Prostate Health

Awareness of prostate health has come a long way since the days when comedians would confuse "prostate" with "prostrate." Yet, many men still aren’t sure what the prostate is, what its functions are, and how to have good prostate health. Knowing the answers to these questions is the key to understanding prostate health.

What Is the Prostate?

The prostate is a small gland in men that is part of the reproductive system. It's about the shape and size of a walnut. The prostate rests below the bladder and in front of the rectum. It surrounds part of the urethra, the tube that carries urine from the bladder. The
prostate helps make semen, which carries sperm from the testicles when a man ejaculates.

Enlarged Prostate

As a man ages, the prostate can grow larger. When a man reaches the age of 40, the prostate gland might have increased from the size of a walnut to that of an apricot. By the time he reaches the age of 60, it might be the size of a lemon.

Because it surrounds part of the urethra, the enlarged prostate can squeeze the urethra. This causes problems in the passing of urine. Typically, these problems passing urine don’t occur in men until they are age 50 or older. They can, though, occur earlier.

An enlarged prostate is also called benign (noncancerous) prostatic hyperplasia or BPH. It is common and cannot be prevented. Age and a family history of BPH are risk factors. Eight out of every 10 men eventually develop an enlarged prostate. About 90% of men over the age of 85 will have BPH. About 30% of men will find their symptoms bothersome.

Symptoms of an enlarged prostate may include:

- Trouble starting to urinate or urinating freely
- Having to urinate frequently, particularly at night
- Feeling that the bladder is not empty after urinating
- Feeling a sudden urge to urinate
- Having to stop and start repeatedly while urinating
- Having to strain to urinate

To maintain prostate health, it is important for men who have early symptoms of BPH to see their doctor. BPH is a progressive disease. It can lead to serious, although rare, health problems, such as kidney or bladder damage.

Enlarged Prostate continued...

Treatments include:

- **Watchful waiting.** Patients who have an enlarged prostate but who are not suffering symptoms or whose symptoms are not bothersome may be advised by their doctor to merely get an annual checkup, which might include a variety of tests.

- **Making lifestyle changes.** Changes could include limiting drinking at night and before bedtime, especially drinks containing alcohol or caffeine.
• **Drug therapy.** Two common treatments for BPH are alpha-blockers, which alleviate BPH symptoms, and 5 alpha-reductase inhibitors, which help shrink the prostate. Many men take them together. The FDA is revising labels on several BPH drugs -- Proscar, Avodart, and Jalyn -- to include a warning that the drugs may be linked to an increased risk of prostate cancer.

• **Surgery.** This is generally used for men with severe symptoms who haven't been helped by other treatment.

**Prostatitis**

There are four types of prostatitis. Prostatitis is an infection or inflammation of the prostate. It can affect men in their late teens to those well into old age. Its symptoms include trouble passing urine, chills and fever, and sexual problems. The condition is not contagious and cannot be transmitted sexually to a partner. Treatment usually includes antibiotics.

A man who has recently had a catheter or other medical instrument inserted into his urethra is at higher risk of bacterial prostatitis. Some sexually transmitted diseases, such as *chlamydia*, may cause chronic prostatitis.

**Maintaining Prostate Health: Tests**

Doctors use several tests to check on the condition of the prostate. They include:

**DRE**, or digital rectal exam: This is the standard prostate test. A doctor feels the prostate from the rectum, checking for things such as size, lumps, and firmness.

**PSA**, or prostate-specific antigen test: This blood test measures the amount of a protein called PSA that is produced by prostate cells. Elevated levels may indicate cancer. They are not, though, proof that a man has prostate cancer. Levels may be elevated with noncancerous prostate conditions such as an enlarged prostate or prostatitis. Levels may be low with prostate cancer.

Screening for prostate cancer is controversial.

The American Cancer Society says that, starting at age 50, men should talk to their doctors about the benefits, risks, and limitations of prostate cancer screening before deciding whether to be tested. The group's guidelines make it clear that prostate-specific antigen (PSA) blood testing should not occur unless this discussion happens.
Enlarged Prostate and Prostate Cancer

Benign prostatic hypertrophy (BPH), an enlargement of the prostate gland, is the most common benign tumor found in men. The prostate is enlarged, and may have numerous nodules on it. The urethra narrows to a small slit and creates pressure on the urethra. Symptoms can include difficulty in starting the urine stream, decreased force and caliber of the stream, dribbling, sense of fullness after urination, frequency, urgency, pain on urination, frequent urination during the night. In severe cases, as in the figure below, there can also be thickening of the bladder wall, dilation of the ureters, and a resultant enlargement of the kidneys.

Most prostate cancers are usually slow growing, although some can be aggressive. Both early and advanced prostate cancers may have no symptoms. If there are symptoms, men usually have urinary tract problems such as frequency, burning on urination, and blood in the urine, or have back or hip pain. The causes are not known, but some potential risk factors may be heredity, a high-fat diet, and being an African-American man.

Signs of prostate cancer can often be detected by your doctor during an annual rectal/prostate exam. With prompt treatment, the survival rate in men with a small localized prostate cancer is about the same as for men who never had prostate cancer.
Maintaining Prostate Health: Tests continued...

The American Urological Association recommends that men ages 55 to 69 who are considering screening should talk with their doctors about the risks and benefits of testing and proceed based on their personal values and preferences. The group also adds:

- PSA screening in men under age 40 years is not recommended.
- Routine screening in men between ages 40 to 54 years at average risk is not recommended.
- To reduce the harms of screening, a routine screening interval of two years or more may be preferred over annual screening in those men who have decided on screening after a discussion with their doctor. As compared to annual screening, it is expected that screening intervals of two years preserve the majority of the benefits and reduce over diagnosis and false positives.
- Routine PSA screening is not recommended in men over age 70 or any man with less than a 10-15 year life expectancy.

The U.S. Preventive Services Task Force, however, doesn't recommend routine PSA screening for men in the general population, regardless of age. They say the tests may find cancers that are so slow-growing that medical treatments -- which can have serious side effects -- would offer no benefit.

**Prostate biopsy:** Men with high PSA results or other symptoms of cancer may have a tissue sample taken of their prostate to determine if cancer is present.

To treat an enlarged prostate, some people use herbs, from flaxseed to stinging nettle to prickly pear cactus. At typical doses, experts say that most plant extracts are probably safe for BPH, or benign prostatic hyperplasia. But do they work?

Some supplements may help. Others -- including the most popular, saw palmetto -- might not. And a few, including zinc, may actually put you at risk for getting BPH.
Reasons for Prostate Gland Enlargement

The enlargement of the prostate happens as men age and it is the root cause of prostate problems such as prostatitis, benign prostatic hyperplasia (BPH) and prostate cancer. Besides aging, there are other causes of prostate enlargement. This article discusses the factors that lead to the enlargement of the prostate gland and the different treatment options available for shrinking the prostate and addressing prostate problems.

by Brad Chase

What Causes Prostate Enlargement?

Prostate enlargement can be quite bothersome for aging men. Although it is not life-threatening, its symptoms are often uncomfortable and painful.

Besides the pain associated with prostate enlargement, prostate enlargement should be carefully monitored because it could transform into prostate cancer if the rapidly increasing prostate cell population turn malignant.

Basically, the enlargement of the prostate occurs when epithelial and stromal cells in the prostate increase in number. This proliferation of prostatic cells can either be benign or malignant.

Benign form of prostate enlargement is also known as benign prostatic hyperplasia (BPH) and benign prostatic hypertrophy. Malignant prostate enlargement is also known as prostate cancer.

It is the second most common cancer in older men and a leading cause of death in the age group.
However, most cases of prostate enlargement are benign and do not necessarily signal the onset of prostate cancer. Since the symptoms of both malignant and benign forms of prostate enlargement are identical, specific laboratory tests are required to differentiate between the two.

Prostate enlargement occurs naturally with age and the prostate is believed to start growing late in puberty. At the age of 50, approximately 50% of men show some evidence of latent BPH while the percentage increases with age. Half of these men are also likely to develop BPH that will require medical attention.

The major factors known to cause prostate enlargement are discussed below.

**Androgens -- Anger and Stress cause BPH**

Most experts believe that androgens play a major role in the enlargement of the prostate. Although, rather than directly causing the condition, these male sex hormones sometimes play a permissive role. This suggests that they are required to be present for prostate enlargement to occur.

One clear evidence to support the androgen-driven enlargement of the prostate is that castrated boys do not experience BPH even as they get older.

In addition, injecting these boys with testosterone does not increase the risk of BPH.

![Testosterone molecule](image)

Although testosterone is involved in the growth and development of the prostate, its action is minimal compared to that of its metabolite, dihydrotestosterone (DHT). In fact, various studies have found that many BPH patients have low serum levels of testosterone and high levels of DHT.

In the prostate, as well as some other parts of the body, testosterone is converted to DHT through the action of the enzyme, 5α-reductase (type 2). Once synthesized, DHT binds to the androgen receptors found on prostate cells to act.

Therefore, DHT is the main androgen in the prostate and it is essential for prostatic growth.

Unlike testosterone, DHT dissociates slowly from androgen receptors. As a result, its action is more potent and longer lasting.
When DHT binds to these receptors, it induces cell growth and proliferation in the prostate. This is often what causes the enlargement of the prostate.

With the knowledge of this mechanism, 5α-reductase inhibitors can be used to reduce the levels of DHT in the prostate by blocking the enzyme responsible for the conversion of testosterone to DHT.

This therapeutic action reduces the size of an enlarged prostate and relieves the symptoms of BPH.

**Estrogen**

A number of recent studies indicate that estrogen can contribute to BPH. Although many of these studies agree that estrogen is indeed involved in the cellular processes that result in BPH, it is believed that it plays a less direct role in this process.

In all likelihood the presence of estrogen in the prostate is because androgens in the prostate tissue are converted to estrogen. This explains the reason why many studies have found inconsistent correlations between serum estrogen levels and BPH.

A subtype of estrogen receptor (ERα) has been discovered to contribute to the proliferation of prostatic cells. This means that estrogen plays a role in the division and multiplication of cells in the prostate which, in turn, leads to enlargement of the prostate.

A confirmation of the role of estrogen in the enlargement of the prostate comes from the observation that a selective estrogen receptor modulator that can regulate estrogen levels in the prostate was effective in the treatment of BPH in animal models.

This drug was tested in transgenic mice with positive results and the findings were presented in the 2006 Society for Endocrinology medical conference in London.

Lastly, some experts suggest that the contribution of estrogen to prostate enlargement involves the effect of the hormonal imbalance between estrogens and androgens in the prostates of older men.

**Lifestyle, Diet and Age**

As already mentioned, age is a major causative factor of BPH. In fact, the prostate grows larger with age. Therefore, the risk of clinically significant BPH is higher in older men.

In most men, the prostate begins to grow latently during puberty and may remain in a relatively small size until the age of 40. After the age of 40, the prostate begins another phase of growth which may signal the onset of BPH.

However, symptoms of BPH do not often occur until men turn fifty and it may take longer in some other men.
An increased risk of this condition has also been linked to lifestyle. For example, symptomatic BPH is more prevalent among men who live in urban areas compared to those who lead traditional or rural lifestyles.

**Super• IMMUNE Diet Tips**

STARTS With

What NOT To EAT

1. AVOID Synthetic Foods
2. AVOID Hi Glycemic Foods
3. AVOID Processed Foods
4. AVOID White Sugars
5. AVOID Foods Boiled in Oil
6. AVOID Nitrite/Nitrate meat
1. Eat Natural Foods with little preservatives
2. Eat more fruits, seed products, leafy greens, salads
3. Let Fruit be your Sweetener,
4. Drink ONLY 100% Fruit juice diluted with water
5. Boil foods in WATER, NOT OIL
6. Use fresh, cold processed UNHEATED olive oil, sunflower oil, safflower oil etc.
7. Less Cooking, Use stir fry well washed veggies
8. Foods made with Love and Nature is Blessed Nutrition, Foods made and eaten with Hate and Anger are poisons.
9. Celebrate each meal with friends, family or at least your joyous self. Celebrate
10. Listen to your inner self what to eat, and when to stop, do not eat with your eyes

This is supported by the fact that the diet of most men who lead urban lifestyles can actually increase the risk of an enlarged prostate.
Prepared and processed foods mostly eaten by city dwellers can cause prostate enlargement. Such foods include refined carbohydrates (soft drinks, candy, milk chocolate, enriched breads, and ice cream), trans fat, butter and red meat.

Lastly, the regular consumption of fluids such as alcohol, coffee and other beverages especially before bedtime can result in symptomatic BPH in older men.

**How is Prostate Enlargement Treated?**

There are many treatment options for BPH. Depending on the severity of the condition, treatment may range from simple medications to invasive surgeries.

However, treatment options usually depend on a number of factors. One major factor to consider before choosing a treatment therapy is to determine how severe the symptoms are. Then the size of the prostate can also be considered.

In some cases treatment may be postponed as long as the symptoms are mild and tolerable.

When treatment is being considered, the physician must determine what the best treatment options are especially where there are other health conditions present.

Some of the treatment options for BPH are discussed below.

**Medications**

For moderate symptoms, medications are usually recommended. They are the most common form of treatment therapy for BPH because they are non-invasive and usually recommended by physicians.

Some the medications commonly used for the treatment of BPH are:

**Alpha blockers**

These are medications that block α1-adrenergic receptors. These receptors are found in the smooth muscles around the neck of the bladder, urethral sphincter, and muscle fibers in the prostate. Therefore, alpha blockers relax these sites to ease the flow of urine and relieve the symptoms of BPH especially difficulty urinating.

This type of medications usually works fast and improvements can be observed in less than 2 days.

Side effects associated with the use of alpha blockers include weakness, nasal congestion, and orthostatic hypotension.
It is also common to experience a harmless condition known as retrograde ejaculation when taking alpha blockers. Retrograde ejaculation occurs when semen is drawn back into the bladder instead of coming out of the tip of the penis.

Common alpha blockers that are available over the counter include terazosin, doxazosin, tamsulosin, alfuzosin, and silodosin.

**5-alpha reductase inhibitors**

These medications target androgen hormones in the prostate. Specifically, they inhibit 5α-reductase which is the enzyme responsible for the conversion of testosterone to DHT (the major androgen hormone responsible for increasing the size of the prostate).

Unlike alpha blockers, 5α-reductase inhibitors work slowly and it may take days to weeks before improvement can be observed. However, their therapeutic effects are cumulative and longer lasting.

They are usually used by men with very large prostate. The 2 types of 5α-reductase inhibitors commonly sold are finasteride and dutasteride.

Common side effects of 5α-reductase inhibitors include decreased sexual urge, erectile dysfunction, and retrograde ejaculation.

**Combination Drug Therapy**

Using a combination of alpha blockers and 5α-reductase inhibitors will have a greater effect on the prostate than just taking one of the two medications.

The combination of these two types of medications can effectively slow BPH progression, relieve acute urinary retention and help patients avoid prostate surgery. Besides, the combination produces quick relief while also providing longer lasting action.

Combining alpha blockers and 5α-reductase inhibitors will also result in the same side effects observed when using any one of the two medications.

**Antimuscarinics**

This type of medications can also be used singly or combined with other medications.

Antimuscarinics relieve overactive bladder (one of the presentations of BPH) by reducing the effects of acetylcholine on the smooth muscles of the bladder. This relaxes the bladder and eases the flow of urine.

Tolterodine is an example of an over the counter antimuscarinic medication.
Minimally Invasive Therapy

For BPH patients who do not respond well to medications, minimal invasive therapy is a treatment option. These therapies are easier to perform than prostate surgeries. They are also less painful.

Although they are recent developments in the treatment of prostate problems, these therapies are now the preferred treatment for quickly and effectively decreasing prostate volume and improving urinary flow in BPH patients.

The major procedures under this treatment option are:

**Transurethral Microwave Thermotherapy (TUMT)**

This procedure was approved in 1996 by the FDA (Food and Drug Administration) in the US.

It involves inserting a microwave antenna into the prostate region of the urethra. Through a control box, the antenna delivers microwave radiation to a specific target area of the prostate. This heats up the targeted prostate tissue and thus destroys it.

To prevent unwanted damage to other parts of the urethra, the device simultaneously cools the surrounding areas of the prostate region while also heating up the targeted area.

The procedure takes about 30 minutes to 1 hour and it is usually done only once for BPH patients with small prostates.

**Transurethral Needle Ablation (TUNA)**

This procedure works in similar ways to TUMT but differs in some ways. For example, TUNA delivers radio frequency energy unlike TUMT.

In addition, the device used has a rigid scope similar to a cystoscope and armed with two protruding needles by its sides. When inserted into the urethra, the two needles pierce the prostate and deliver radio frequency energy to heat up and destroy part of the prostate.

In cases where the prostate is very large, more needles may be required to deliver more energy. Like TUMT, this procedure shrinks the prostate and reduces the symptoms of BPH.

TUNA has fewer side effects (especially a reduced risk of erectile dysfunction) than TUMT.

**Surgery**

Surgery is usually the last option to be considered in the treatment of enlarged prostate. It is mostly recommended for patients who have tried other treatment options to no avail.
Although surgery is more complicated and may require being admitted in the hospital for a few days at least, it brings a more lasting solution to the symptoms of BPH.

During surgery for BPH, the large prostate tissue which is resting against the urethra is carefully removed while the other parts are left intact.

Common procedures for prostate surgery are discussed below.

**Transurethral Resection of the Prostate (TURP)**

This procedure for prostate surgery has been in used for some years. It is the most commonly used and even considered as the standard surgical procedure for reducing the size of enlarged prostates.

TURP does not require any external incision. Instead, a device called resectoscope is inserted through the penis into the prostate after giving anesthesia. Through the wire loop of the resectoscope, the enlarged and obstructing tissues are carefully removed piece by piece.

To prevent excessive bleeding, the resectoscope is equipped with a valve which works together with the electrical loop to seal blood vessels.

The procedure usually takes between 90 minutes to one hour but may require a short stay in the hospital. Retrograde ejaculation is also a side effect commonly associated to this form of procedure.

**Transurethral Incision of the Prostate (TUIP or TIP)**

Unlike TURP where a section of the prostate is removed, TUIP involves making a few incisions in the bladder neck (the junction between bladder and urethra) and the prostate. This widens the urethra and allows the free passage of urine.

Basically, it follows the same procedure as TURP. TUIP is commonly done for BPH patients with small prostates.

**Open surgery**

Open surgery requires external incision and it is often considered when other procedures have been deemed unusable.

Factors which may necessitate the intervention of open surgery in BPH patients include: a very large prostate gland, damaged bladder which needs to be repaired or other complicated medical conditions.

As with other open surgical procedures, the surgeon makes an incision after anesthesia has be given, then he reaches for the prostate and cut out the enlarged tissue. Open surgery usually requires an extended hospital stay and a few visits for checkups afterwards.
Laser surgery

Laser surgery was approved by the FDA in the US in 1996. Although it is less invasive than open surgery, it also requires anesthesia and a stay in the hospital.

Laser surgery involves inserting a laser fiber into the urethra through a cystoscope. The laser fiber then delivers energy into the enlarged prostate which subsequently destroys parts of the prostate and shrinks the organ.

Although, this procedure causes relatively small amount of blood loss, its effectiveness in the long-term is still not properly demonstrated.

There are some other procedures that have been recently developed for the treatment of BPH but their safety and effectiveness are yet to be approved by many experts.

Natural Supplements

Natural supplements are also available to treat prostate problems including prostate enlargement. These supplements include herbs, vitamins, minerals and other natural products.

Natural supplements act by the same mechanisms as the medications described above. They inhibit the conversion of testosterone to DHT, the binding of DHT to androgen receptors and the inflammation of prostate tissues. These natural supplements are just as effective as the standard prostate medications regularly recommended by doctors. In addition, they are safer, better tolerated and cause fewer side effects than these standard medications. The major herbs used in treating prostate problems are saw palmetto (Serenoa repens) berry extract, stinging nettle (Urtica dioica) root extract and pygeum (Pygeum africanum) bark extract. Other effective plant extracts used include isoflavones from soy extracts and lycopene, a natural antioxidant found in tomatoes.

Antioxidant minerals and vitamins such as selenium, vitamin C and vitamin E can also complete prostate supplements and medications by protecting the prostate against oxidative damage and preventing autoimmune damage to the organ.

Other vitamins that have been proven useful in the treatment of prostate problems include beta carotene, vitamins D and K. While there are many natural supplements that can be used to treat prostate problems, it is best to find a natural prostate product that combines as many of these supplements as possible. One such effective combination of natural supplements is Avistate, an oral dietary supplement formulated with proven herbs, mineral and plant extracts to help shrink the prostate, relieve the symptoms of BPH and reduce the risk of prostate cancer.

Sources

http://www.nature.com/nrurol/journal/v8/n1/abs/nrurol.2010.207.html
Supplements Most Likely to Work

**Beta-sitosterols** may help your urine flow better and leave less in your bladder. They may be worth a try, especially if you have high cholesterol. Beta-sitosterols, a plant version of cholesterol, are also used to lower cholesterol and are in some cholesterol-lowering margarines. Try 60 to 130 milligrams a day.

**Pygeum**, also known as African plum extract, could cut down on the times you have to get up to urinate at night and can improve urine flow. It may not work as well as standard treatments like alpha-blockers, though. Try 75 to 200 milligrams a day. Experts encourage using only sustainably harvested pygeum.

Supplements That May Help

Two studies showed that **rye grass pollen extract** may relax the muscles of the tube that urine flows through and help bladder muscles contract. You may have less dribbling after urinating and need to get up less often at night to urinate. In one study, it also appeared to shrink prostate size. If you want to try it, it's probably safe for up to 6 months. Some older research suggests that Harzol, an extract of **African wild potato (South African star grass)**, may ease urinary symptoms. That's probably because it's high in beta-sitosterols. But it may also lower blood sugar levels. So if you have diabetes, you may want to skip products with this plant. And if you do try it, watch your blood sugar closely.

The Latest Science on Saw Palmetto

Extract of the berries from this small palm tree is a favorite remedy for BPH, but studies are mixed on how well it works. Early studies showed that taking 320 milligrams a day could ease urinary symptoms. Some even showed that it worked as well as the BPH drug finasteride. But newer and larger studies have shown that saw palmetto works no better than a placebo -- even at higher doses. And it doesn't shrink your prostate gland, just its lining. The benefits of saw palmetto seem to be modest at best. If you want to try it, look for a fat-soluble extract that contains 85% to 95% fatty acids and sterols.
Tips for Taking Supplements

Before you take any natural remedy, talk to your doctor. They can interact with drugs you’re already taking or with other herbs and supplements. The FDA regulates dietary supplements; however, it treats them like foods rather than medications. Unlike drug manufacturers, the makers of supplements don’t have to show their products are safe or effective before selling them on the market. It's not always certain what's in supplements. So try a product with one ingredient only -- just pygeum, for example. You don't have to buy a brand that costs a lot. But if a standardized extract was studied in human trials, start with that one. If your doctor says it's OK, give it a month or two. If your symptoms don't get better, try another brand or a different dose for a month or two. If that doesn't help, you could switch again. But if that doesn't help, give up on that supplement. Herbal remedies or supplements may not help your symptoms. You may get more relief with a BPH drug.
VARUNADI VATI

- The extract of bark is among the best alkalizer and effective in treating urinary tract infections, renal calculi, high urea and creatinine levels, prostate enlargement, nephritic syndrome etc.

- Varunadi Vati contains standardized extract of Varun bark as the main constituent.
10 Natural Treatments for Enlarged Prostate

Natural treatments for enlarged prostates are preferred by many for a number of reasons: they are safer, better tolerated and cause fewer side effects than standard prostate medications. However, not all natural supplements for treating prostate problems work. This article discusses the 10 most effective natural remedies for treating prostate enlargement and it should serve as a guide to help you when choosing a natural product for your prostate problems.

by Brad Chase

Herbs
1. Saw Palmetto

Saw palmetto or *Serenoa repens* is one of the most effective anti-androgen herbal remedies used in traditional medicine. The parts of the plant used are the fruits or the berries.

The bioactive phytochemicals in saw palmetto are the liposterolic fractions containing fatty acids and phytosterols such as beta sitosterol.

- Inhibiting the enzyme, 5-alpha reductase and, therefore, blocking the conversion of testosterone to DHT
- Binding to the androgen receptors on prostate cells, therefore, preventing DHT from binding to these same receptors
In addition, saw palmetto can also relieve specific symptoms of BPH such as difficulty urinating. It does this by contracting the smooth muscles of the urethra sphincter passing through the prostate.

The efficacy of saw palmetto in the treatment of prostate problems has been extensively demonstrated.

It is also well tolerated and most of its side effects are mild gastrointestinal discomforts. Because saw palmetto interferes with the levels and activities of hormones, it can reduce the effectiveness of oral contraceptives.

Besides oral contraceptives, NSAIDs (non-steroidal anti-inflammatory drugs) such as aspirin and blood thinners like warfarin are not to be combined with saw palmetto.

2. Stinging Nettle

Stinging nettle or _Urtica dioica_ belongs to the large family of nettles. The root extract of stinging nettle is used in the treatment of BPH.

This herb also contains fatty acids and phytosterols. Other bioactive phytochemicals in stinging nettle are flavonoids, lignans and lectins. Therefore, stinging nettle can shrink the size of an enlarged prostate by all the mechanisms discussed above for saw palmetto.

A number of studies have shown that the bioactive lignans in stinging nettle block the binding of androgens to a glycoprotein known as sex hormone-binding globulin (SHBG).

SHBG binds to sex hormones in the plasma and is primarily responsible for transporting them to the various organs where they are needed. By making SHBG unavailable for testosterone, stinging nettle can reduce the level of testosterone, and then DHT, in the prostate.

Stinging nettle can also help treat BPH by inhibiting the synthesis of estrogen.
The primary female sex hormone has also been implicated in the progression of BPH because it blocks the breakdown of DHT. To reduce estrogen levels, stinging nettle inhibits the monoxygenase enzyme known as aromatase.

Stinging nettle is also well tolerated and its side effects are mild. These include nausea, sweating and gastrointestinal discomfort. It can also cause dehydration through diuresis. Therefore, users of this herb are advised to drink lots of water.

Drugs that should not be used along with stinging nettle include lithium, diuretics, NSAIDs, blood thinners, antihypertensive drugs and diabetes medications.

3. **Pygeum**

Pygeum or *Pygeum africanum* is an African evergreen tree. The herbal extract of this tree is taken from the bark.

Pygeum also contains phytosterols such as beta sitosterol. Other bioactive phytochemicals in pygeum are tannins, triterpenes and ferulic acid.

The phytosterols in pygeum block the production of androgens especially DHT. Beta sitosterol competes with the precursors of these androgens to achieve this.

In addition, beta sitosterol inhibits the production of prostaglandins, a family of pro-inflammatory compounds released in the body. By blocking prostaglandins, beta sitosterol can reduce the inflammation of the prostate.

The triterpenes also act by reducing inflammation in the prostate but instead of inhibiting prostaglandin, they inhibit pro-inflammatory enzymes.

The ester salts of the ferulic acids in pygeum are anti-androgens. However, they inhibit the production of these hormones very early in their synthetic pathways by lowering the amount of cholesterol available for making androgens.

Because the active ingredients of pygeum work by different but complementary mechanisms, the herb represents an important natural remedy for BPH.

It works best when combined with stinging nettle and saw palmetto.
However, pygeum can reduce the effectiveness of soy, another natural remedy for treating enlarged prostates. Due to the multiple ways in which pygeum reduces the levels and actions of sex hormones, it can reduce the efficacy of the phytoestrogens in soy too.

This effect on hormones is also the reason why pygeum should not be taken concurrently with birth control pills.

**Other Plant-Derived Remedies**

4. **Lycopene**

Lycopene is a carotenoid, and the compound responsible for the red coloration of plants such as tomatoes and red peppers. It is a super antioxidant, a non-toxic food coloring and an anti-carcinogenic agent.

As an antioxidant, lycopene can prevent the kind of oxidative damage that may lead to inflammation and enlargement of the prostate. However, this vitamin A precursor also provides more specific benefits in the treatment of prostate problems.

Lycopene can increase the production of the proteins that regulate the growth of prostate cells. Prostate enlargement occurs as men age because the production of these proteins is reduced and because prostate cells become less responsive to them.

By increasing the levels of these regulatory proteins, lycopene can stimulate better regulation of cell growth in the prostate, and therefore, prevent prostate enlargement.

In addition, lycopene can inhibit the accelerated growth of prostate cells by inhibiting insulin-like growth factors.

Lycopene is not only effective for treating BPH but also for reducing the risk of prostate cancer.
5. Isoflavones

Isoflavones are phytoestrogens found in large amounts in soy but also in other plants such as red clover.

Because the diet of Asian men include a high proportion of isoflavone-rich foods such as soy, many believe that isoflavones are responsible for the lower incidence of prostate cancer among these men compared to Westerners.

Once absorbed, isoflavones preferentially accumulate in the prostate rather than the blood. Therefore, they can immediately improve prostate health rather than be metabolized in the body.

The most important isoflavones are genistein and daidzein.

- by counteracting the effects of androgens; and
- by inhibiting the production of proteins, growth factors and blood vessels needed to spur and sustain accelerating cellular growth.

One of the proteins inhibited by isoflavones is PSA or prostate-specific antigens. This protein has been shown to directly contribute to the enlargement of the prostate. In fact, measuring its level is one way of diagnosing BPH.

Soy isoflavones are contraindicated in people who have had or have certain cancers such as those affecting the uterus and breast.

In the presence of cancerous cells, studies have shown that soy actually increases the risk of cancers.

Soy isoflavones can cause hypothyroidism. They should also not be taken along with NSAIDs, blood thinners and MAOI (monoamine oxidase inhibitors) antidepressants.
Vitamins and Minerals

These groups of natural treatment options for prostate cancer are meant to supplement the primary treatment options for the condition.

Vitamins and minerals can contribute to the therapeutic benefits of the natural remedies discussed above and are not meant to serve as the only treatment for prostate problems.

In addition, unlike the natural remedies discussed above, studies into the effectiveness of vitamins and minerals in the treatment of BPH mostly have mixed results. However, the ones discussed below are those with the most positive results.

6. Selenium

Selenium is a trace but essential mineral in humans. Its chief role is as an antioxidant and it is incorporated into a family of antioxidant selenoproteins in the body.

Therefore, selenium can reduce prostate enlargement by providing antioxidant protection against oxidative free radicals. In addition, selenium can reduce the production of PSA in the body.

Lastly, this mineral can reduce the pain and inflammation associated with BPH by inhibiting prostaglandins.

7. Beta Carotene

Beta carotene is a yellow-orange phytochemical found in colorful plants. Like lycopene, it is also a carotenoid and a precursor of vitamin A. Therefore, it is most likely that beta carotene shares the same mechanisms of action as lycopene in the treatment of BPH.

While beta carotene supplementation can increase the risk of lung cancer among cigarette smokers, it reduces the risk of breast and prostate cancer.

8. Vitamin D

Although, humans make vitamin D in their skin, vitamin D receptors are found all over the body including in the prostate.

Different studies have identified vitamin D deficiency to increase the risk of prostate cancer.

Vitamin D prevents the excessive increase in the population of prostate cells. It inhibits the differentiation and proliferation of prostate cancer cells.

Studies have also shown that the antioxidant, anti-inflammatory and immunomodulatory properties of vitamin D are all useful for reducing the size of enlarged prostates. These studies also identified 1, 25-dihydrovitamin D or calcitriol as the form of vitamin D that benefits the prostate.
9. Vitamin E

Vitamin E refers to a family of 8 vitamers. It is a fat-soluble, antioxidant vitamin proven to help reduce the risk of prostate cancer.

Although one large study concluded that vitamin E can increase the risk of prostate cancer, its design has been faulted and other studies have found quite the opposite conclusion to be true.

One study published in the *Proceedings of the National Academy of Sciences in the United States of America* in 2002 found that vitamin E can reduce the enlargement of the prostate by inhibiting androgen receptors and by lowering the level of PSA (prostate-specific antigen).

10. Vitamin K

Vitamin K is another family of related vitamers. The natural forms of this vitamin are vitamins K1 and K2.

Of these two vitamers, vitamin K2 is the only one that can reduce the risk of prostate cancer. Studies have also shown that combining vitamin C and K provides better results in the treatment of prostate problems.

Sources


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How Soy Affects an Enlarged Prostate

Soy has enjoyed a rapid, if controversial, rise in popularity over the last few years. Its adoption in the US was driven by the health benefits soy products give Asians who traditionally eat them. Since its use became widespread, different research has been conducted to investigate the medicinal benefits and dangers of soy consumption. One of the best results have been obtained while studying the effect of soy on the prostate gland. Can soy help shrink enlarged prostates? How does it work? Is it safe? Which soy products are the most beneficial for the prostate? This comprehensive article answers all your questions.

by Brad Chase

What is Soy?

Soy is obtained from the seeds of soybean or *Glycine max*. It is a popular species of legume native to East Asia but now widely grown all over the world especially in the United States.

Soy is a versatile food crop. When fermented, it is used to make foods such as soy sauce, soy paste, natto and tempeh. Unfermented soy is used to make soy milk and tofu. Besides these, other soy food products include miso, edamame and TVP (textured vegetable protein) which is used to make substitutes for meat and dairy products for vegetarians and other people who eat special diets.

The oil obtained from soy can be used as vegetable cooking oil and also in a number of industrial applications.

Soy is regarded as the most efficient use of land with regards to producing protein food sources for man.
Because soy contains appreciable amounts of all of the essential amino acids, it is considered a source of complete protein. In addition, compared to other protein sources, soy protein is relatively stable to cooking heat.

By the standard used to measure protein quality, soy ranks as an excellent source of nutritional protein along with meat and eggs.

Besides protein, the oil and carbohydrate contents of soybean are also high (40% protein, 35% carbohydrate and 20% oil). Other nutrients found in soybean include vitamins A, B6, B12, C and K as well as iron, calcium, magnesium, potassium, sodium, zinc, phosphorus and choline.

Most of the micronutrients in soy can also serve as medicinal phytochemicals. For example, soy contains phytic acid, isoflavones and the omega-3 fatty acid, ALA (alpha linolenic acid) all of which can be both nutritional and medicinal.

Other important phytochemicals in soy are saponins and phytosterols such as sitosterol and stigmasterol.

**The Health Benefits of Soy**

Over the years, soy has been claimed to be healthful or harmful by different researchers and different interest groups.

Often, these claims are made regarding the same disease linked to soy consumption or the same soy phytochemicals. For example, while some studies suggest that soy may reduce the risk of developing breast cancer, other studies have reached quite the opposite conclusion.

One of the most popular therapeutic benefits of soy is the reduction of LDL (low density lipoprotein or “bad” cholesterol) levels.

Different studies have confirmed this effect and it is estimated that soy can reduce LDL levels by 5 – 10%.

In addition, soy can reduce total cholesterol and triglyceride levels. However, it does not significantly increase the level of HDL (high density lipoprotein or “good cholesterol”). Still,
researchers agree that these effects are enough to reduce the risk of congestive heart disease.

Even the FDA (Food and Drug Administration) has officially approved the marketing of soy foods for its cholesterol-lowering property and health benefits for the heart.

The wide adoption of soy and soy products in the US was largely driven by this FDA approval.

Another popular health benefit of soy is its anti-cancer properties. Different studies have established that soy can indeed reduce the risks of cancers affecting organs in the endocrine system. Therefore, soy can prevent breast, uterine and prostate cancers.

However, most studies show that Asians benefit more from the anti-cancer effects of soy than Westerners. This is because Asians eat diets with high soy content for most of their lives while Americans are just adopting the protein source.

Other medical disorders that soy may help treat include osteoporosis during menopause and other menopausal signs such as hot flashes.

However, the results of studies investigating the benefits of soy for these disorders have been mixed.

**Side Effects, Contraindications and Health Risks of Soy**

Soy allergy is the most common adverse reaction to soy products. It occurs within minutes of eating soy and its symptoms include itching and hives. In rare cases, a full anaphylactic reaction may develop after soy ingestion. In addition, food intolerance has been associated with soy products. In these cases, vomiting and diarrhea results even when skin allergy tests fail to detect soy allergy.

Soy products should also be avoided by women who have or have had breast and uterine cancers. Even though soy is known to reduce the risks of these cancers, they can stimulate the growth of cancerous cells if they are already present.

Furthermore, the isoflavones in soy can reduce iodine levels in the body. This affects the production of thyroid hormones and can cause hypothyroidism.

Soy can also affect the efficacies of certain drugs such as tamoxifen and raloxifene. Zinc and iron, on the other hand, can reduce the absorption and level of soy in the body.

Non-steroidal anti-inflammatory drugs such as aspirin and blood thinners such as warfarin should not be used with soy as the phytochemicals in soy can increase the risk of bleeding.

Lastly, MAOI (monoamine oxidase inhibitor) antidepressants are to be avoided when taking soy.
How Soy Affects the Prostate

The most solid evidence that soy can reduce prostate size is from population studies that establish that Asian men have lower risk (and lower incidence) of prostate cancer than men living in Western countries. Furthermore, this protection was lost in the second generation of Asian men whose parents moved to Europe and the US and then abandoned soy-rich diets.

Prostate cancer is the second most common cancer affecting men but soy products such as soy milk, tofu and tempeh can reduce the risk of this cancer by as much as 70%. How does soy achieve this?

The exact mechanisms by which soy protects the prostate is not well understood but researchers are certain that the isoflavones in soy are involved.

Men who regularly eat soy-rich foods are known to have higher levels of isoflavones than those who do not. In addition, the isoflavones obtained from soy products are mostly found in the fluids filling the prostate.

Once absorbed, isoflavones preferentially accumulate in the prostate rather than in the blood.

This means that this group of soy phytochemicals can help promote prostate health more than increase the risks of all the health conditions associated with them.

Isoflavones are also phytoestrogens. This means that although they are obtained from plants, they have estrogenic properties. Therefore, they may cause hormonal imbalance although their ability to do this is rather limited.

Even then, isoflavones definitely work by influencing hormonal balance. They are known to be good for reducing the risks of hormone-dependent cancers such as breast, uterine and prostate cancers.

The 3 most important isoflavones in soy are daidzein, glycitien and genistein (the most bioactive).

Being potent antioxidants especially known for removing reactive oxygen species particularly singlet oxygen
Influencing the metabolism of sex hormones; however, soy does not prevent prostate hyperplasia (enlargement) by reducing the levels of testosterone; rather it counteracts androgens with its estrogen-like activities.

Influencing cellular growth via contributing to the regulation of enzymes within cells, protein synthesis and the effects of growth factors.

Inhibiting the rapid increase of malignant cells and also the rapid growth of new blood vessels feeding tumors.

Soy consumption is also known to reduce the PSA levels in men.

PSA or prostate specific antigen is naturally produced in the prostate gland to increase the motility of sperms. While all men have a small amount of PSA in their blood, a high level indicates a high risk of prostate cancer.

In addition, soy isoflavones may not increase the levels of male sex hormones such as testosterone but the estrogenic activities of these phytoestrogens can counterbalance the effects of male sex hormones.

One such effect of male sex hormones is the enlargement of the prostate. Therefore, soy phytoestrogens can neutralize androgens, inhibit the growth of prostate cells and, therefore, prevent the enlargement of the gland.

**Studies on Soy and Prostate Health**

Having established that genistein, the most active isoflavones in soy, can inhibit the growth of prostate cancer cells, a group of researchers investigated the clinical effects of soy isoflavones in the treatment of prostate cancer.

In a study published in the journal, *Nutrition and Cancer*, in 2003, 41 patients were recruited, and divided into 3 groups:
Group 1 – newly diagnosed and untreated prostate cancer cases with rising PSA levels (4 patients)

Group 2 – treated cases but with the PSA levels still increasing even after basic therapy (18 patients)

Group 3 – treated cases but with the PSA levels still increasing even after hormone therapy (19 patients)

All of the participants were given 100 mg of Novasoy (an oral soy isoflavones supplement) twice daily for 3 – 6 months.

While the soy product did not reduce PSA levels in the participants, it stopped its increase and even stabilized its levels in 83% of the patients in group 2 and 35% of the patients in group 3. As expected, soy did not reduce the levels of testosterone.

These results show that soy isoflavones may provide some benefits for some prostate cancer patients even when standard treatments fail.

A 2011 study published in *Southern Medical Journal*, however, confirmed that soy can indeed reduce PSA levels. In that study, the researchers treated 10 men with rising levels of PSA even after prostatectomy and radiotherapy.

The men were given commercially available soy products for an average of 24 months. During this period, the PSA levels were reduced in half the participants.

**Combination with Other Natural Products**

In a Phase II clinical trial published in 2007 in the journal, *Nutrition and Cancer*, a group of researchers determined whether the combination of soy isoflavones and lycopene was better than lycopene alone in bringing down the size of enlarged prostates.

For this study, 71 patients with high PSA levels were recruited and randomly assigned either 15 mg lycopene or 40 mg soy isoflavones plus 15 mg lycopene twice daily for a maximal duration of 6 months.
The results showed that 95% of the patients in the lycopene group experienced stabilization of PSA levels while 67% of patients in the drug combination group enjoyed the same benefits.

This study showed that even though soy isoflavones and lycopene were effective for reducing the size of enlarged prostate and reducing the risk of prostate cancer, their combination was less effective than lycopene alone.

In a 2010 study published in the same journal, researchers investigated the benefits of soy isoflavones for prostate cancer patients receiving radiotherapy. It is believed that soy can reduce the side effects of radiation therapy by its antioxidant and anti-inflammatory properties. In addition, the benefits of soy for prostate health can also contribute to the positive outcome of the combination therapy.

For the study, the researchers gave each of the 42 prostate cancer patients receiving radiotherapy 200 mg of soy isoflavone or placebo for 6 months.

The results showed that soy isoflavone reduced urinary, gastrointestinal and sexual side effects of radiation therapy. Therefore, the patients in the soy group saw fewer of these side effects than those in the placebo group.

This study shows that even when treating prostate cancer with drastic measures such as radiotherapy, supplementation with soy can still provide additional benefits.

A 2011 study published in the Journal of Nutritional Biochemistry determined whether the combination of soy and green tea can help reduce prostate size in prostate cancer cases.

Chronic inflammation and nuclear factor-kappa B have been linked to prostate cancer and since Asian men have lower risk of prostate cancer than men in Western countries, many believe that the difference in the traditional diets of the two cultures is responsible.

The major food sources of anti-inflammatory agents in Asian diets are soy and green tea.

In this study, the researchers induced prostate hyperplasia in a group of male rats and then divided them into 4 groups according to the test drugs given them. One group received soy alone; another group got green extract alone; the third group were given a combination of the soy and green tea; and the last group received placebo.

The results showed that the best response was obtained from the group that received soy and green tea.

In this group, the combination reduced the levels of inflammatory factors in the prostate gland, and also prevented prostate cancer by reducing the excessive proliferation of prostate cells (prostate hyperplasia).

While it is necessary to see if the same effects can be replicated in humans, the study suggests that the combination of soy products and green tea can significantly reduce the size of enlarged prostate and even lower the risk of prostate cancer.
Meta-Analyses

In a meta-analysis of 5 cohort studies and 8 case-controlled studies published in 2009 in the journal, *Nutrition and Cancer*, a team of Korean researchers weighed the benefits of soy food consumption against the risk of prostate cancer. From the studies selected, these researchers concluded that the soy isoflavones, genistein and daidzein, were linked with a lowered risk of prostate cancer. They also agreed that soy food consumption can reduce the risk of prostate cancer although the consumption of natto, miso or soybean milk did not seem to help.

In the same year, a second meta-analyses was published on the same subject in *The American Journal of Clinical Nutrition*. Here, the researchers analyzed a total of 24 epidemiological studies on the link between prostate cancer risk and soy/isoflavone consumption.

They concluded that soy food consumption can indeed lower the risk of prostate cancer but the degree of protection offered depended on the type and quantity of soy food products consumed.

Sources

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Desiré is the Professor Emeritus of IMUNE. IMUNE is an accredited and legally registered medical university in Europe.

Since 1995 IMUNE has been offering medical education in a variety of subjects to defend and perpetuate Natural Medicine. There are many small minded people being driven by the synthetic chemical companies to destroy Natural Medicine as a viable choice in Medicine. IMUNE has offices in Switzerland, Mexico, Dubai, Budapest, England, and the British Virgin Islands. The small petty minded picayune minions of the chemical companies constantly attack with their anal retentive biased short sided views. We must fight for freedom of choice and especially freedom of choice on medicine.

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