousness, your breathing pattern will tend to modify itself and return to normal. Excessive ventilations results in lightheartedness, dizziness or a feeling that you are floating in the air.

Bhashrika (Bellows)

- Bhashrika is primarily consists of forced rapid deep breathing which serves as a basis for many varieties of exercises, all of which may be described by the same name. Although air is forced in and out, the emphasis is placed upon the expulsion or explosion of air. A series of such expulsions, each following the other in quick succession without either Fall or Shallow Pause, is called “A Round”. Beginners should limit a round to about five explosions, though the number may be increased to ten, or even more if needed to obtain the desired effect. The desired effects range from increased ventilation, increased blood circulation, clearing of the nasal passages and increased thinking capacity to eliminating all Mental Disturbances. Please be warned against generating such powerful explosions since it can cause injuries to lungs. Extending a series for so long can also cause dizziness. Comfort and not excess excess should guide your motives and manner of doing the Bhashrika of Bellows.

- Although you can breathe through your mouth or both mouth and nose, regular breathing is limited to either both or one method. The breath-troubles in the rapid succession of breathing may or may not be very deep, but it is customary to finish or follow a Round by the deepest possible inhalation and exhalation. A series of normal breaths should occur before undertaking a second round. A deepest possible inhalation and exhalation may, and perhaps should, introduce each round. Some nasal happy will be expected but avoid unpleasant sound and fluttering of the nasal skin surfaces. You may perform the Bhashrika exercise while standing but it is advisable to do it in a Seated Position in order to allow maximum relaxation of the abdominal muscles and easy diaphragmatic breathing. Variations include using a full pause after each round, partial clots closures and Alternation of Nose.
Then everything we do is wrong, and we need to seriously look at Health Care and rethink what we are doing.

Nature Knows

...you're saying you've made the bed, vacuumed the stairs, planted the marigolds and now you want to visit my mother... ...have you been at the St John's Wort again?

Universal Health Care

...now make an incision between the third and fourth abdominal muscles

This is not the Kind of Home Medicine this book is about
What makes you thing I care about the drug companies?

Viagra for Happy Day

Everything you do...

Immediate keeps your stool clean

Just take your meds, but don't call me in the morning.

---

The Day after Valentine's Day
The Day after Christmas
The Day after Halloween
The Day after Easter
The Day after my birthday
The Day after You Name It

If you did it once a year it would not be so bad but continued addictive abuse of the Immune system, Well

---

"I've become a vegetarian, but I haven't decided yet if it's for health, religious reasons, saving the planet, or because animals are just so darned adorable."
Atsikratyk 16 kg per 2 mėnesius!

Weight Loss

Quantum

Kinesiology can test a muscle, but not your reaction to a substance or whether you are lying or not.

“What fits your busy schedule better, exercising one hour a day or being dead 24 hours a day?”

ED FISCHER 2009

1. Exercise
2. Exercise
3. Exercise
4. Exercise
5. Exercise
6. Exercise
7. Exercise

Yes, yes, yes - how seriously what can I do to improve our health?

Copyright 2008 by Randy Gluebergen. www.gluebergen.com
"The three things that stop people from losing weight with exercise are boredom, laziness or injury," says physical therapist and strength and conditioning specialist Ben Quist, PhD, NSCA.

HIIT (High Intensity Interval Training) is cardio performed at such an intense level that your body will spend the rest of the day expending energy to recover from the ass-kicking you gave it. This is commonly referred to as EPOC (excess post-exercise oxygen consumption) and it means that you consume a great deal more oxygen recovering from the exercise bout than you would have if you'd just done a steady-state workout. When you push the body to the physical max even for just 30 sec the brain will sense that you need to improve to survive. The Brain will then send out Human Growth Hormone and other fat dissolving muscle building enzymes, hormones, chemicals to increase survival. And even if you just imagine and visualize the high intensity self defense workout your brain will still release some HGH.

"A new study shows, and this is really exciting, that when you work the fast twitch fiber and work your heart muscle anaerobically, your body releases exercise-induced human growth hormones (HGH) that actually mimic taking injections of growth hormones. You get as much as a 530 percent increase in growth hormone! It stays your body for two hours, going after body fat like a heat seeking missile. It's so powerful that if you were to do the program today and monitor your blood, it will look like you injected growth hormone illegally. That's why there is no HGH test for Olympic athletes today."
It’s central to realize that your body does not make much HGH after long, slow exercise. Short, quick-burst anaerobic type of exercise, for short periods of time make more of the human growth hormone. This is natural and safe whereas injecting human growth hormone is unnatural and has many adverse side effects. Many HGH supplements are not fully tested and have fraudulent claims.

Here is a designed HIIT exercise protocol that takes just 20 minutes, three times a week, and then you reduce fat. The brain needs to sense danger or intensity to build more muscle and reduce fat.

When young athletes train for speed research shows 20 to 25 grams of protein (within 30 minutes of training) with a 4 to 1 ratio of carbs to protein, starts the recovery process quicker. Like a hamburger with lettuce and tomatoes no bun.

Research shows that a spike of insulin after training increases somatostatin (the hormone that shuts down HGH). Dextrose Sugar or processed carbohydrates produce an insulin spike. So avoid sweets, chips, corn, potatoes and go to low glycemic foods and extra protein right before and after training.

Carbing up with unprocessed spaghetti or pasta one or two days before and event can help to saturate some energy reserves in the liver as glycogen. But this is a before competition practice not a training practice and this is not for weight loss.

One of the first books I read on exercise, which set me on the path toward a career in health, was Dr. Ken Cooper’s book Aerobics. That was back in 1968. Cooper was a physician and an Air Force Colonel, and he helped develop a fitness program for the astronauts. His program was based on cardiovascular exercise, and the book incited a revolutionary shift in how people approached exercise and fitness.

Dr. Cooper actually created the term Aerobics and I bought his program hook, line, and sinker, and it had a major impact on my life. I was incredibly cardiovascular fit. I chose distance running as my approach, and I spent the next 40 years running.

Then, about five years ago Dr. Al Sears opened my mind to the possibility that extensive cardiovascular aerobic-type training might be counterproductive. His program introduced me to the concept that high intensity; burst-type sprints could be a far healthier alternative to long distance running. However his program is a bit more generalized.

One of the questions that stood out to me though was when you compare the two types of physiques, which would you rather have – the physique of a sprinter or a long distance runner? Who looks healthier?

We need to understand the connection to growth hormone and how to actually integrate the program. Phil taught the Sprint 8 program in a specific, understandable way, and provided the physiological and scientific underpinnings of the health impact of growth hormones in somatopause.
It works because it promotes human growth hormone (HGH), which is a synergistic, foundational biochemical underpinning that makes your strength training and everything else work like a charm, and effectively burns off calories.

Perhaps the most important aspect of fitness is fast and super-fast muscle fiber development. While many people focus on endurance, endurance comes as a by-product of super fast-twitch fiber development, which takes about a month to build.

When you work your heart anaerobically and aerobically, you get great endurance.

However, endurance comes and goes in as little as two weeks. You can double your endurance in just two weeks, but you can also lose it pretty quickly. The beauty of HIIT exercises is that you don’t have to worry about the regular, traditional cardio exercises because you’re going to get that (and more) anyway through this program. In fact, HIIT type exercises can dramatically improve your cardiovascular fitness and fat-burning capabilities in a fraction of the time.

**But First, Know Your Muscle Fibers...**

We now know, from more recent research, that you have three muscle fiber types with three energy systems that fit together. The three different types of muscle fibers are:

1. Slow (red muscle, which contains more oxygen)
2. Fast (white muscle); The white fiber essentially has two types of fiber -- what the researchers call 2A and 2B -- but it’s easier to call it fast twitch and super-fast fiber.
3. Super-fast (white muscle)

"...The blood supply is going to the red muscle. The white muscle really doesn’t get a lot of blood because it doesn’t need a lot of blood. It gets its energy from the stored up energy in your body. That’s six to eight seconds worth of stored up energy and through the oxygen you breathe for 30 seconds or less.

The fast twitch fiber moves about five times faster than the slow, but about 30 percent of your muscle fiber, the super-fast fiber, move 10 times faster than the slow.

Working your super-fast fiber forces your heart to work anaerobically. So you get a great comprehensive heart muscle workout when you do that."

If you don’t work all three muscle fiber types and energy systems, then you’re not going to work...
both processes of your heart muscle. Many mistakenly believe that cardio works out your heart muscle, but what you’re really working is your slow twitch muscle fibers. You’re not working the anaerobic process of your heart.

Your heart actually has two totally different processes; the aerobic process and the anaerobic process. The anaerobic process lines up with your fast and super-fast twitch muscle fibers that are used during HIIT type exercises.

Meanwhile, traditional strength training and cardio only works your slow twitch muscle fibers. Your body kicks in these slow twitch muscles first, in an effort to not recruit your fast twitch muscles or work your heart anaerobically. This is why you may not see results even though you spend an hour on the treadmill a few times a week – you’re basically denying the natural physiology of your body by not working the other half of your muscle fibers; your fast-twitch muscles.

In addition, about half of your muscle fibers are fast twitch fibers, and if you do not exercise these fast muscles, they begin to atrophy, which is detrimental to physical health and fitness. This HIIT exercise program Naturally Increases Human Growth Hormone Production – The research is so clear about the superior benefits of this type of exercise that the American Heart Association and the American College of Sports Medicine have now totally changed their exercise cardio guidelines.

Long, slow cardio simply doesn’t work because it does not work both processes of your heart enough; it doesn’t work all three muscle fiber types.

Their new guidelines now state that you can do moderate intensity cardio, five days a week for 30 minutes, or you can do vigorous intensity cardio for 20 minutes, three days a week, which is exactly what HIIT is.

Dietary Recommendations: Fast Recovery vs Growth Hormone Release

In order to promote HGH release, you do need to restrict sugar intake post-exercise, while carbs can benefit those more interested in fast recovery, such as professional athletes.

*When young athletes train for speed – www.40speed.com - I explain to them that the research shows 20 to 25 grams of protein (within 30 minutes of training) with a 4 to 1 ratio of carbs to protein, starts the recovery process quicker.*

This advice is given to everyone as general advice in most fitness magazines today and is mostly based on research led by Dr John Ivey on young cyclists who have to perform several days in a row.

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This advice is given to everyone as general advice in most fitness magazines today and is mostly based on research led by Dr John Ivey on young cyclists who have to perform several days in a row, and a quick recovery during competition is extremely important. Clearly, young athletes more concerned with fast recovery than maximizing HGH release should use this strategy.

However, if you are middle-aged, or in a non-competitive phase of training, and keeping HGH circulating as long as possible is your goal, then protein intake (20 to 25 grams after training) is a great strategy, but you need to monitor the glycemic impact of carbs because of the variable impact of carbs on insulin, which in turn impacts the HGH release process.

There are a couple of variables that come into play that can change the rules for adults wanting to maximize human growth hormone from exercise.

Research shows that a spike of insulin after training increases somatostatin (the hormone that shuts down HGH).

So, here’s where this issue gets complicated, because it’s difficult to estimate the glycemic impact of food on different people with different muscle to body fat ratios. And what makes this issue very complicated is that the insulin producing process is variable for every adult to some degree. It depends on where you are on the Metabolic Syndrome scale. Metabolic Syndrome just became an official medical condition in 2001, and the research shows that even a few carbs can spike insulin for some people with insulin resistance.

If you are lean and do not need to drop a lot of body fat, then you can probably eat some carbs without spiking insulin -- and maybe even some refined sugar depending on the interaction of the carbs with an intake of post-training protein, which will somewhat negate the impact of the carbs on the insulin response -- as opposed to an intake of carbs on an empty stomach.

So, as you can see, there are many variables that come into play.

In short, carbs with the protein can be good after training as long as the glycemic response doesn’t spike your insulin.

Research shows that the insulin response of an individual is lessened with youth and/or lean body weight (muscle vs. body fat), and that’s another reason why it’s so important to maintain muscle throughout life.

From a performance training strategy perspective for runners, I would suggest consider training with the strategy of maximizing HGH release (except on really hot days or on the one-long-run-a-week day) because this strategy should build muscle to make you faster, and reduce body fat so you have less to carry.

For competitions, and those hot, long-training days, I’d suggest using the quick recovery strategy of 1 to 4 ratio of protein to carbs, because in this instance, your body does not care what the quality of glucose is; it just needs glucose."

Special Note about Synthetic Fructose (like high fructose corn syrup HFCS) The following point is a minor one, but it’s significant nonetheless. Keep in mind that the glycemic index of carbs has become slightly outdated due to the more recent research on synthetic fructose like HFCS. Synthetic Fructose actually causes a very minor, if any, change in insulin response, but we know its incredible damaging. It causes this damage through other mechanisms besides insulin. Therefore, now look at carbohydrates as the percentage of fructose it contains. And higher dextrose, although it can raise insulin, may not cause as many adverse biochemical side effects as synthetic fructose does...

What You Need to Know about Somatopause, and Why HIIT is so Beneficial. The concept of somatopause is frequently overlooked, but it is what makes growth hormone production so important, and why HIIT high intensity burst exercises are so incredibly beneficial. Somatopause is tied directly to decreased amounts of growth hormone (HGH), which is also called "the fitness hormone." As you reach your 30s and beyond, your levels of HGH begin to drop off quite dramatically, which triggers somatopause. This is part of what drives your aging process. You start putting on body fat and losing muscle; you become more fatigued, and the "middle age spread" sets in. It has become apparent thru experience that nearly everyone over 30 has dramatically abnormally low levels of this important hormone because they begin leading
increasingly sedentary life styles. Children and most animals in the wild do not run marathons or lift weights, they move at high speeds for very short periods of time and then rest. This is natural and what optimizes the production of growth hormone. The higher your levels of growth hormone, the healthier and stronger you’re going to be. And the longer you can keep your body producing higher levels of HGH, the longer you will experience robust health and strength.

High-intensity interval training (HIIT) or sprint interval training is an exercise strategy that is intended to improve performance with short training sessions. HIIT is a form of cardiovascular exercise which is beneficial to burning fat in a short and intense workout. Usual HIIT sessions may vary from 9–20 minutes. The original protocol set a 2:1 ratio for work to recovery periods. For example, a runner would alternate 15–20 seconds of hard sprinting with 10 seconds of jogging or walking. And even if you just imagine and visualize the high intensity self defense workout your brain will still release HGH.

“Really, if you think about it, when you’re looking at exercise-induced growth hormone it’s like you’re listening to your body tell you how, as a human being, you should exercise. Because when you do it this way, your body releases this huge amount of growth hormone that does so many things synergistically for you for two hours after you work out.”
How to Perform High intensity HGH stimulation Exercises

Here’s a summary of what a typical peak fitness routine might look like using a recumbent bike (although you can perform this on an elliptical machine or treadmill, or with any type of exercise you prefer):

1. Hydrate with some good water. Warm up for three minutes, Stretch the spine in all directions while holding the extreme for 20 sec. This will bring flexibility to the spine and start to set the hormones free.

2. Exercise as hard and fast as you can for 30 seconds. You should feel like you couldn’t possibly go on another few seconds. Go past 10 METs of training intensity. (The movies on Self Defense have in them many different self defense moves you can use to do your High intensity Repetitions, just repeat them very fast for the 30 sec) And even if you just imagine and visualize the high intensity self defense workout your brain will still release some HGH.

3. Recover for 90 seconds, with deep belly breaths. Remember fat is carried away most by the breath. (see bellows breath exercises.)

4. Repeat the high intensity 30 sec exercise and 90 sec recovery 7 more times (don’t be afraid to do just five in the beginning, work up slow)

5. Hydrate with good water after and eat high protein foods before or after.

6. Be aware of your present fitness level and don’t carry on too far when you first begin.

7. No carbs before bedtime. Avoid processed foods and high glycemic foods. If you are not in great shape and just starting this you may want to start with just two or three repetitions, and work your way up to eight. You may need to start with just walking and when you do your 30 second bursts your legs would be moving as fast as possible without running - and your arms would be pumping hard and fast. Breathe deep into the abdomen in the 90 sec recovery times.

Ultimately you want to exercise vigorously enough so you reach your anaerobic threshold as this is where growth hormone release is triggered. If you do this in your mind, believe it, see it, feel the burn, become it deeply. Your mind will still trigger the hormone and dissolve your fat. But it works better if you get off of your butt and burn the fat with exercise. If you can’t (or won’t) train in the mind.

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**Table: Interval Training for Different Energy Systems**

<table>
<thead>
<tr>
<th>% of Maximum Anaerobic Power</th>
<th>Energy System Taxed</th>
<th>Interval Time</th>
<th>Work:Rest Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100</td>
<td>Phosphagen</td>
<td>5-10s</td>
<td>1:12 to 1:20</td>
</tr>
<tr>
<td>75-90</td>
<td>Fast glycolysis</td>
<td>15-30s</td>
<td>1:3 to 1:5</td>
</tr>
<tr>
<td>30-75</td>
<td>Fast glycolysis and oxidative</td>
<td>1.3min</td>
<td>1:3 to 1:4</td>
</tr>
<tr>
<td>20-35</td>
<td>Oxidative</td>
<td>&gt; 3min</td>
<td>1:1 to 1:3</td>
</tr>
</tbody>
</table>

From Essentials of Strength Training and Conditioning, NSCA (2008)
The first sport study with the Quantum Xraid technology was on members of the Cleveland Browns football team in 1999. The results were amazing and all of the participants went all Pro over the next five years. Having worked with the power lifting team of Hungary in 1991 they went from moderate to gold medal performance.

AC Milan bought some systems and their injury level dropped 91%. This was because they can stimulate and accelerate healing of injured tissue. They asked me to develop the device to sharpen the athletic skills of the clients. With this in mind we developed a way to sharpen coordination endurance and strength. AC Milan won the European championship the next two years. We worked with Dennis Johnson ex twice NBA MVP in the San Antonio Spurs system. The results were amazing.

The Chinese Olympic team had us do a study. Out of their 467 athletes in the 2000 Olympic Games, they assigned 150 of the sick, old, weak, and tired to us. The study was to see if we could repair injured tissue and get an athlete back onto the field. The results were astounding. Out of the hundred medals won by the Chinese our 30% of the injured performers won 33% of the medals. Our athletes were not supposed to win. And because of this Dennis was awarded an honorary Gold medal.

Sports medicine has entered the energetic arena. There are those who want to win and they differ from those who want to conform.

Some of the best cyclists in the world have used the SCIO to win championships.
When you push the body to the physical maximum even for just 30 sec the brain will sense that you need to improve to survive. The Brain will then send out Human Growth Hormone and other fat dissolving muscle building enzymes, hormones, chemicals to increase survival.

Here are some self defense moves to repeat very fast for 30 seconds for your High Intensity work out.
These are to be done very fast like speedy shadow boxing. Two to Three strikes a second for 30 sec.

Whatever activity you choose, by the end of your 30 second sprint period you will want to reach these markers:
1. It will be relatively hard to breathe and talk because you are in oxygen debt
2. You will start to sweat profusely. Typically this occurs in the second or third repetition unless you have a thyroid issue and don’t sweat much normally.
3. Your body temperature will rise
4. Lactic acid increases and you will feel a muscle "burn"
5. If you are using cardio equipment like an elliptical or bike, you don’t need to reach any “magical” speed. It’s highly individual, based on your current level of fitness. But you know you’re doing it right when you’re exerting yourself to the point of typically gasping for breath, after a short burst of activity.

Do this HIIT exercise two to three times a week, and you’re virtually guaranteed to drastically improve your HGH production. When you push the body to the physical max even for just 30 sec the brain will sense that you need to improve to survive. The Brain will then send out Human Growth Hormone and other fat dissolving muscle building enzymes, hormones, chemicals to increase survival.

And even if you just imagine and visualize the high intensity self defense workout your brain will still release some HGH.

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**Human Growth Hormone (HGH)**

Human Growth Hormone (HGH) is a very powerful hormone that changes the chemistry of the body so that it starts using fat for energy instead of just sugar. It is triggered when your brain is threatened and feels inadequate to the tasks you are doing. It reduces the age of your metabolism and makes you stronger. In other words it turns the age of your metabolism to that of a younger body. Some of the things HGH Does For You:

- Increases calcium retention, and strengthens and increases the mineralization of bone
- Increases muscle mass, decrease fat mass
- Promotes lipolysis (breaking down fat for fuel)
- Increases protein synthesis
- Stimulates the growth of all internal organs excluding the brain
- Promotes gluconeogenesis in the liver
- It stimulates the immune system

It doesn’t take much to see how this affects your weight loss and fat loss progress. All the above allows your muscles to recover faster, grow stronger and burn fat (lipolysis).

**Makes Your Metabolism Younger**

Internally, it makes your metabolism younger. If you are someone who used to be low fat and very lean when you were younger, and now you are having a hard time getting there when it was so easy before, there is a different internal environment in your body. In fact, human growth hormone has also been regarded as an anti-aging agent.1 One of the changes is the amount of HGH that is released and present in the blood. As a person grows older, the amount of HGH produced decreases. The graph below shows the natural decrease of HGH.

What Promotes HGH?
- Deep Sleep. Most HGH is secreted during deep sleep, or a good power nap.2
- Intense exercise (in particular resistance training)3
- Low levels of blood sugar (hypoglycemia)4
- Dietary protein5,6
- Moderate amounts of Natural Fruit Levulose Fructose (Not processed HFCS)

What Stops HGH Secretion?
- Chronic Stress7,8,9
- Cortisol (which is caused by stress)
- Dextrose or any High Blood Sugar10
- Insulin11,12
- Lack of Sleep13,14,15

HGH and Sleep
Other than intense exercise, the bulk of your HGH is produced and secreted in deep sleep, especially in the first two hours of sleep.16 This is the reason why fat is burned when you sleep and not during exercise.

That’s right ... fat is burned when you sleep if you do not eat carbs 2 hours before sleeping.

In fact, you will learn later in the book, sleep deprivation and weight gain are interconnected. So much so that with a client I will usually have them first start with a sleep diet before anything else!

Professional weightlifters and bodybuilders all make sure recuperation is a part of their entire program. This includes making sure there is enough sleep or good power naps.

How Is It Increased?
Reduce cortisol levels but reducing stimulants (like coffee, gaurana, caffeine, yerba mate, cola, or caffeine tea), eating nutritious water-rich foods, eating more frequently so you are not going for long periods without food.

Reduce high levels of Insulin. High levels of insulin will suppress growth hormone. This also means you must reduce or eliminate sugar from the blood to help increase growth hormone or restore normal levels of growth hormone. You will learn about how to do this in a next few chapters.

Increase Dietary Protein.
Partake in intense resistance exercise. If you partake in intense exercise, rest the next day or do only aerobic exercise. As you can see from the graph below, there is a phase right after intense exercise where growth hormone decreases. But 15 - 18 hours later, it surges. So with intense resistance exercises, there is a latent rise in human growth hormone.

Get more sleep. Other than intense exercise the greatest amount of human growth hormone is secreted during the first half of sleep. The graph below shows this surge in human growth hormone during sleep.

Take Power Naps (35 min) This can also release pituitary hormones and help reduce fat.
To learn more about how to structure your HIIT exercise to enhance your fat burning hormones you can learn this in Best Exercise To Lose Weight.

**Reversing Somatopause - Middle Age Metabolic Slowdown**

It starts in your 30's then progresses as you continue into your middle age years. You start to lose lean muscle, gain weight, and see a sharp decrease in energy. What’s the cause? It’s a series of hormonal changes that's commonly referred to as “somatopause.”

Basically both men and women will see a decline in androgen and growth hormones levels with aging. While hormone replacement therapy is an option there’s also a way to reverse the effects of “somatopause” with one simple type of exercise.

**The Fitness Fix For Middle Age Somatopause**

When you look at how people in their 30’s to 50’s exercise, you’ll find one thing almost always lacking - anaerobic exercise. This is the short burst, “get-you-out-of-breath quickly” type of exercise. Most people in this age group do low-moderate intensity cardio workouts (30-60 minutes on a treadmill, elliptical, bike, etc) along with light resistance training typically done on machines.

This type of exercise may burn a few calories but it does next to NOTHING for increasing growth hormones.
Weight Loss

Quantum hormone and testosterone levels.

High intensity, short burst types of anaerobic exercise is the missing ingredient in the fitness programs for people ages 30 and above. Research has shown this type of exercise to be best at reversing the effects of somatopause.

Why is it that most people quit doing anaerobic exercise?

The short answer is because there seems to be a big misconception on what type of exercise works best as we age. The reality is we should never stop doing anaerobic or burst training exercise. It gets more and more beneficial as we age.

Watch kids when they’re outside playing.

Are they moving methodically at the same pace for long periods of time, or do you typically see them running, chasing, zig-zagging, and going all out in short-bursts until they’re totally spent and exhausted?

There are lessons to be learned here by watching kids complete their style of “exercise.”

In both your resistance and cardio workouts you’ll want to incorporate anaerobic exercise through the use of burst training. As the name implies, this is just a means of doing short “bursts” of high intensity movement followed by brief recovery periods.

With resistance workouts you can accomplish this by combining exercises in “super-sets”, completing 3-4 exercises in a row with minimal rest, or doing anything that will work you at a high intensity for a short period of time.

This is way different than the typical “3 sets of 10 reps” on each exercise and rest two minutes between sets talking to people in the gym.

If you want to create a hormonal response (increase growth hormone) you have to work at these higher intensities. The good news is your workouts will be short-sweet and over quickly. High intensity, short duration, burst training workouts take less than 30 minutes to complete while producing better results than typical health club workouts on machines taking twice the time to complete.

Burst training can be completed with your cardio workouts by doing interval training. While slow-paced cardio is beneficial for developing an aerobic base, healthy individuals should look to progress to higher intensity, short duration workouts for maximum benefits.

You Have To Apply Some EFFORT For Growth Hormone Release!

There are four main benchmarks that must be achieved in order to see an exercise-induced growth hormone release.

- **Oxygen Debt**
  Oxygen demand is an important regulator in the body’s release of growth hormone during exercise. The objective with high-intensity, burst training exercise is to get you in a short-term “winded state.”

  After 10-30 seconds of 90-100% maximal high intensity effort on something like sprinting, weight lifting, etc, the body experiences an “oxygen debt.” During the recovery period your body tries to replenish oxygen by raising heart rate and increasing respiration. It’s this oxygen debt that worksto trigger growth hormone release.

- **Muscle Burn**
  That burning feeling you get in your muscles when you’re training hard is a result of lactic acid. While discomforting it’s a positive sign. The problem is most people who experience this burning sensation during exercise typically stop. If they only knew how helpful it would be to push on a little bit more.

  Researchers have found that growth hormones is commonly released 16 minutes after reaching the “lactic acid threshold.” Reaching the “burn” phase in your training is a good sign that you’re able to start releasing growth hormone.

- **Increased Body Temperature**
  If you’re not sweating during your workouts chances are you’ve not reached the necessary intensity to produce agrowth hormonerelease. You need to raise your body temperature just a
little for the hormonal response to kick in.
No this doesn’t mean working out in a sweat suit or some other crazy idea! You just need to raise your body temperature slightly which will not be difficult if you’re training with intensity.

Adrenal Response
For your body to release growth hormone there must be an adrenal response. Specifically, it’s the release of epinephrine (adrenaline) and nor-epinephrine by your adrenal glands during high intensity exercise that triggers agrowth hormoneresponse. If you don’t work at a high enough intensity (the old “3 sets of 10, take two minutes and talk between each set” workout) you simply won’t see a change in your hormonal responses.

Getting The Most From Your Workouts
Typically by the end of 20-30 minutes of high-intensity exercise you’ll experience a rise ingrowth hormone. The levels will continue to rise after your workout and peak about one hour later. Once peaked, thegrowth hormonelevels return back to normal after a few hours.
You’ve got a golden window of opportunity here that you won’t want to miss out on though. If you do things correctly, this can be a several hour window to turn your body into a fat burning machine.
Here area few strategies to follow that will help you maximize your results in afﬁtness program.

Don’t eat a high fat or high processed carb meal before training
Researchers have found that eating a high fat or high glycemic carb meal before working out can stop the release of growth hormone. This is due to the fat triggering an increase in the hormone “somatostatin,” which inhibits growth hormonerelease.

Take Some Amino Acids before training
L-Glutamine, L-Lysine, L-Arginine, L-OARGINine, Glycine, Leucine, Valine
These are inexpensive amino acids that can help stimulate growth hormonerelease.

Drink plenty of water during your training session
Research has shown that if you’re not hydrated you’ll see a significant reduction ingrowth hormonerelease in high-intensity exercise.

Limit dextrose sugar for two hours before after training
While you’ll need a small amount of carbohydrate with some protein post-workout, you’ll want to minimize your sugar intake. This means no Gatorade drinks, etc. While these “electrolyte replenishing” drinks work fine for young athletes then can wreck havoc on the hormonal responses in middle age adults going through somatopause. See below for some good examples of post-workout choices.

Take 15-25 grams of protein after training
Try and get between 15-25 grams of fast-assimilating protein (whey protein is ideal) post-workout combined with a small amount of carbohydrate. This is the best strategy for speeding up the recovery process and extending thegrowth hormonerelease window.
A lot of protein shakes contain far too much protein for most individuals and too much is just as counterproductive as not enough. The idea is to get a small amount of both protein and carbs in quickly then wait a couple of hours before eating your next meal.
Your own whey proteinsmoothie with water, 1 scoopwhey protein, and ½ cup berries.
The recipe for reversing the effects of somatopause is simple. Train with intensity (get yourself out of breath- do some sprinting, lift something heavy, push yourself!), follow a primalnutrition diet, and get plenty of rest.
That’s it if you want to lose unwanted body fat, get trim and toned again, increase your energy and turn back the aging process.
A word of advice: If you’re new to an exercise routine, starting back after a while, or if you’ve simply been working out without much intensity – please go slow!
Take your time and progress to higher levels of intensities little by little. The last thing I want is to see you go out and try and do some sprints and pull a hamstring or suffer some other type of injury.
Play it smart and know your limits. It’s always a good idea to get with your physician first then seek the counsel of a certiﬁed personal trainer who can help design your afﬁtness program to meet your needs.

When you push the body to the physical max even for just 30 sec the brain will sense that you need to improve to survive. The Brain will then send out Human Growth Hormone and other fat dissolving muscle building enzymes, hormones, chemicals to increase survival.

Special Warning to Over-Achievers...
I want to stress this point: perform HIIT only two to three times a week. I’m continuously shocked and surprised when people say they do this program every day!
Folks, if you do that your body will shut down. You’ll be bedridden. Nearly every time someone tells me they are doing it more than four times a week, they are not doing it properly as they are not pushing themselves hard enough and getting their heart rate up to their maximum.
You can do it four days straight but it’s very difficult. The brain just shuts down. You can become totally lethargic the next day. That’s really too much… you should not do it ﬁve days in a row.
So please understand that not only do you not NEED to do it more than three times a week, you may actually cause more harm than good if you overdo it.
To get all the beneﬁts from HIIT, just focus on gradually increasing intensity, as opposed to doing it more frequently.
Again, this interview contains countless additional nuggets of pure gold, so please listen to it in its entirety, or read through the transcript at your leisure. It very well could change your life. I know
it has had the most dramatic impact on my body and health than any other fitness program I’ve ever tried.

**MET in exercise (metabolic equivalent tasks)**

There are lots of reasons to exercise. The most important is that it is fun. There are also health benefits, some better documented than others. Those benefits supported by substantial or overwhelming evidence include the following:

- helps in weight control
- can relieve tension and feelings of stress
- reduces the risk of heart attack
- can lower blood cholesterol levels (mostly through weight loss)
- can lower blood pressure to a modest degree
- helps build strong bones
- reduces the risk of adult onset diabetes
- can raise blood concentrations of high density lipoprotein cholesterol - so-called good cholesterol that reduces the risk of arteriosclerosis and heart attack

The evidence also suggests that exercise lowers the risk of bowel cancer and it may lessen the extent of osteoporosis.
The question is how much exercise do you need to do, what type, and at what frequency?

In past decades, the exercise goal was set at achieving about 80 percent of your maximal heart rate. Now, the focus is on METs (metabolic equivalent tasks).

One MET is the energy expenditure and caloric requirement at rest. Mild exercise such as walking at a leisurely pace increases energy expenditure to perhaps 2.5 METs/hour of walking. Vigorous activity can result in 6 to more than 12 METs/hour of activity.

The following is a table of energy expenditure per hour of activity in METs (this is a general approximation; there is a lot of individual variation).

<table>
<thead>
<tr>
<th>Activity</th>
<th>METs/hr Expended On Home and Occupational Activities</th>
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</table>

One MET is the energy expended at rest. Two METs indicates the energy expended is twice that at rest. The evidence is convincing for the health benefits of moderately vigorous or vigorous exercise, it is less persuasive for less vigorous exercise or average pace walking (at least as far as heart attack prevention is concerned).

Still, the bottom line is that, if you cannot achieve the 12 MET-hours per week by moderately vigorous or vigorous activities or even by less vigorous activity done more often, do what you can. The evidence suggests reasonably strongly that doing something is better than being sedentary.

For example, walking for one hour at a leisurely pace increases energy expenditure to perhaps 2.5 METs/hour of walking. Vigorous activity can result in 6 to more than 12 METs/hour of activity.

The following is a table of energy expenditure per hour of activity in METs (this is a general approximation; there is a lot of individual variation).

What should be the goal in MET-hours per week (METs per hour of each activity multiplied by hours per week of each activity)? For weight control, relief of tension or stress, the MET hours per week goal is basically what works for you. For reduction in risk of heart disease, it is still not clear what the goal should be - a reasonable goal would be at least 12 MET-hours per week of moderately vigorous or vigorous activity. That could be accomplished by about four hours of brisk walking at a pace of one mile every twenty minutes (3.5 METs/hour). Whether average pace walking (one mile every 25 to 30 minutes) for four or five hours a week would be satisfactory is not yet clear, but there are some encouraging studies.

It might be a good idea for everyone to be METs conscious and to calculate the MET-hours of every leisure or work-related physical activity and keep a weekly record of MET-hours, assuming that a total of at least 12 MET-hours per week is a reasonable health promotion goal.

If you walk very briskly (one mile every 15 minutes) for 1/2 hour, that is 2.5 METs-hours. Play doubles tennis for one hour - maybe that’s worth 5 METs, depending on how much running you do. There is so much variation from individual to individual that all you can do is make a reasonable guess about MET values during exercising, but it still makes sense, and is sort of fun, to estimate MET-hours for each activity, set weekly goals, and try to reach them.

Some would say 6 to 8 MET-hours per week of moderately vigorous physical activity is enough to achieve substantial benefit; others would put the figure at 9 to 12; still others would argue 20 or even 30 MET hours/week of at least moderately vigorous activity is needed for reduction in risk of heart attack, diabetes, and some cancers.

There is no absolutely definitive figure. Thirty minutes of vigorous activity three times a week would result in at least 9 MET-hours (>6 METs per hour for vigorous activity divided by 2 for the 1/2 hour of activity, multiplied by 3 times per week). One hour of moderately vigorous activity, such as brisk walking, three times a week at 3.5 to 5 METs/hour would give 10.5 to 15 MET-hours. Although the evidence is convincing for the health benefits of moderately vigorous or vigorous exercise, it is less persuasive for less vigorous exercise or average pace walking (at least as far as heart attack prevention is concerned).

Still, the bottom line is that, if you cannot achieve the 12 MET-hours per week by moderately vigorous or vigorous activities or even by less vigorous activity done more often, do what you can. The evidence suggests reasonably strongly that doing something is better than being sedentary.

For example, walking for one hour at a leisurely pace, one mile every 25 to 30 minutes, three times a week is 3 to 2.5 METs each time or a total of 7.5 (one mile every 30 minutes) or 9.0 (one mile every 25 minutes) MET-hours a week. That may reduce risk of heart attack, especially in persons over 65 years of age. The least healthy situation appears to be that of being sedentary, and that appear to be more true for older age groups (over age 65). So, do what you can, taking into account your age, time constraints, and any underlying conditions. For those in older age groups or with underlying health conditions, it is a good idea to consult with your health care provider before undertaking any physical activity regimen.

Remember, although a reasonable goal is 12 MET-hours per week of at least moderately vigorous physical activity, if your age and any underlying condition permits, 20 to 30 MET hours of at least moderately vigorous activity is even better. Activities at home or at work count as much as recreational activities.

Here is the Healthful Life summary recommendation in regard to moderately vigorous (or vigorous) physical activity and lesser activities for those who cannot engage in moderately vigorous activities.

1. 30 or more MET-hours/week of at least moderately vigorous activities - excellent
   20 to 29 MET-hours/week - very good
   12 to 19 MET-hours/week - satisfactory (but, you should still try for 20 MET-hours/week or more.

2. Set 12 MET-hours of at least moderately vigorous activity as a minimum goal. Walking briskly at 3 miles per hour (one mile every 20 minutes four times a week would meet that requirement; so would walking at a pace of 17 minutes a mile three times a week). Remember, moderately vigorous physical activities at home or at work also count.

3. If you cannot get to the 12 MET-hours/week goal, do what you can of moderate intensity physical activity (at least 3.5 METs/hour). Even 5 MET-hours/week of moderately vigorous physical activity may be beneficial.

4. If you cannot manage moderately vigorous physical activity, do lesser intensity activities (2.5 METs/hour or more) with a minimum recreational goal of 10 MET-hours/week (for example, walk casually at a pace of one mile every 30 minutes - 2.5 METs/hour - for one hour four times a week. You can substitute home activities that get at least 2.5 METs/hour. The important point is that, unless you are restricted by underlying condition or disease, you should not be sedentary; some physical activity is much better than virtually none.

If you are over age 40 and moving from sedentary to physically active, or if you are substantially increasing the amount of your physical activity, it is a good idea to first consult your health care practitioner.

CALCULATING YOUR WEEKLY ENERGY EXPENDED IN RECREATIONAL-TIME PHYSICAL ACTIVITY USING METs (Metabolic Equivalent Task)

One MET is the energy expended at rest. Two METs indicates the energy expended is twice that at rest. Three METs is triple the resting energy expenditure, etc. Thus, the METs per hour score is a measure of the intensity of a physical activity.


METs/hr Expended On Home and Occupational Activities

METs
1.3 Standing
1.5 Reading, talking on telephone
1.8 Sitting in class, studying, note taking
2.0 Walking on job, at 2 mph (in office or lab area), easy casual
2.0 Light gardening
2.0 Light office work, light use of hand tools (watch repair or micro-assembly, light assembly/repair); standing, light work (bartending, store clerk, assembling, filing)
2.5 Walking downstairs
2.5 Cooking, light housekeeping, shopping
2.5 Somewhat heavier gardening or yard work
2.5 Pushing stroller with child, walking dog
3.0 Standing, light/moderate work (assemble/repair heavy parts, welding, auto repair, pack boxes for moving, etc), patient care (as in nursing); driving heavy tractor, bus, truck
3.0 Washing car or windows, mopping, moderately vigorous playing with children, sweeping outside house, vacuuming, picking fruit or vegetables, scrubbing floors
3.5 Walking on job, 3 mph (one mile every twenty minutes), in office, moderate speed, not carrying anything, or carrying only light articles
4.0 Raking lawn, planting shrubs, weeding garden, heavy yard work or gardening activities
4.0 Masonry, painting, paper hanging, moderately heavy lifting, moderately heavy farm work
5.0 Walking downstairs or standing, carrying objects about 25-49 lb
5.0 Digging, spading, vigorous gardening, using heavy power tools; general gardening, mowing lawn (hand mower)
5.0 Painting, carpentry, cleaning gutters, laying carpet, other vigorous activities
5.0 Chopping wood
6.0 Using heavy tools (not power) such as shovel, pick, spade; driving heavy machinery, forestry
6.5 Walking downstairs or standing, carrying objects about 50-74 lb
6.5 Loading and unloading truck (standing); moving heavy objects; heavy farming work
7.5 Walking downstairs or standing, carrying objects about 75-99 lb
8.0 Heavy farming

One MET is the energy expended at rest. Two METs indicates the energy expended is twice that at rest. Three METs is triple the resting energy expenditure, etc. Thus, the METs per hour score is a measure of the intensity of a physical activity.

Don’t eat carbs at night

Sleep is directly related to how much fat you store. However, in the past it was mainly related to Human Growth Hormone. While reading a new weight loss book, they also related it to carbohydrates. That old saying “don’t eat carbs at night,” makes a lot more sense when you relate it to the science of HGH.

The age old rule of not eating carbs at night has been proven true. While researching it further, it’s clear that this rule is not a myth.

Why You Shouldn’t Eat Carbs At Night

• Eating carbs late at night doesn’t give your body time to burn them off before you go to bed. Therefore your body more readily stores them as fat.

• As you eat throughout the day your insulin levels get less sensitive. By night time your insulin is not as active leading to a higher amount of fat being stored.

Growth Hormone is released more readily at night in a slightly fasting state.

According to researcher Dr. Bill Misner Ph.D., “allowing the body to settle into a fasting state 3 hours prior to bedtime totally clears gastric-related digestive activity, allowing the maximum 5-pulsatile human growth hormone (HGH) bolus to be released from the pituitary gland. The mechanism of postprandial diurnal pulsatile growth hormone peak is largely dependent upon lowering blood levels of free fatty acids, blood sugar (including insulin) which in general takes 3 hours before levels reach their respective nadir.”

Refraining from carbs at night CAN BE DONE. You don’t have to do it every night to see a noticeable difference. Four to five times a weeks will still give you results. Hopefully this article inspired you to eat your carbs during the day and cut them at night! Eat Fruit carbs in the morning. The banana diet and fruit before noon diets.
100% Grapefruit juice (diluted) or grapefruit in the morning is anti-aging and anti-fat.

Heat Exhaustion risk of 10+ Met activity

Exercise is good for you, but make sure you enjoy it as much as possible by staying safe. We don’t want to put a damper on your enthusiasm, but it is important to be aware of potential dangers, including crime, traffic, and injury. Use your common sense and good judgment while exercising, and you should be fine. Here are a few tips:

Outdoor hazards
- Avoid crime by exercising with someone else, or stay in populated, well-lit areas. Carry a whistle in case you have a problem.
- Always obey traffic rules when exercising near streets or intersections. If you can, try to use sidewalks, parks, or pedestrian paths. These “exercise friendly” places take you out of the way of traffic and are much safer than the street.
- If you choose to exercise at night, wear a reflective vest or sash. This will help drivers see you in the dark.
- Do not wear headphones – they distract your attention and obstruct your ability to hear traffic.
- Carry identification and a small amount of cash, just in case you need them.
Injury

- The risk of injury increases if you do weight-bearing exercises more than five days per week. If you exercise every day of the week (physical activity every day is good), reserve at least 1 - 2 days per week for non-weight bearing activity.
- When cycling, skating, or rollerblading, always wear a helmet and knee pads.
- Always warm up before your workout, and cool down after it. Don’t forget to stretch when you are done.
- Don’t do the same kind of exercise day after day. You want to avoid putting too much stress on one part of the body while neglecting the others. Don’t continue to exercise on joints that hurt -- stop or change your activity.

Dehydration and overheating

- Drink plenty of water before, during, and after you exercise. This is important at all times of the year, but especially when exercising in warm weather.
- Take it slow and be cautious about pushing your limits. Don’t push yourself too hard, especially in the heat. Remember that you still need to replenish fluid even when you don’t feel thirsty. If you do feel dizzy, lightheaded, or sluggish -- stop, rest, and drink some water immediately!
- Heat stroke is a medical emergency. It may decrease your level of consciousness or even cause a seizure. If you experience any of the more serious symptoms -- such as nausea, headache, confusion, clamminess, trouble focusing, fever, or sudden lack of sweating -- you should go to the hospital right away. You should also promptly see a doctor if your heavy breathing, dizziness, and excessive fatigue remain after you have rested and drank water.
- If heat, humidity, or pollution make exercise too hard, exercise indoors or during cooler hours.

Fat Absorption

Most of our digestive lipase is released by the pancreas. It is water-soluble and works at the interface between water and lipids. Therefore, lipase can only do its work properly if the lipids in our food are finely emulsified which is done by bile released from the liver and gallbladder. The sulfur-amino acid taurine is a major component of bile. A deficiency of lipase, taurine or lecithin can result in problems, autoimmune diseases, cancer, degenerative diseases of the brain and nervous system, and also for rejuvenation and regeneration in general. How can lipase be important with all of these problems and diseases?

The answer lies in the overriding importance of fats and oils not only for our energy metabolism, but even more so for the structural integrity of our body. Fats, oils and related fat-soluble vitamins and other biochemicals, such as lecithin and cholesterol, are collectively called lipids. Most of our brain, nerves and cell membranes consist of lipids. Lipase is important to maintain optimal cell membrane permeability; this allows adequate nutrient supply into the cells and wastes to flow out. P.G. Seeger, the most prolific researcher into the relationship between nutrition and cancer, has clearly shown that the first biochemical step towards cancer is a deterioration of the cell membrane.

Fats are chemically called triglycerides, and consist of three fatty acid molecules combined with the alcohol glycerol. The biochemical function of lipase is to split fats into their components, specifically to remove two or all three fatty acids from their glycerol base in order to transport the individual components through the intestinal wall. There are several lipases for different functions, including phospholipases, which split phospholipids, such as lecithin. Phospholipids are important structural components of brain, nerves and cell walls. Lipase is not only needed to digest and absorb lipids from food, but also for the internal use of lipids.

LIPASE and the FAT METABOLISM

by Walter Last

Lipase is the fat-splitting enzyme. Lipase has vast importance for our health, not just in regard to the commonly recognized diseases of the fat metabolism such as overweight and underweight, cardiovascular disease, diabetes, strokes and degenerative muscle diseases, but also for skin problems, autoimmune diseases, cancer, degenerative diseases of the brain and nervous system, and also for rejuvenation and regeneration in general. How can lipase be important with all of these problems and diseases?

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Fat Absorption

Most of our digestive lipase is released by the pancreas. It is water-soluble and works at the interface between water and lipids. Therefore, lipase can only do its work properly if the lipids in our food are finely emulsified which is done by bile released from the liver and gallbladder. The sulfur-amino acid taurine is a major component of bile. A deficiency of lipase, taurine or lecithin...
can lead to a lack of bile and the formation of gallstones from cholesterol. This can then lead to malabsorption of lipids and liver problems. Lipase and lecithin added to meals help to avoid deficiencies of essential lipids after gallbladder removal, and are also beneficial with liver diseases. Another common cause of lipid and mineral malabsorption is gluten sensitivity. Gluten causes irritation and inflammation of the intestinal wall and this erases the absorption villi. Instead of long and slender they now become blunt with a greatly reduced absorption surface. Fat malabsorption is called steatorrhea. It leads to fatty, bulky and smelly stools that may be noticed to frequently stick to the side of the toilet bowel. The stickier it is the higher is the fat content. In this case the fat is split into fatty acids but instead of being absorbed, these combine with mineral ions, especially calcium, to form insoluble soaps. This causes chronic deficiencies of minerals, essential fatty acids and fat-soluble vitamins.

As we age, also pancreatic lipase production declines. This combination of declining lipase production, reduced bile flow, reduced intestinal absorption surface, and poor food choices leads to internal lipid deficiencies, especially in regard to fat-soluble vitamins, phospholipids and essential omega-3 fatty acids. This, in turn, causes or contributes to the common symptoms of aging and the development of degenerative diseases. Widespread mineral deficiency despite an adequate diet is commonly due to a lack of gastric acid, or fat malabsorption, or usually a combination of both.

Lipid Transport

After passing the intestinal wall, the individual components are put together again to form fats and phospholipids. Now they are combined with protein carriers, called chylomicrons, and carried in the bloodstream to all the cell structures. Chylomicrons belong to the class of lipid carriers called lipoproteins. They are the largest and least dense lipoproteins because of their high fat content. Another group is the VLDL or Very Low Density Lipoproteins. They are made in the liver to carry triglycerides and releases them into the bloodstream to be converted in the liver or used by other cells for energy production. Lipase is even an essential factor in the synthesis of insulin in the beta cells of the pancreas.

Internal Lipase

In order to split and re-assemble lipids, the liver requires its own lipase, and this is called liver lipase. Some more lipase is in the blood, and may keep blood vessels free of fatty deposits. Furthermore, before fats can enter a cell, they must be disassembled for individual components to pass the cell wall.

Therefore, there is another lipase attached to the outside of cells or on nearby capillaries. This one is called lipoprotein lipase. The amino acid carnitine carries long-chain fatty acids through the inner cell wall into the energy-producing units, while shorter fatty acids, like some of those in butter and coconut oil, do not need a carrier. Inside the cell fatty acids may be used for energy production or to form new walls in dividing cells, or replace structures in existing walls, or they may be re-assembled into triglycerides and stored in fat cells.

As all of the individual molecules in our body are constantly being replaced, there is a high turnover in structural fatty acids. If we have not eaten for a while, lipase in fat cells disassembles triglycerides and releases them into the bloodstream to be converted in the liver or used by other cells for energy production. Lipase is even an essential factor in the synthesis of insulin in the beta cells of the pancreas.

Lipase Deficiency

As you can see from this short description, there is a lot of internal lipase required to keep the body functioning and in good working order. If there is not enough liver lipase, we may develop fatty degeneration of the liver, if there is a deficiency in the blood, the blood vessels may clog up, if it is lacking in fat cells, then we may only be able to deposit fat but not mobilize it again when needed, and when lipoprotein lipase is in short supply, then chylomicrons and VLDL build up in the blood and cause a range of problems, while cells are starved of lipids for energy production or structural regeneration.

Internal lipase deficiency may develop when more lipase is needed for fat digestion and absorption than can be produced in the pancreas. Then lipase is taken from the internal lipase store to prop up the pancreas. Actually, lipase is recycled similar to bile. For the purpose of fat digestion bile and lipase are released, but unused amounts of each are reabsorbed in the lower parts of the small intestines, and re-supplied to the liver and pancreas through the blood and lymph circulation. Internal lipase deficiency arises when we habitually eat food low in lipase. Then the body has difficulties reabsorbing and generating enough lipase as we get older, and we develop age-related degenerative body changes.

Another problem is the increasing incidence of genetic, inherited or familial lipoprotein lipase deficiency, also called familial chylomicronemia. This leads to all of these problems already at a younger age. The most severe form is seen when a genetic lipoprotein lipase deficiency is inherited from both parents. Fortunately, this is rare with a frequency of only one in a million. Much more common is a relative deficiency inherited from only one parent. In this case problems may be mild in childhood, and become more disabling as we get older.

Depending on the exact nature of the deficiency, cholesterol may accumulate and lead to cardiovascular disease, or problems may be due to excess triglycerides. This may cause enlargement of liver and spleen, inflammation of the pancreas or chronic pancreatitis; fatty deposits, fatty...
tumors or lipoma under the skin; deposits in the retina of the eye, white inner eyelids, yellow-brown skin patches, inflammatory skin and muscle diseases, chronic muscle pain, spasms and cramps, varicose veins and fragile arteries, and generally lack of energy. A frequent sign is the early formation of an arcus senilis – a bluish-white opaque arc in the top part of the iris, which may later become a full ring around the iris.

With this I see lipase deficiency causing or contributing to a wide range of health problems and diseases such as aging skin, Alzheimer’s disease, arteriosclerosis and atherosclerosis, auto-immune disease, cancer, cardiovascular disease, chronic fatigue syndrome, cystic fibrosis, dementia, depression, diabetes, eye diseases, fibromyalgia, lateral sclerosis (A.L.S.), liver diseases, malabsorption, multiple sclerosis, muscular dystrophy, obesity, pancreatitis, Parkinson’s disease, psoriasis, Raynaud’s disease, stroke, and vertigo (labyrinthitis or Meniere’s Disease).

The medical solution for elevated triglycerides and cholesterol levels, apart from drugs, is a low-fat diet. However, this has its own problems. It leads to severe deficiencies in essential lipids, such as fat-soluble vitamins, essential fatty acids and phospholipids; while a high carbohydrate diet predisposes to the development of diabetes, and any excess carbohydrate is converted in the liver into saturated fat and cholesterol, and is a main cause of obesity. This applies to genetic as well as acquired forms of elevated lipids.

**Overweight**

If we have a good metabolism, then we can easily gain or lose weight. When the metabolism becomes inefficient, we have difficulty either gaining or losing weight. I see the present epidemic of overweight mainly as a symptom of lipase deficiency. This is especially a problem with high-carbohydrate diets because of their low satiety value.

The problem is this: the less fat there is in a meal, the faster it is released from the stomach into the small intestine. Unlike fats, carbohydrates are easily and rapidly absorbed. This can lead to damaging high blood sugar levels. To prevent this, the pancreas releases large amounts of insulin. This helps glucose to enter cells more quickly but if you are not doing hard work or exercise at the time, the excess glucose is either converted to lactic acid, thereby causing overacidity and mineral deficiency, or the glucose is converted to fat (mainly in the liver).

Fat is then stored in fat cells. When the blood sugar level drops, this stored fat can now be used to generate energy – but only if you have sufficient internal lipase. If lipase is deficient, fat remains in the fat cells and you feel hungry again, having another carbohydrate meal with a replay of the same story. After several years of repeating this cycle with habitually elevated blood sugar levels, diabetes may be diagnosed.

There are two ways to solve this problem, and it is best to use both simultaneously. Firstly get plenty of lipase, preferably from raw fats and oils, or otherwise from lipase supplements. Secondly slow down the absorption of carbohydrates. This may be done in several ways. You may use a low carbohydrate diet, or slow down the emptying of the stomach by mixing carbohydrates with sufficient oil or fat. You may, for instance, eat fruit mixed with (coconut) cream.

Alternatively, you may eat mainly slow-digesting carbohydrates, such as legumes, especially chickpeas and sprouted mung beans and lentils, in addition to vegetable salads. Another possibility is snacking - nibble, space out the food intake. Ingest only as much carbohydrate as you need to...
produce energy during the next 30 to 60 minutes so that nothing is converted into fat. Then have another snack. Finally be aware that if you do have a high-calorie meal in the evening, then it just cannot help but enrich your fat cells.

However, lipase deficiency is only one factor that may prevent converting body fat into energy. Others necessary nutrients are L-carnitine, coenzyme Q10, choline or lecithin, inositol, methionine, and vitamin B3 (niacin and niacinamide). Furthermore, fat burning can be accelerated by drinking diluted lemon juice, grapefruit juice or cider vinegar before meals.

**Lipase to the Rescue**

The natural solution to these problems originating from lipase deficiency is to use a diet that is high in lipase. All fatty or oily foods naturally have a high content of lipase. Lipase is destroyed by heating over 40 to 45°C. Therefore, to improve genetic or age-related problems of the fat metabolism, we need to maximize our intake of raw, unheated and unrefined fats and oils.

Raw butter, for instance, has formerly been used to cure psoriasis but pasteurized butter causes or aggravates it. The healing effect of raw butter is due to its high content of lipase. The same is true for heart and liver problems, which are caused or aggravated by processed cheese and butterfat. Such health problems did not occur in the inhabitants of the Caucasus and Bulgaria with their high intake of raw milk products. Cholesterol did not harm anyone in former times when mainly unheated milk products were used; cardiovascular disease was almost unknown.

Raw milk was formerly used to cure tuberculosis but pasteurized milk is more likely to cause it. Carnivorous wild animals have diets high in fat and cholesterol but no signs of atherosclerosis and heart disease. In contrast, dogs and cats on canned food, pasteurized milk or cooked meat develop the same diseases as their masters.

**Lipase in Food**

All lipid-rich foods also are high in lipase. However, you need to be aware that lipase is water-soluble while at the same time being attracted to the lipid phase. Therefore, you cannot get much lipase by using only the lipid phase, such as vegetable oil. Even extra virgin olive oil does not contain lipase, except as unfiltered, milky or turbid oil, but this is not commercially available because lipase would cause it to spoil quickly. The same applies to avocado oil or coconut oil.

This is not a problem with fresh avocado, coconut flesh or raw animal lipids as they usually retain much lipase by using only the lipid phase, such as vegetable oil. Even extra virgin olive oil does not contain lipase, except as unfiltered, milky or turbid oil, but this is not commercially available because lipase would cause it to spoil quickly. The same applies to avocado oil or coconut oil.

In addition to a high intake of refined carbohydrates, I see the current epidemic of diseases, such as Alzheimer’s disease, cardiovascular disease, diabetes, and obesity, largely as long-term manifestations of lipase deficiency, caused by the restrictions of health departments on the sale of unpasteurized milk products. To overcome this in countries where pasteurization is mandatory, groups of people could become part owners of a cow or a small herd managed by a farmer.

Preferably do not use Friesian cows (which give the largest volume of milk) but rather Jersey cows which have the highest fat and lipase content in their milk. Friesians are linked to allergies and diabetes, but Jerseys and other types seem to be fine. However, only butter, cream, cottage cheese and other cheeses are safe for regular use, the high lactose content of milk tends to cause mucous problem, while milk allergy occurs mainly to whey proteins.

In order to obtain a high lipase intake from vegetable sources, we need to consume the whole food. This means eating the avocado instead of using just the oil, or presssing, juicing or blending the coconut flesh to make and use coconut milk or cream. This needs then to be refrigerated or frozen because the high enzyme content causes it to deteriorate rapidly at room temperature.

We encounter another problem with nuts and oily seeds. Even if we do eat them whole, we may not get much benefit from it because of the presence of enzyme inhibitors. Eaten frequently or in high amounts these inhibitors tend to cause indigestion. The solution is to soak and possibly sprout or ferment these seeds (see Recipes section). In one reported experiment all enzyme inhibition had been removed after 24 hours of soaking.

**RECIPES**

I am not fond of using recipes. Most recipes seem to be designed to tickle our palate by harming the nutrients in the food. The healthiest recipe for carrots, for instance, is to pull one out of the ground, clean it and chew well. Any additional step is less nutritious. Also I favor experimenting: mixing this and that within the framework of the food combining rules and seeing how it turns out. In this spirit I offer the following recipes as starting points for finding ways to make healthy food tasty.

If you are willing, you can gradually change your taste preferences, and come to like the new diet with healthier meals. If your life is in no immediate danger from an advanced disease, it will be best to change slowly, making a gradual transition from the present diet to the high quality diet and possibly the raw-food diet over a period of years.

**ACID FOOD**

Food acids, such as in cider vinegar, fermented liquids, citrus fruits, and other acid fruits, and tomatoes are usually beneficial for individuals with an insensitive body and raised blood pressure. However, fruit acids cause problems for those with a sensitive body and low blood pressure. The main reason for this is an inefficient metabolism that causes the body to become overacid and mineral deficient. The main problem is not the ingesting of fruit acids but rather the mineral deficiency caused by the overacidity. In the right way, in neutralised form, fruit acids can be used to re-mineralize and alkalinise the body and in this way are highly recommended. Dolomite or bicarbonate may also be used by sensitive individuals to neutralize acid ferments, or Kombuchatea, or tomatoes.

When using dolomite or eggshell powder it is best to let the powder react with the acid for some time before drinking or pouring it off from the residue. Bicarbonate, on the other hand, acts nearly instantly. You may keep adding a pinch of bicarbonate and stir until it stops bubbling with the next lot. If it has become alkaline it may not taste so good, and you may again add a small amount of acid liquid to make it slightly acid. Individuals with an insensitive body or raised blood pressure on the other hand do not need neutralizing fruit acids but may optionally add magnesium oxide or magnesium carbonate.
BAKING

The best method for baking is one in which enzymes in the food remain alive. This means heating to less than 50ºC/120ºF. Furthermore, it is preferable to start from whole, soaked or sprouted seeds that are rich in enzymes rather than from commercial flours.

Rice Flat-Bread: After blending soaked or sprouted rice, the dough continues to absorb water and so becomes firm almost without any heat. This property seems to be unique for rice. Try different varieties of brown rice to find one that sprouts.

Soak brown rice overnight. If it is viable, rinse for two or three days until sprouts appear; otherwise use after soaking. Wash well and blend with a minimum of water. If the blended rice does not have the consistency of a paste, add rice or buckwheat flour, or strain off excess water. Lightly cover a tray with some rice flour or baking paper and spread the paste out flat. Preferably leave in the sun or otherwise a warm place, such as a warm oven with the heat turned off, until the dough has solidified, usually after a few hours.

Any other soaked or sprouted and blended seeds may be used for making flat bread by baking at 70º-80ºC/160º-180ºF with or without adding some sourdough starter. Again, it is advisable to spread the dough over a layer of flour to absorb excess moisture. You may also add other flavoring ingredients, such as banana or carrot pulp. Buckwheat flour helps to bind all other ingredients together. It may take five hours or more of baking for the bread to solidify. At this temperature the enzymes are destroyed and, unlike sun-baked rice, it is not a raw food any more. However, the protein structures generally are not damaged and there is no digestivelakacystosis when eating this bread.

Sourdough baking with lactic acid fermentation is much healthier than yeast baking. It breaks down gluten so that it tends to be less of a problem, and it makes minerals and inositol available that otherwise remain locked up in conventional cereals. Furthermore, you can use part of the ferment unheated as a live food and source of probiotics.

Rye-Sourdough: Mix a cupful of acidophilus starter with rye flour, water, flavorings (for example, caraway seeds) and a tablespoonful of honey or molasses as food for the bacteria. Leave covered overnight in a warm place. Before adding salt, reserve and refrigerate 1 cup of this as a starter for the next baking. Add more flour, knead, shape and cover the loaves and let them rise in a lightly warmed oven for several more hours. Then bake at moderate heat for 90 minutes. Place a pan of hot water on the bottom rack to develop steam.

Buckwheat-Rice Dough: Mix the following:

- 2 cups of brown rice flour
- 1 cup of buckwheat flour
- 1 cup of sourdough starter
- 1 cup or more of warm water
- 1 or 2 tsp of honey or molasses

When doing this for the first time then use as sourdough starter a cup of Kefir, or sauerkraut juice, or pollen ferment, or any other suitable source of acidophilus (e.g. Grainfields liquid). Honey or molasses are added as food for the bacteria to be converted to lactic acid. Normally you save a cup of the sourdough for the next batch, and also adjust the amount of water to obtain firm dough.

Buckwheat flour is recommended in all non-gluten baking to make the bread stick together. You may replace part of the rice flour with some other non-gluten flour.

Keep the mixture warm for several hours or overnight, possibly in a yogurt maker. When it has become somewhat frothy and risen by up to half in volume it is ready to bake. Take a cupful out and refrigerate as starter for the next batch. If you want to add salt you can do it at this stage. If it is too acid for your taste, mix some alkalizer (e.g. bicarbonate) into the dough.

There are now two possibilities. The conventional one is to put it into a (lightly greased) baking tin, keep it warm for an hour or more to let it rise again, and then bake for 35 to 40 minutes at 180ºC. However, the healthier option, which you may explore with some of the dough, is to spread it out flat on a tray and preferably let it dry in the sun for a few hours, or otherwise just in a warm place. The aim is not to get it dry like a baked product, but rather moist and crumbly.

This is now a live fermented food, similar in health qualities to yogurt, and it tastes somewhat sour like yogurt. You may use it with any good spreads and in addition to salads and other meals just like you use bread. Start with a small amount and hopefully you come to like it and use more.

BEEF JUICE

Beef juice was recommended by Edgar Cayce in cases of serious muscle weakness. To make beef juice: dice about 500 grams or one pound of lean beef. Put in a jar without water, cover well and stand the jar on a piece of cloth in a pot filled with water. Boil for 3 hours. Press the accumulated juice in the jar through a strainer and refrigerate or freeze. Sip a teaspoonful 5 to 10-times daily and keep in the mouth for some time. Make fresh weekly.

BLENDED GREEN LEAVES

This is highly recommended as a daily drink, either on its own or mixed with other ingredients. Blend a handful of dark-green leaves, such as spinach, with water or juice at high speed, and drink without straining; flavoring is optional.

BONE BROTH

This is beneficial with connective tissue problems, including arthritis and ageing skin. Use the soft bones of fowl, or bones and heads of fish. Add one or more tablespoons of vinegar, depending on the amount of bones you have. Simmer with sufficient water in a covered non-metal container for several hours until the bones become brittle and the liquid is nearly neutral. With larger quantities and longer cooking time you may repeatedly add more water and vinegar. Alternatively, use a pressure cooker for 30 minutes, but without adding acid. When the bones have become soft, blend it all, strain (optional) and freeze in ice cube trays. Use some of the broth frequently with meals; especially add it to vegetable salads - it is an excellent source of gelatin, calcium and other minerals.

BUTTER SPREAD

In order to cut down on butter consumption, lightly warm some butter and mix it with an equal amount of extra virgin olive oil. Add lecithin, chopped onion, kelp, herbs and spices to taste.
weight loss
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are commonly grown on milk with lactose as the main energy source and are not very good at
The key component for fermenting is a good starter culture. Commercial acidophilus cultures
sauerkraut, seed cheese, seed yogurt, and sourdough.
Better suitable are ferments made from vegetables, fruits, grains, seeds and nuts, but even
ferments for sanitizing the intestines.
implicated in causing type 1 diabetes. Therefore for most individuals it is better to use non-milk
may stimulate tumor growth. The most commonly used milk from Friesian cow’s (A1 milk) is also
individuals are allergic or sensitive to some ingredients of milk. While whey contains most of
Self-made ferments are more effective for sanitizing the intestines than commercial capsules
freshly ground or frozen linseed may be added.
or it may be flavored with berries or chopped pawpaw or grated apple. Also 2 or 3 tablespoons of
may be added to other food, such as a sprout or vegetable or fruit salad, or cooked vegetables,
or milk powder of any type of animal. As starter culture you may use kefir grains or acidophilus-bifidoculture from capsules, powders or from suitable commercial yogurt.
Keep warm overnight and then strain and refrigerate. This greatly reduces unwanted ingredients
and improves its healing potential.
If you can buy raw milk of any type of animal, you may make quark the traditional way. Just keep
the milk in a warm place in a covered bowl until it has curdled and the whey separated from the
curd. This may take two days but less time if you add whey from a previous lot as a starter. Pour
into a large strainer, let drip overnight, and then refrigerate.
Oil-Protein Mix: This is recommended for overcoming cancer and autoimmune diseases by
restoring the oxidative energy production in the mitochondrias in the Budwig Diet. Mix 3-4
heaped tablespoons of low-fat cottage cheese with 3 tablespoons of flaxseed oil, a small amount
of lecithin and additional liquid as needed. Stir well until the oil is no longer visible. This basic mix
may be added to other food, such as a sprout or vegetable or fruit salad, or cooked vegetables,
or it may be flavored with berries or chopped pawpaw or grated apple. Also 2 or 3 tablespoons of
freshly ground or frozen linseed may be added.
FERMENTS
Self-made ferments are more effective for sanitizing the intestines than commercial capsules or powders. The commonly used yogurt based on cows’ milk has some problems in that many individuals are allergic or sensitive to some ingredients of milk. While whey contains most of the beneficial bacteria it also has most of the mucus-forming lactose and a factor (IGF-1) that may stimulate tumor growth. The most commonly used milk from Friesian cow’s (A1 milk) is also implicated in causing type 1 diabetes. Therefore for most individuals it is better to use non-milk ferments for sanitizing the intestines.
Better suitable are ferments made from vegetables, fruits, grains, seeds and nuts, but even
honey or molasses may be fermented, also see the recipes for cottage cheese/quark, rejuvelac, sauerkraut, seed cheese, seed yogurt, and sourdough.
The key component for fermenting is a good starter culture. Commercial acidophilus cultures are
commonly grown on milk with lactose as the main energy source and are not very good at
fermenting seeds and vegetables where the main energy source are glucose and other sugars. You do not need a starter for making sauerkraut but for other ferments it is preferably to acquire a culture suitable for the intended medium. Two good suppliers who deliver worldwide are http://www.agmfoods.com/ (also known as Grainfields) for grain and vegetable ferments, and http://users.verynet.com/~dna/kefirpage.html for kefir-based recipes and information. In addition
fermenting milk you may obtain water kefir grains, also called sugar kefir grains, which are more suitable for fermenting non-milk products. Kefir has the advantage that it works at room temperature.
Most lacto-bacteria work best at a temperature between 35-40°C. If you do not have a yogurt
maker, keep the ferment inside a closed (Styrofoam) box warmed by a small light bulb, or use a jar standing in warm or hot water or keep it in a warm place. Refrigerate the ferment when it just starts frothing. If it is too sour, use less of the whey as the next starter, and partly neutralize the acid.
The water used for fermenting should be free of chlorine and fluoride. Mineral-rich water works
better than low-mineral water. To improve soft water you may add a small amount of dolomite or eggshell powder, magnesium chloride, colloidal minerals, molasses or bee pollen.
It is best to use a clean fermenting jar for each batch rather than just adding more raw-material.
In this way the formation of undesirable bacteria and yeasts is minimized. Also a rather low or
high fermentation temperature may encourage the growth of yeasts. If you let a batch ferment for
more than a day occasionally shake or stir the content to prevent molds forming on the surface.
Do not use any ferment that does not taste or smell right. Sensitive individuals should partly
neutralize any strong acidity by letting it react with bicarbonate or dolomite powder before
ingestion. If you are sensitive and new to ferments start taking only a spoonful, and then keep
doubling the dose until you have reached a normal amount, such as a glassful.
Bee Pollen Ferments is nutritious and easy to make. Add one or several teaspoons of bee pollen
and a teaspoon of honey or molasses to half a liter of warm water, and as starter use sugar kefir
grains, or half a glassful of AGM ferment, or any other probiotic culture. As with goats’ or rice
milk, this does not curdle or set, and is used or refrigerated when it starts frothing and tastes
somewhat acid. When more experienced with fermenting you may try adding other ingredients
such as spirulina, chlorella, wheat grass or barley grass powder or fresh ginger.
Subsequently use up to a cupful of strained liquid of the previous batch as starter. The more of the
starter you use and the warmer it is, the sooner it will be ready. It may take from just a few hours
up to two days. Also with a new starter the bacteria are still dormant and need longer to work, but
after making several batches it takes much less time.
FISH, MARINATED
Dice the fish and cover with lemon juice or diluted cider vinegar or a mixture of both. Refrigerate
overnight; add onion, cooked or raw, or herbs and spices, and possibly some juice or leaf or green
skin of papaw. Eat with vegetables or sprout salad. You may also marinate liver or other soft cuts of meat.
FRUIT BALLS
These are for festive occasions. Mince any of following: nuts, sesame or sunflower or pumpkin seeds, fresh coconut, dried fruits such as apricots, dates, mixed peel, papaya, pineapple. Mix well, add lemon juice to taste and also lecithin; bind with oil. Make into small balls and roll in desiccated coconut. For different flavors add carob powder or spices to the mixture.

HOMEMOS
Soak chickpeas (garbanzo beans) overnight. If viable sprout them, otherwise use soaked raw or soaked and cooked for a few minutes only. Puree the prepared chickpeas in a blender and mix with any combination of the following: olive oil, tahini, lecithin, cayenne, herbs or spices. Keep refrigerated. This may be used as bread spread or as an addition to meals.

HOT VEGETABLE JUICE
Normally you drink fresh vegetable juice cold. However, in cold weather you may enjoy drinking it hot, flavored like a broth. Use a handful of fresh green leaves, add cabbage, celery, tomato, cucumber - whatever is available - and finally some sliced carrot, pumpkin or beetroot. Mix this in an electric blender, together with a suitable warm to hot liquid, for instance herb tea, bone broth, or just water. Drink without straining or only coarsely strained. Try to keep the temperature of the broth below 50°C/120°F. A juice extractor may be used instead of the blender. You may also mix the hot liquid with some fresh vegetable juice. Refrigerate for setting. Instead of commercial gelatin, a gelatinous bone or gelatin may be used. Gelatin aids in the absorption of vitamins and minerals.

JELLIES
Dissolve 4 teaspoons of white, unflavored gelatin in half a liter of hot water. Pour it over diced fruits or over sprouted seeds and diced or grated vegetables (for example, cucumber, tomato, carrot or chopped onion). You may add herbs, spices, and salt. Alternatively, the gelatin may be dissolved in a smaller amount of hot water and mixed with an appropriate amount of fruit juice or fresh vegetable juice. Refrigerate for setting. Instead of commercial gelatin, a gelatinous bone or fish broth may be used. Gelatin aids in the absorption of vitamins and minerals.

LIVER JUICE
Raw liver juice is the most nutrient-rich food. Use only organic liver, lamb's fry or liver of other free-range animals. Blend with sufficient water, strain and freeze in ice cube containers. Drink one or more cubes daily dissolved in fresh juice.

MINCED MEAT
Use only mince from lamb or grass-fed or organic meat; do not use anything from a feedlot.

Keep larger amounts frozen in meal-size portions. You may flavor a portion with chopped or grated onion, radish, ginger and tomato, use chilli or cayenne, add some magnesium chloride, and squeeze some lemon or lime juice over it. If possible expose previously frozen or refrigerated food for several minutes to sunshine before eating.

PAPAW SMOOTHIE
This may be used as a special health food to aid the digestion, cleanse the body of protein residues and dissolve tumors or other unwanted growths. Mix in a blender mature green papaw (when it just starts turning yellow and the seeds are already black) with skin, seeds and flesh, also banana and any other fruit in season and sufficient of a suitable liquid, such as a juice. Eat on its own or as part of a meal. You may also add protein powders as described for the Protein Drink.

POTATOES - grated
In addition to baking or steaming potatoes with skin, they may sometimes be prepared in the following way. Bring a cupful of water to boil, keep the element on high, add coarsely grated potato and stir for 2-3 minutes. This leaves the potato semi-raw with a quite distinct flavor; add oil, salt and other flavoring, and eat with vegetables or sprouts.

PROTEIN DRINK
You may use this as a basic snack or meal: Mix one teaspoon of spirulina, two of barley or wheat grass powder and three each of pollen and ground linseed with a suitable liquid. You may, of course, change the composition of the mix as it suits you. As liquid you may use seed milk, seed yogurt or (goats') milk yogurt, kefir, fresh vegetable juice, apple juice or grape juice, or smoothiemade with raw egg, pawpaw, banana or other fruit. You may add lecithin granules, coconut oil, linseed oil or extra-virgin olive oil, any fermented liquid, and suitable supplement powders or crushed tablets. You may make the consistency so that you can drink it, or like porridge to eat with a spoon.

REJUVELAC (FERMENTED SEED DRINK)
Wash a cupful of whole grain (preferably organically grown) and cover with 2 cups of warm water. Suitable are brown rice, millet, rye and other grains. Keep in a glass or porcelain container in a warm place. Pour off the liquid the next day or when it tastes slightly sour. Use possibly refrigerated as a refreshing drink. The grains may then be cooked or sprouted. Use the ferment only if it has a pleasant taste and smell otherwise discard it. Rejuvelacmay not be suitable for sensitive and yeast-allergic individuals.

RICE DISHES
Cook the rice until almost soft and most of the water has evaporated. Add a small quantity of apples, cover, cook until the apples are soft and then mash them. Add cinnamon, oil and lecithin. Possibly eat cold as dessert. As an alternative, add apple puree to the cooked rice. You may also try rice with a sauce based on blended raw carrots and other sweet vegetables or bananas.
SAUERKRAUT
Use a sterilized wooden barrel or earthenware pot of suitable size. Place a layer of shredded cabbage 10-15 cm/4 - 6 inches deep in the container. A small amount of salt and some herb seeds, such as caraway, fennel or cumin, may be sprinkled over it; other shredded vegetables may be added for flavoring. Press the first layer down then add another layer and so on. The cabbage must be completely saturated with its juice and no air pockets left. Cover the contents with cheesecloth, place a wooden cover over it and weigh down with a heavy stone. Leave at room temperature.

From time to time, after several days, remove foam and mildew from the top, wash the cheesecloth, board and stone with warm water and then put them back. After about 2 weeks it should be ready for eating. Store the container in a cool place, or fill the sauerkraut in jars and refrigerate. Eat it raw and drink the juice as well as an excellent source of beneficial bacteria.

To make it easier for beneficial bacteria to develop, you may sprinkle some suitable ferment into the different layers, such as sauerkraut juice, organic cider vinegar, kefir, or some acidophilus culture.

SEED CHEESE - SEED YOGURT
Soak oily seeds such as almonds, nuts, sesame seeds, pumpkin or sunflower seeds for 8-12 hours. Puree in an electric blender and add kefir or acidophilus culture, or possibly sauerkraut juice orrejulaceras startet. Keep in a warm place for several hours until the desired degree of sourness develops. Refrigerate and use within 3 days. If it is too sour or if curd and whey have separated, just strain and discard the whey, possibly even rinse the curd. You may use seed yogurt as part of a salad dressing, for flavoring meals or as bread spread. The more sensitive you are the less sour it should be when you use it. If it smells or tastes bad, discard it.

SEED MILK
Soak almonds or sunflower kernels overnight or for about 12 hours. The simplest way is to change the water, blend the soaked seeds in an electric blender and press them through a strainer. You may either drink the liquid immediately or refrigerate. You may add the residue of the oily seeds to any breakfast mix (remove almond skins before blending). However, a better way is to obtain viable seeds and wait until they start sprouting. In this way you may even use much cheaper un-hulled sunflower or pumpkin seeds for making milk. You may also sprout barley or brown rice and then blend and strain, the sprouting process produces sweeter milk.

SOYMILK
Self-made soymilk is less harmful than commercial soymilk and may be used for making yogurt. Soak whole non-GM soybeans for 2 days in the refrigerator, changing the water several times to remove all the anti-nutrients. Then blend and strain through a cheesecloth. Bring the strained liquid to boiling and simmer for 3-5 minutes, cool quickly and refrigerate until needed. One cup of dry beans yields about 3 cups of soaked beans and 2-3 litres of soymilk. When using this to make yogurt add a tablespoon of raw honey as food for the starter bacteria.

SPROUT SALAD
Mix a variety of freshly rinsed sprouted seeds with a combination of fresh, raw vegetables, basically using whatever is available. Most suitable are sprouts ofmungbeans, lentils, sunflower seeds and fenugreek together with finely grated beetroot, carrot and turnip or radish. Tomato and cucumber (try grated) are good for flavoring. If you have difficulty chewing, you may put all of it through aminceror you may also liquefy and drink it, possibly as part of a protein drink.

The key to enjoying a salad is to find a delicious dressing. Experiment until you succeed. Try a general dressing of extra virgin olive oil, lemon juice or whole blended lemon or cider vinegar or rosehip powder, any fresh or dried herbs or spices, possibly a dash of cayenne. These may be added individually or mixed beforehand and refrigerated in a jar. You may flavor olive oil by mixing in a jar one part oftahinith with 3-10 parts of oil, lemon-juice and lecithin. Raw egg yolk is a good addition to the dressing, and possibly seed cheese or sour milk. You may also flavor this salad with tofu or yogurt.

SWEET VEGETABLES
Use any combination of the following: sliced pumpkin, sweet potato, onion, turnip, carrot and tomato. Adjust the cooking water so that finally almost all of it has evaporated. Vegetables with short cooking times (tomato, pumpkin) may be added later to preserve their flavor. Also any salt, oil, curry, cayenne, herbs and spices are best stirred in at the end of cooking.

VEGGIE BURGERS
Soak overnight one cup of chickpeas or lentils; next morning replace the water and blend. Soak two cups of rice overnight and cook. Combine the blended legumes with the cooked rice and add some buckwheat flour or an egg to bind. Flavor this with any combination of the following: miso, soy sauce, fresh parsley, coriander, cumin, fresh ginger, onion, and any other herbs or spices. Form flat burgers, and bake crisp in a grill or a non-stick pan.

Lipase Supplements
Unfortunately, the richest food sources of lipase, raw butter and cream, have been outlawed in most Western countries. Individuals with genetic or age-related lipase deficiency will find it difficult to obtain enough lipase in commercially available raw food. Fortunately, lipase powder has in recent times become more easily available. Originally lipase could only be obtained in relatively low concentrations as an ingredient of pancreatin from animal sources. In order to protect it from de-activation in the stomach, pancreatin is commonly available as acid-resistant or enteric-coated tablets that dissolve only in the intestines. While these can be helpful with malabsorption syndromes such as cystic fibrosis, because of their late activation, they are less effective than pancreatin released from the pancreas or enzymes already present in the food.

Furthermore, in children high spot concentrations of pancreatin from dissolving tablets in the lower intestines have been reported to cause damage to the intestinal wall. Another problem of mixing high levels of protease with a low level of lipase is that lipase is a protein. Its activity
can be diminished by being partly digested by close contact with proteases. Presently pancreatin and lipase from animal sources are increasingly replaced with enzymes from plant and microbial sources. One well-known enzyme factory is papaya or pawpaw, especially the white sap in underripe fruit and in leaves and twigs. The highest concentration is in the green skin of unripe fruit. Besides the protease (protein-digesting enzyme) papain, it also contains appreciable amounts of lipase.

Commercially lipase is produced mainly from special strains of fungi and bacteria. It is highly purified with no contamination from fungal or bacterial protein. Its main advantage is its activity over a wide pH range. Therefore, it is not deactivated by stomach acid, and is effective when mixed with the food in powder form before ingestion. With some fatty or oily food, it can be mixed already up to one hour before mealtime and kept in a warm place to react. However, if waiting too long an off-flavor may develop, especially in the presence of short-chain fatty acids.

The advantage of using pre-mixed enzyme powder rather than pancreatin tablets can be seen from a reported case in which enteric-coated pancreatin tablets failed to arrest the progression of cancer of the pancreas, while fungal enzyme powder pre-mixed with food helped this patient to survive. Tests have revealed that under favorable conditions about 40% of pancreatic lipase powder added to food is being absorbed into the bloodstream. I assume that by taking lipase in juice or water before meals this percentage will be even higher.

Pre-mixing of lipase with food overcomes a common problem with microbial lipases: they tend to be degraded by the pancreas enzyme trypsin in the small intestine. Pre-mixing gives lipase time to react not only before ingestion but also for a considerable time before the meal becomes too acid in the stomach and lipase becomes dormant. Lipase activity tests measure the amount of free fatty acids liberated from olive oil per minute; however, for complete hydrolysis much longer reaction time is required.

On the other hand, if we want to maximize absorption of lipase into the bloodstream, then we need to avoid the release of trypsin by taking it on an empty stomach and with a reasonably large volume of liquid. I have experimented with absorbing small amounts of high-strength lipase under the tongue, and believe that this is an effective way of getting lipase into the bloodstream, although it may be equally effective carrying it across the skin with DMSO but I have not tried it.

Cod liver oil and other fish oils are highly beneficial for most individuals who do not eat much cold-water fish. If you suspect fat malabsorption or lipase deficiency, shake a tablespoon of cod liver oil or several opened capsules of fish oil together with some lecithin and lipase in juice before ingestion, or alternatively emulsify the oil by swishing the mixture around the mouth for a while. The omega-3 fatty acids in fish oils have been shown to reduce elevated fat levels in the blood. Cells containing plenty of omega-3 fatty acids in their walls produce up to 7 times more energy than cells with other fatty acids in their walls.

As a general rule, fat or oil, or fatty food such as egg yolk, ingested without thoroughly chewing together with other food, or by emulsifying it with lecithin, are not well absorbed and may lead to indigestion and deficiencies. If you just swallow capsules of fish oil or vitamin E, or a spoonful of cod liver oil, the oil may just remain in a puddle and not be absorbed because lipase cannot penetrate a blob of oil or fat. Therefore always try to emulsify oils and fats by shaking, swishing or, the natural way, by thoroughly chewing with other food.
Technical Details

Lipase is also used for other purposes, such as in washing powders. Therefore, when trying to source lipase, look for food-grade or supplement quality lipase. I have not been able to find single ingredient lipase supplements in the retail market. They are always in tablet form, usually in low concentration, and mixed with other enzymes. While pancreatic tablets have their place, I believe that tablets or capsules of microbial lipase are relatively inefficient as they start working only in the small intestine where they may soon be degraded by trypsin. Alternatively you may, of course, open capsules and pre-mix their content with the meal.

For individuals with genetic or advanced age-related lipase deficiency, and no access to raw butter or cream all this is not satisfactory. Therefore, search on the Internet for enzyme manufacturers, you may be able to obtain lipase powder in kilogram quantities. Preferably store lipase powder refrigerated in a closed container. At room temperature the loss of activity is generally stated as 10% per year if kept in a tightly closed container.

The activity is commonly expressed as Lipase Units or LU, and in the US sometimes as US Pharmacopeia (USP) units. Different lipase preparations may have different activities. For fungal lipases these may range from 2,000 to 2,000,000 LU per gram. However, to make it more complicated, activity presently is also stated as FIP units / g of FCC III LU/g. One of these new lipase Units is equivalent to ten of the old LU, or 1,000 FIP units / g = 10,000 LU / g.

Depending on the nature of your health problem you may use up to 500,000 LU daily, although no research on maximum amounts is available. Start with small amounts, such as 20,000 LU daily, and increase gradually according to your observations of any benefit or reaction. Half a level teaspoon of lipase 80,000 LU / g provides about 120,000 LU. Lipase powder easily dissolves in water. Mix more with meals high in fats or oils, and less with food of lower fat content. With cooked food always add after cooling to below 45ºC. Also add some lecithin and mix and chew well.

For better absorption to clean congested blood vessels, or with lipoprotein lipase deficiency, or to lose weight, stir lipase in a glass of juice, herb tea or water and take before meals. Drink more afterwards. Alternatively try absorbing 100,000 to 200,000 LU under the tongue, possibly best at bedtime.

Two US enzyme manufacturers are Valley Enzymes athttp://www.valleyenzymes.com/and American Laboratories athttp://www.americanlaboratories.com/. You may inquire about a distributor near you. For retail supplies of fungal lipase in Australia see www.strideintohealth.com.

External Use of Lipase

To remove fatty lumps (lipoma), or yellow-brownish skin marks (xanthomas), or to rejuvenate aging or damaged skin, mix a suitable amount of lipase with a carrier agent, such as unheated honey, MSM in water or fresh aloe vera gel. It may also help to add a small amount of lecithin and fish oil (possibly odorless). Apply this to the problem area and cover to leave overnight or for several days. Repeat from time to time if and as required. You may also try it on external tumors, skin cancer, moles and boils, but in this case also add a capsule of halibut liver oil. I would use this method for skin cancer on a sensitive area such as the lips in preference to any harsher measures. Also applying the south pole of a magnet to lipomas, moles or skin cancer may help, while xanthomas may respond to rubbing on lemon juice or vitamin C.

To regenerate aging skin, you may rub on a mixture of lipase with aloe vera gel, deodorized fish oil and vitamin E oil, or add some lipase to your favorite natural skin lotion just before you rub it on. Alternatively, you may rub the skin with a lipase-rich nutrient, such as unpasteurized cream, or mix some raw egg yolk or avocado with your skin lotion. Unheated coconut milk is highly germicidal, and especially good for areas affected by Candida and other fungi.

To lose weight from specific parts of the body, such as thighs, buttocks or stomach regularly rub on lipase dissolved in an agent that easily penetrates the skin such as aloe vera gel, vanishing cream or, possibly most effective, DMSO. In addition frequently stimulate this area by rhythmic tensing and relaxing the involved muscles, by massaging the area and using alternating hot and cold showers on it.

Safety

In regard to safety, tests with rats did not show any side-effects after intakes of 2 g/kg of high-potency lipase for several months. For a human that would be equivalent to taking 100 to 150 g daily. Also there are no reported health incidents. Therefore health authorities generally do not have any concerns about lipase as nutritional supplement. A committee report of the Australian TGA states: "Authors of safety studies and reviews indicated that they could find no reports of adverse reactions for oral consumption of microbial-derived enzymes in humans"(CMEC47).

Caution: There is a theoretical possibility that a continued high intake of lipase supplements, especially in combination with elevated blood fat levels, may cause the blood to become high in free fatty acids. This can cause overacidity, and in addition fatty acids may enter cells too rapidly. Over time, this may cause muscle problems. Therefore, if you notice overacidity or any kind of muscle problems developing, temporarily stop lipase supplementation, and possibly re-introduce it at a later date at a lower dose. Furthermore, as enzymes are proteins, there is always the possibility of an allergy against the used lipase developing. Therefore watch out for this possibility, and possibly switch to a lipase produced by a different strain if you suspect any allergic reaction.

The information in this article has been provided in good faith according to my experience and understanding. I cannot guarantee results or accept responsibility for any side effects.

In 1930, under the direction of Dr. Paul Kouchakoff, research was conducted at the Institute of Clinical Chemistry in Lausanne, Switzerland. The effect of food (cooked and processed versus raw and natural) on the immune system was tested and documented.

Dr. Kouchakoff’s discovery concerned the leukocytes, the white blood cells.
It was found that after a person eats cooked food, his/her blood responds immediately by increasing the number of white blood cells. This is a well-known phenomena called ‘digestive leukocytosis’, in which there is a rise in the number of leukocytes - white blood cells - after eating.

Since digestive leukocytosis was always observed after a meal, it was considered to be a normal physiological response to eating. No one knew why the number of white cells rises after eating, since this appeared to be a stress response, as if the body was somehow reacting to something harmful such as infection, exposure to toxic chemicals or trauma.

Back in 1930, the Swiss researchers at the institute of Chemical Chemistry made a remarkable discovery. They found that eating raw, unaltered food did not cause a reaction in the blood. In addition, they found that if a food had been heated beyond a certain temperature (unique to each food), or if the food was processed (refined, chemicals added, etc.), this always caused a rise in the number of white cells in the blood.

The researchers renamed this reaction ‘pathological leukocytosis’, since the body was reacting to highly altered food. They tested many different types of foods and found that if the foods were not refined or overheated, they caused no reaction. The body saw them as ‘friendly foods’. However, these same foods, if heated at too high a temperature, caused a negative reaction in the blood, a reaction found only when the body is invaded by a dangerous pathogen or trauma.

The worst offenders of all, whether heated or not, were processed foods which had been refined (such as white flour and white rice), or pasteurized (a process in which milk is flash-heated to high temperatures to kill bacteria), or homogenized (also seen in milk where the fat in milk is subjected to artificial suspension), or preserved (chemicals are added to food to delay spoilage or to enhance texture or taste).

**Raw foods and digestive enzymes**

Let’s get back to enzymes. Raw foods are rich in enzymes. Enzymes are needed for the digestive system to work. They are necessary to break down food particles so they can be utilized for energy. The human body makes approximately 22 different digestive enzymes which are capable of digesting carbohydrates, protein and fats. Raw vegetables and raw fruit are rich sources of enzymes.

While all raw foods contain enzymes, the most powerful enzyme-rich food is sprouted seeds, grains, and legumes. Sprouting increases the enzyme content in these foods enormously.

Lack of digestive enzymes can be a factor in food allergies. Symptoms of digestive enzymes depletion are bloating, belching, gas, bowel disorders, abdominal cramping, heartburn and food allergies.

All of us lose our ability to produce concentrated digestive enzymes as we grow older. In cases where age is a factor, or where lack of digestive enzymes causes food allergies, supplementation may be helpful. You may also want to explore food combining.

The following digestive enzyme supplements aid digestion:

- **Amylase** works to breakdown carbohydrates i.e. starches, sugars
- **Bromelain** taken from pineapple plant, helps break down proteins
- **HCL** hydrochloric acid stimulates pancreatic secretion, activates pepsin and sterilizes the stomach from bacteria and parasites
- **Lactase** needed to break down lactose found in milk products
- **Lipase** works to break down fats into fatty acids and glycerol
- **OX BILE** improves fat digestion, stimulates bile flow, aids gallbladder
- **Pancreatin** contains protease, amylase, and lipase, functions in the intestine and in the blood
- **Papain** extracted from papaya fruit, aids in protein digestion
- **Pepsin** breaks down proteins, function depends on availability of HCL
- **Protease** works to breakdown protein into amino acids

The more food that you can eat raw, the better. If you do cook your food, the best way to cook food is to lightly steam, stew, or use a slow crock cooker. Eat as few over-processed and over-cooked foods as possible. The body has a difficult time digesting fried, pasteurized, barbecued, dried, and other over-processed and over-cooked foods which you find in boxed and processed foods.

In other words, foods which were changed from their original God-given state.
The synthetic sweeteners drive neurological diseases that can actually make you gain weight, make you depressed, chronic fatigue, irritability and loss of concentration.

Drink only 100% fruit juice diluted 50/50. By no means ever drink Fruit DRINKS.
Blood is the key to life and to healing. So exercises that bring blood to an area are good for the area and the diseases that come from it. We do not get enough blood to our heads as we get older and more sedentary. These yoga exercises will bring blood to the head thus the thyroid, pituitary, hypothalamus etc. thus helping with weight loss.
Use these carefully to bring blood to stimulate the hormones.

*Always Remember*

*Natural fruit non-processed Fructose in moderation builds Hormones especially HGH*

*All Dextrose blocks and Impedes Hormone Production Especially Processed Dextrose*