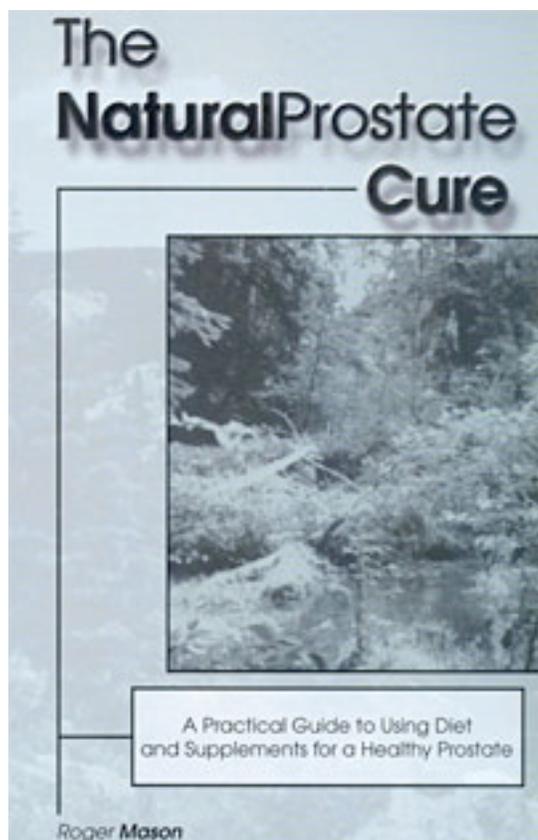


# Natural Prostate Health

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## CONTENTS

Chapter 1: Diet	page 2
Chapter 2: Science and Beta-Sitosterol	page 6
Chapter 3: Other Benefits of Beta-Sitosterol	page 10
Chapter 4: Supplements	page 13
Chapter 5: Progesterone	page 17
Chapter 6: Melatonin	page 19
Chapter 7: Androgens	page 21
Chapter 8: Estrogens	page 26
Chapter 9: Home Hormone Testing	page 29

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## Chapter 1: Diet

Diet is the first chapter as it is the most important aspect generally of good prostate health. In one word we can sum up everything you need to know about diet and your prostate - FAT. Look at the chart on dietary fat intake and prostate cancer; it is almost a 1 to 1 relationship no matter where you go in the world. In the countries like China and Viet Nam that eat as little as 10% vegetable fat calories and almost no animal fats they have as low as one 120th of the prostate cancer rate we do in America. That is less than 1%. If these people move to America and adopt the American forty per cent plus fat intake they get as much or more prostate cancer as we do. This is called a "migration study" and cannot be argued with. Saturated fats come from red meat, dairy products, and the hydrogenated fats we find in margarine and so many processed foods. Eating vegetable oils is better but not good at all. Countries like Italy and Greece that eat large amounts of olive and other vegetable oils have much higher prostate disease rates than Asian countries. So there are no good fats (with the exception of two grams of flax oil as an omega-3 supplement which is a mere 18 calories and is proven to promote prostate health).

Dairy milk regardless of the fat content has been shown to be very correlated with prostate disease (J. Cancer 58 (1986), p. 2363-71) due to the lactose. Use soy milk instead as this is now commonly available in any grocery store. All adults of all races are allergic to lactose, as they do not produce the enzyme lactase after the age of three.

Surprisingly no studies have shown a correlation with sugar intake harmful as that is and considering Americans eat over 120 pounds of sugar a year. Sugar is sugar is sugar whether it is honey, maple syrup, brown sugar, "raw" sugar (a real victory of advertising over reality), molasses, sorghum syrup, cane syrup, dextrose, fructose, maltose, amazake, fruit juice, invert syrup, corn syrup, dried fruit, fruit concentrate or any other form of sugar regardless of the name it is given.

Also surprisingly no relation has been shown by smoking, drinking or caffeine intake no matter how unhealthy they are in other ways. I say this reluctantly, but alcoholics have smaller prostates. Nor does exercise seem to correlate with prostate disease although one or two studies seem to show that, others do not. Does anything correlate with prostate health? Yes, grain and cereal intake does as does fiber intake. Also the lower your calorie intake and lower your body weight. In fact Life Sciences, vol. 40 (1987), p. 1761-8, published a study that showed a whole grain based diet raised male testosterone levels substantially. A good 90% of the health and diet books on the market are worthless and the worlds best selling diet author is Robert Atkins who says you should eat 70% fat and meat!!! There are some good authors out there including Dean Ornish, John McDougall, Nathan Pritikin, Susan Powter, Gary Null and any of the "macrobiotic" authors. There are

almost no good books on natural prostate health. The most inspiring is Dirk Benedict's "Confessions of a Kamikaze Cowboy". He overcame prostate cancer over 20 years ago by simply going on a macrobiotic diet of whole grains and vegetables. He is alive, well, happy and youthful today as he turned his back on traditional treatments.

Basically you should be eating whole grains like brown rice, whole grain breads, whole wheat pastas, oatmeal, corn meal, barley and other cereals. Dried beans of all kinds are almost as good as whole grains. Most vegetables are good for you, but you should avoid Nightshade species such as potatoes, tomatoes, eggplants and peppers. If you doubt this go eat a cup of potato eyes and you will fall over dead from solanine poisoning. You can eat seafood if you want and even skinless chicken once a week. Fruit is limited as it contains basically sugar and water with little nutrition. Tropical foods such as bananas, mangoes, coconuts, avocados, pineapples, citrus fruits and other such foods should be avoided as they are meant for people living in very hot tropical climates. Basically you do not eat dairy, milk, poultry, eggs, red meat, refined foods, sweeteners of any kind, preservatives, chemical additives or hydrogenated oils.

The less you eat the longer you live, the better you feel, the healthier you will be and the less prostate problems you are likely to have. Unfortunately Roy Walford is about the only person to write about calorie restriction and longevity and his two books, "The 120 Year Diet " and "Maximum Lifespan" can be hard to find. Doctors in Japan (Takeda Kenkyushoho 53 (1994), p. 134-50) reduced the prostate weight of rats with simply lowering their calorie intake. Doctors at the University of Wisconsin (Prostate 33 (1997), p. 256-63) showed that lowering caloric intake in rats not only reduced the prostate weight but lengthened their lives dramatically.

Fasting goes even further and is the most powerful of all healing methods as well as the most difficult. You don't need to be a Christian to appreciate Matthew 17:21 where Christ heals the man possessed by demons saying, "this kind goeth out not but by prayer and by fasting" or Mark 9:29 "this kind can come forth by nothing, but prayer and fasting". Please remember that fasting means water only. People who advocate so-called juice fasts are just kidding themselves and really going on juice feasts. A look at your local public library or amazon.com or Barnes & Noble will give you a list of books on fasting.

Numerous studies suggest that dietary fat intake, especially animal fats are the main cause of prostate disease are too numerous to mention but we can cover some of them quickly to prove the point inarguably.

The American Health Federation has done a wonderful job of studying the relation between diet and disease especially prostate cancer. In Bull, N.Y. Acad. Med (1980), vo.56, p. 673-96 they showed the development of prostate cancer can be slowed with a low fat, high fiber diet. In Cancer Res.

(1982), vol.42, p.3864-9, South African men with prostate cancer have high estrogen levels and low testosterone levels even on their natural diet (only a fraction of American black cancer rates though). When switched to a high at American diet their estrogen rose even further and their testosterone dropped even lower. This is more proof a high estrogen to testosterone ratio could facilitate prostate cancer.

In Lipids (1992), vol. 27, p. 798-803, it was shown fat intake as well as obesity were major causes of prostate disease and backed up with 59 references. Omega-3 fatty acids inhibited cancer while omega-6 stimulated it. This is further proof vegetable oils could be detrimental for you as they mainly are made up of omega-6 fatty acids.

Again in the Amer. J. Clin. Nutr. (1997), vol. 66, p. 998S -1003S dietary fat intake was related to prostate cancer while omega-3 fatty acids inhibited it. In the same issue on pages 1513S - 1522S high fat diets especially those high in omega-6 fatty acids promoted prostate cancer. In Proc. Soc. Exp. Biol. Med. (1997), vol. 216, p.224-33, they showed omega-6 acids promoted prostate cancer and omega-3's inhibited it.

Doctors at the University of Vermont (Amer. J. Clin. Nutr.51 (1990) p. 365-70, showed high fiber diets reduced excessive estrogen levels and thus promoted prostate health.

At Harvard Medical School (JNCI 85 (1993) p. 1571-9) a most definitive study was done showing dietary fat intake, especially saturated animal fat, promoted prostate cancer.

At Loma Linda University in California a 43 page study was done complete with 249 references (Nutrition Research, 14(1994) p. 1853-95), showing beyond any doubt that high fat, low fiber diets are responsible for prostate disease.

At the University of Tokyo (Cancer Research 54 (1994) p. 6129-32) high fat diets in test animals caused both BPH and prostate cancer.

At the University of Wales (Brit. J. Urol. 77 (1996) p. 481-93), a study with 149 references show prostate cancer can be largely prevented with an Asian-style low fat diet.

At the University of Michigan (Anticancer Res. 16 (1996) p. 815-20) doctors showed that the omega-3 fatty acids inhibited prostate cancer while omega-6's stimulated it, thus proving even vegetable oil is not good for prostate functioning.

The National Cancer Institute (Cancer Epidem. Biomarkers Prev. 5 (1996), p.859-60), showed again that dietary fat intake is the main preventable cause of prostate disease.

At the University of Ohio State (Ann.Rev. Nutr. 18 (1998) p. 413-40) a 28 page study with 193 references was published showing yet again it is dietary fat intake that causes prostate disease.

At Wageningen Agricultural University in the Netherlands (Amer. J. Clin. Nutr. 68 (1998) p.142-53) a study with 178 references to verify it showed the clear relation of animal fat intake to prostate diseases.

At the University of Umea in Sweden (Prostate 36 (1998) p.151-61) human prostate cancer cells were transplanted into rats but both soy isoflavones and calorie restriction inhibited their growth.

These studies have been detailed to show beyond any doubt that it is dietary fat intake, especially saturated animal fat, that is a primary cause of prostate illness.

## Chapter 2: Science and Beta-sitosterol

Traditionally such herbs as saw palmetto, Pygeum species, nettles, star grass and other herbs have been used to treat prostate problems. The trouble with using these is that generally they only contain a mere one part in three thousand of the beta-sitosterol complex. That means you would literally have to eat about a pound of saw palmetto berries to get a mere 330mg of beta-sitosterol. Even with the best "10x" (ten times) extracts of these herbs one would still have to eat about two hundred 500mg capsules to get the 330mg of beta-sitosterol! So it is obvious these herbs are useless despite their continual promotion by the so-called natural health industry. Please understand that saw palmetto, Pygeum africanum and other herbs and their extracts are simply not effective.

But what about the herbal extracts sold by prescription only over in Europe? These extracts are standardized according to beta-sitosterol content regardless of their source. Whether you buy Permixon in France, Harzol, Tadenan and Azuprostat in Germany or Prostaserene in Belgium, these are all based on how much beta-sitosterol content they have. And they are very, very expensive. A bottle of 60 tablets of Permixon, for example, containing 30mg of beta-sitosterol per tablet will cost about 50 American dollars.

After one really researches beta-sitosterol it becomes obvious that herbs are a completely uneconomic source, but soybeans, sugar cane pulp and pine oil (tall oil) are excellent, inexpensive sources. Many sugar processors now extract the valuable chemicals from the pulp after the sugar is pressed out.

There are dozens and dozens of classic double blind studies done with real men on the effects of beta-sitosterol on benign prostate hypertrophy or BPH. We'll discuss a few of these to give you some examples of the first rate research that has been done around the world.

A study published in volume 21 of European Urology (1992), at the Institute of Clinical Medicine at the University of Rome, DiSilverio and his colleagues studied 35 men with BPH for 3 months and gave half of them a placebo (inert capsules). They concluded, "On the basis of these considerations, monotherapy with *S. repens* extract (beta-sitosterol extracted from saw palmetto) may be more favorably accepted, since on account of similar clinical results, when compared to the combination therapy cyproterone acetate plus tamoxifen."

The British Journal of Clinical Pharmacology in volume 18 (1984) at the Hospital Ambroise in Paris, Champault and two other doctors did a classic double blind study with 110 men half of them getting a placebo. They concluded, "Thus as predicted by pharmacological and biochemical studies PA109 (4 tablets of Permixon daily) would therefore appear to be a useful therapeutic tool in the treatment of BPH."

In volume 98 of the German journal *Fortschritte Medizin* (1980) at the *Klinische Endokrinologie* in Freiburg, Zahradnik and other doctors studied the beta-sitosterols taken from star grass sold as the prescription extract Harzol in regard to the development of prostate enlargement and prostaglandin levels. High prostaglandin levels support tumor growth.

In the Italian journal *Minerva Urologica e Nefrologica*, volume 37 (1985), doctors at the University of Padova studied the effect of beta-sitosterol extract on 27 men with BPH. Dr. Tasca and his associates measured urine flow and other parameters in men ranging from ages 49 to 81 compared to men receiving a placebo.

In *Medical Science Research*, volume 16 (1983), Drs. Malini and Vanithakumari at the Institute of Medical Sciences in Madras, India studied the effect of beta-sitosterol on the fructose concentration of the prostate. Fructose is vital to the function of the prostate with regard to the androgenic hormones such as DHEA and testosterone. This was a very unique and thorough study lasting almost two months.

One of the very best studies done was published in the *British Journal of Urology*, volume 80 (1997), at the University of Dresden. Drs. Klippel, Hilti and Schipp studied 177 men for 6 months who suffered from BPH. Half the men got a placebo and half got the prescription extract Azuprostat containing 130mg of beta-sitosterol. They cited a full 32 references to substantiate their research. They carefully screened all the men and tested them extensively during the study. They concluded, "These results show that beta-sitosterol is an effective option in the treatment of BPH."

In the journal *Urolage A*, volume 24 (1985) at the University of Basel, Switzerland, Dr. Vontobel and his colleagues studied a strong extract of nettles containing a high concentration of beta-sitosterol in a double blind study of 50 men for nine weeks. They said that the use of beta-sitosterols from nettles, "The evaluation of the objective parameters showed significant differences."

In the *Lancet*, vol 345 (1995) a very professional study was done at the University of Bochum in Herne, Germany by Dr. Berges and his associates. They used pure beta-sitosterol with 200 men half of whom received a placebo over the course of a year. They said, "Significant improvement in symptoms and urinary flow parameters show the effectiveness of beta-sitosterol in the treatment of BPH." This is clearly one of the most important and well done studies on prostate ever published.

Again, in *Minerva Urologica e Nefrologica*, volume 39 (1987), Drs. Bassi et al at the University of Padova studied 40 men with BPH with and extract of *Pygeum africanum* with a high beta-sitosterol content. Half the men received a placebo and many parameters were measured for the two month study.

They concluded, "The preliminary results demonstrate a significant improvement of the frequency, urgency, dysuria (difficult, painful urination) and urinary flow in patients treated with the active drug."

In the German journal *Wiener Klinische Wochenschrift*, volume 22 (1990) at eight different urological clinics in Europe 263 total patients with BPH were studied over a two month period. They were given either Tadenan (a *Pygeum africanum* extract standardized for beta-sitosterol content) or a placebo. This very extensive study compiled from different clinics and different doctors yet all agreed that, "Treatment with the *Pygeum africanum* extract led to a marked clinical improvement: a comparison of the quantitative parameters showed a significant difference between the *Pygeum africanum* group and the placebo group with respect to therapeutic response."

In volume 77 of the German journal *Medizinische Klinik* (1982) a study done at the Urological Clinic of Krankenhaus in Ludenscheid-Hellersen was performed on 23 patients. Dr. Szutrelly gave the patients either Harzol (herbal extract standardized for beta-sitosterol content) or a placebo for patients with prostate enlargement over a two month period. They measured their prostates with ultrasound equipment before and after treatment. At the end he said, "Within the scope of a controlled double blind study to demonstrate the effect of conservative therapy of benign prostatic hyperplasia with Harzol, ultrasonic examination of the prostate adenoma (enlargement) was carried out on 23 patients before and after therapy with the trial preparation of a placebo. Within a two month treatment with Harzol there was a significant change in echo structure of the prostate adenoma, and this is interpreted as a reduction in the interstitial formation of oedema (swelling)."

A most unique review of 31 years of studies was published in the volume 280 of the *Journal of the American Medical Association* (1998) where they chose 18 different trials involving 2,939 men in total who were treated for BPH with strong extracts of saw palmetto containing beta-sitosterol. They said after reviewing all these studies, "The evidence suggests that *Serenoa repens* (saw palmetto) improves urologic symptoms and flow measures."

Another unique review in a different manner was done by Dr. Buck in the *British Journal of Urology*, volume 78 (1996). At the Department of Urology in Glasgow, Scotland he did a 12 page review of herbal therapy for the prostate including Harzol, Tadenan, Permixon, Strogen and Sabalux (all European prescription herbal extracts standardized for beta-sitosterol content). He documents his review with 59 published worldwide studies and discusses the biological basis of prostate illness. His conclusions of the efficacy of herbal treatment of prescription drugs and therapy are well founded certainly.

In volume 55 of *Current Therapeutic Research* (1994) a study done at the University of Brussels, Belgium by Dr. Braeckman using Prostaserene (an

extract standardized for beta-sitosterol) for a mere six weeks led him to conclude, "Traditional parameters for quantifying prostatism, such as the International Prostate Symptom Score, the quality of life score, urinary flow rates, residual urinary volume, and prostate size were found to be significantly improved after only 45 days of treatment. After 90 days of treatment, a majority of patients (88%) and treating physicians (88%) considered the therapy effective."

These have been only a few of the many dozens of studies that have appeared in the major medical journals around the world that have been done in some of the most important urological clinics. This shows that it is, in fact, beta-sitosterol that is the active ingredient in herbs. American herbal products - even the most expensive extracts that claim "85% fatty acids and sterols" - have almost no beta-sitosterol in them and it is never mentioned on the label because of this fact, suggesting that every OTC natural prostate remedy sold in the U.S. has little if any value at all.

### **Chapter 3: Other Benefits of Beta-Sitosterol**

The information contained in this booklet should not be considered medical advice.

While beta-sitosterol is a most important supplement you can use for good prostate health, it has many other benefits and can be used by both men and women.

A notable benefit is the promotion of healthy cholesterol and triglyceride levels. Over thirty years ago studies showed this effect with no change in diet or exercise and since then over 50 articles have been published in international medical journals for studies done on both humans and laboratory animals. You need to take about 300mg a day and this can be split in order to take 150mg in the AM and 150mg in the PM. If you do lower your fat intake and exercise the results could be much more dramatic of course, but in these studies there were no changes in either to get results. Common sense tells you to cut down or cut out saturated animal fat, dairy and especially unnatural hydrogenated fats which are found in so many of our processed foods. Surprisingly the intake of vegetable oils does not raise cholesterol or triglyceride levels. However vegetable oils generally contain high amounts of omega-6 fatty acids (which are very different from healthful omega-3 fatty acids) that have been shown to contribute to such conditions as arthritis and prostate disease.

We will not list the over 50 studies, but human studies were published in journals such as *Canadian Journal of Biochemistry*, *Scandinavian Journal of Gastrology*, *Journal of Lipid Research*, *American Journal of Clinical Nutrition*, *Joshi Eiyo Daigaku Kiyo*, *Clinica Chimica Acta*, *Journal of Clinical Investigation*, *Metabolism Clinical Experiments*, *Current Therapeutic Research* and *Canadian Journal of Physiology and Pharmacology*. With this overwhelming proof of the effectiveness of a safe, natural, inexpensive plant extract with no material side effects you would think doctors would be giving this to all their patients with high cholesterol levels. Instead they are given prescription drugs with side effects that aren't known entirely or even very effective in reducing cholesterol. And surprisingly beta-sitosterol is very hard to find in drug stores, health food stores and mail order vitamin catalogs.

Studies have been done in other areas of illness that suggest beta-sitosterol may have great potential in many other areas such as diabetes, blood clotting, ulcers, atherosclerosis and inflammation. Since beta-sitosterol is found in nearly all our vegetables it makes sense that this really a necessary nutrient and will be so recognized in the future.

The following studies are discussed for educational and not to infer that beta-sitosterol can be used to cure these conditions.

In Food Chemistry high blood sugar levels in hyperglycemic rats were lowered by giving them oral beta-sitosterol. This was also shown in Archives of Internal Pharmacodynamics. In Biochemical Biophysical Research Communications diabetic rats improved their diamine oxidase levels (DAO) with oral beta-sitosterol. DAO levels are a basic marker in this condition. The same thing was shown in Pure and Applied Chemistry where glucose-6-phosphatase levels were lowered, which is desirable in diabetes.

Studies also indicate beta-sitosterol may help to protect our stomach linings and prevent the formation of ulcers. In the Chinese journals Huaxi Yike Daxue Xuebo and Huaxi Yaoxue Zazhi doctors showed oral beta-sitosterol protected against stomach ulcers in rats. In Digestion Dissertation Science stomach lesions were reduced 80% with oral beta-sitosterol in test animals.

Anti-bacterial and anti-microbial ability has been shown as well as anti-viral and anti-fungal properties. Such activity was even shown against deadly bacteria such as Staph and E. coli. These studies were published in such journals as Plant Science, the Journal of Agricultural Food Science, Bioorganic Chemistry, Journal of Ethnopharmacology, Fitoterapia, and Hon'guk Nonghwa Hakhoechi.

Studies have shown beta-sitosterol intake to improve blood parameters generally in various ways. Such studies have been published in journals such as International Journal of Immunopharmacology, Sogo Rinsho, Folio Haematol, Biochemical Society Transactions, Medical Philosophy, and Tanpakushitsu Kakusan Koso.

The potential for preventing high blood pressure has been shown. This is epidemic in America due to the fat clogged arteries, which, in turn, leads to heart attacks and strokes. Four such studies were published in Zhongcaoyao, Atherosclerosis, Journal of Atherosclerosis Research and Patol. Fiziol. Eksp. Ter. (Russia) where oral supplements of beta-sitosterol suggested improvement atherosclerotic symptoms.

Beta-sitosterol has shown strong anti-inflammatory and anti-pyretic (anti-heat) properties, which should be investigated especially for various arthritis conditions. Patents were granted in America and Europe for treating inflammation with beta-sitosterol orally and studies were published in Boll-Soc. Italia Biologica and Planta Medicina.

To show that beta-sitosterol intake has value for women as well as men in addition to normalized cholesterol three studies suggested beneficial effects on the uterus and reproductive system of female test animals. In Plant Medicine Phytotherapy, Biochemistry Molecular Biology International and Medical Science Research studies were published showing these benefits.

Without mentioning any more journals it is important to know that many other studies of beta-sitosterol on both humans and animals have shown a

wide range of potential benefits, like increases in SOD (super oxide dismutase) levels, which are critical in immunity and lifespan. People with certain illnesses also have low beta-sitosterol intake. Vegetarians eat 50% more beta-sitosterol than meat eaters and are known to be healthier and live longer.

Topical uses have been studied for keratosis, acne, psoriasis and skin protein synthesis. Cattle with fat necrosis have been treated with beta-sitosterol. It has been shown to have anti-tussive (anti-cough) properties. It may raise glutathione levels, which are vital to immunity and lifespan. Beta-sitosterol has strong immune enhancing properties, which need to be studied more.

And why hasn't this been studied more and why isn't it more available and information like this widely disseminated? There's just no profit in selling an unpatentable, non-prescription, plant extract that can inexpensively be extracted from sugar cane pulp, soybeans and pine oil.

## Chapter 4: Supplements

It is important to always remember that diet is the most important thing we can do for our health. Or to put it more broadly our diet and lifestyle including smoking, drinking alcohol, exercise, coffee and other such things. Supplements are very secondary to diet but very, very important. You can do a lot more with both diet and supplements than just diet alone. All the supplements we are going to discuss are natural, safe and inexpensive.

A most important supplement you can take is beta-sitosterol. The prescription herbal extracts used by doctors in Europe are taken from herbs like saw palmetto and Pygeum africanum and are very weak and expensive. Harzol is only 30mg and Azuprostal is the strongest at 120mg. It is a good idea to take a full 300mg of beta-sitosterol a day. Taking more than this will not help and just costs you more. You can cut the tablet in half and take 150mg AM and PM if you want to. The studies on beta-sitosterol are listed in chapter 2.

A most important mineral you can take is zinc. The prostate contains ten times more zinc than any other part of the body and there are too many studies to count on the importance of zinc in prostate metabolism. Low zinc levels have been correlated with low testosterone levels. In the Japanese journal Kitakanto Igaku researchers found low levels of zinc in prostate cancer patients. Some other valuable studies have been done in such journals as Journal of Nutrition, Journal of Steroid Biochemistry, Endokrinologiya, Prostate and too many others to list. You only need about 15 mg of zinc daily and taking too much is detrimental. Zinc is generally deficient in our diets and there are many other benefits to supplementing it.

Flax seed oil is very good for prostate health and contains omega-3 fatty acids. We've emphasized that you have to eat a diet low in both vegetable and animal fats, but omega-3 fatty acids are the one exception. Two articles in Anticancer Research suggest that omega-3 fatty acids may have important protective properties for human prostate cells in vitro. Take two grams a day - one in the AM and one in the PM. This is a mere 18 calories of beneficial flax oil. The more research that is done on flax oil the more benefits are seen from it and flax is by far the best source. Do not take fish oil supplements for many reasons even though many of the studies on omega-3 fatty acids earlier were done using fish liver oils. Keep your flax oil refrigerated.

Soy isoflavones have gotten a lot of attention recently but who has bothered to tell you they may have great value for your prostate? The studies on soy isoflavones on prostate health have been numerous but only in the last seven years. The main constituents in soy that we are concerned with are genestein and daidzein. These are not "phytoestrogens" as many people will tell you as there is no estrogen (or testosterone, progesterone, DHEA, melatonin, etc.) in any plant. Studies on prostate health and isoflavones have been published

in journals such as Prostate, Anticancer Research, Journal of Endocrinology, Nutrition and Cancer, Journal of Steroid Biochemistry and many other journals. The proof here is overwhelming. Get a good brand that lists the amount of genestein and daidzein on the label and take one in the AM and one in the PM.

The value of selenium is undeniable and this is a most important trace element you can take and you only need a mere 200mcg (one fifth of one milligram) a day. Even if this is in your multi-vitamin and mineral tablet it is probably not enough. Take a 200mcg tablet a day of any brand. Selenium, like many minerals and trace elements, is often deficient in our diets due to processed foods. There are many other benefits to taking this as well.

Vitamin D rarely occurs in our diets and is basically made by our exposure to sunlight. It is important to take 800 IU of vitamin D a day, preferably 400 IU AM and PM. It is surprising that nearly all the research on vitamin D and prostate has only come out in the last five years but there are about a dozen clinical studies proving the importance of vitamin D to prostate function. These include studies in such journals as Cancer Research, Anticancer Research, Prostate, Clinical Cancer Research, Cancer Letters, Surgical Forum and other respected international journals.

We all know that vitamin E is a very beneficial nutrient especially for our cardiovascular health and that our American diets are generally deficient in vitamin E. Whole grains are the best source. Take a 400 IU supplement daily and don't pay a lot of money for it; just get the usual dl-alpha tocopherol you see everywhere. At East Carolina University in North Carolina researchers found vitamin E to suppress human prostate cancer cells in vitro. In Finland a study in the Journal of the National Cancer Foundation showed a 32% reduction in prostate cancer when vitamin E supplements were taken. Other studies were published in the Journal of Urology and Nutrition and Cancer.

We all have heard garlic is good for cardiovascular health but who has ever told you garlic may help your prostate? You need a good, dependable name brand here as some garlic extracts are almost useless and they differ very much in constituents. In the book "Nutraceuticals" by Lachance he lists 44 references in his study of the beneficial effects of garlic extracts on prostate health. In the American Journal of Clinical Nutrition in 1997 a very good study showed the value of garlic supplementation for prostate health.

A Chinese study showed the importance of glutathione levels for prostate health in the journal Shondong Yike Daxue Xuebo. Our glutathione levels are critical for immunity and how long we live. Taking glutathione itself surprisingly is expensive as well as somewhat ineffective. Fortunately you can take an inexpensive 600mg capsule of N-acetyl-cysteine and enhance your glutathione levels very effectively and safely. This is widely available so buy any brand. You will gain many benefits by raising your glutathione levels especially raising your immunity so you fight disease.

The value of green tea extract has been shown in the Journal of the National Cancer Institute and Cancer Letters. The problem is finding a good brand that is decaffeinated. It is not good to buy the many cheaper brands that contain caffeine obviously so look for a brand that is clearly marked "decaffeinated" if possible.

Citrus pectin has been shown to have value in actual prostate cancer. It most probably has value in BPH as well. Studies were published in the Journal of the National Cancer Institute and Biochemical Molecular Biology International showing the anticancer properties of citrus pectin. Expensive "modified" pectin is promoted but plain, inexpensive citrus pectin is very bioavailable. Take a good 5 grams a day in juice as it is tasteless.

In Cancer Research beta-carotene intake showed a strong correlation with reduced prostate cancer in Japanese men. This is an important antioxidant and 25,000 IU of any brand daily is good.

**Quercetin** is something you may have never heard of but studies in the Journal of Steroid Biochemistry and the Japanese journal Daizu Tan. Ken. Kaishi show it can help promote prostate health. 250 to 500mg of any brand daily is good. This is a good supplement for many other reasons as well, a good antioxidant.

Vitamin C has received too much attention in the media especially for megadoses, but studies do show its importance in prostate function. Studies in Surgical Forum, Prostate, Cellular Biology International and many other journals suggest strong anticancer properties. Be sure to not take more than 250mg a day. Taking megadoses of vitamin C will acidify your blood (blood is naturally alkaline) and cause numerous side effects over time.

As we age our human growth hormone falls and as it falls the likelihood of developing prostate disease rises. Raising our growth hormone levels could strengthen our immunity and allow us to live longer. Unfortunately actual HGH is very expensive, must be injected, is dangerous and is known to cause severe side effects. There are countless promotional products that claim to raise HGH but none of them appear to do so. Fortunately, there is a simple, inexpensive, effective and safe way to do this by simply taking a gram of L-glutamine in the AM and one in the PM. Please do not fall for the promotional products that claim to raise HGH. L-glutamine is an amino acid with many health benefits especially in strengthening our intestines.

And speaking of intestines, while there are no studies to show the value of taking acidophilus for prostate health this is another supplement you should take. Our intestines are generally in terrible shape from eating the wrong foods and too much food. Eating healthy foods and eating less and taking a good brand of acidophilus twice daily will change that. You must find a good brand that states every tablet or capsule has at least 3 billion live organisms

at time of manufacture. Keep this refrigerated. Take "FOS" with this. FOS is an indigestible sugar that feeds the good bacteria in our intestines. Take a capsule with your acidophilus.

Herbs such as saw palmetto and Pygeum africanum, etc. have been shown to contain insignificant amounts of phytosterols and no matter how strong the extract they are useless. The exception is rye and other similar pollens as they contain a hydroxamic acid called "DIBOA". Unfortunately pollen (not bee pollen!) extracts contain very little DIBOA and are very expensive. Unless someone synthesizes this and puts it on the market don't bother. And we must discuss a very questionable promotion called lycopene, which is the product of the major ketchup manufacturer in the world. It is claimed that the more pizza men remembered eating on questionnaires correlated with prostate health! This is asinine on the surface. Many studies contradict this and actual serum level studies of lycopene proved there is no correlation between tomato intake and prostate health. In fact no matter how many fresh tomatoes or tomato juice you eat you won't raise lycopene levels at all - you must eat cooked tomatoes with fats. Don't fall for this no matter how much advertising you hear about it. Men in Asia who have the lowest rates of prostate disease in the world almost never eat tomatoes in the diets anyway.

There are seventeen supplements recommended here all of which have been shown to be safe, effective, natural and inexpensive. Within reason take as many as you can as they have many other health benefits. Please remember the alternative probably is surgery, radiation, dangerous prescription drugs and you can end up wearing diapers and never having sex again before you die a painful premature death.

Suggested supplements:

- beta-sitosterol complex 300mg
- zinc 15mg
- flax oil 1gram twice daily
- soy isoflavones 750mg twice daily
- selenium 200mcg
- vitamin D 400 IU twice daily
- vitamin E 400 IU
- garlic extract 500mg twice daily
- N-acetyl cysteine 600mg
- green tea extract 200mg twice daily
- citrus pectin 5g
- beta-carotene 25,000 IU
- Quercetin 250 - 500mg
- vitamin C 250mg
- L-glutamine 1 gram twice daily
- acidophilus 3 billion twice daily
- FOS 750mg twice daily

## Chapter 5: Progesterone

First of all, progesterone is thought of as a female hormone, but it is not feminizing in men at all. Quite the contrary. Estrogen is the feminizing hormone in men and it is progesterone that is the natural antagonist to it. It is estrogen excess in men over 50 that causes breast growth and other problems and progesterone can help inhibit this. Please do not confuse real natural progesterone with the progestin analogs like Provera that have serious side effects and do not have the advantages of real, natural progesterone. Nature has given progesterone to both men and women to balance and offset the strong effects of estrogen. Men, of course, have much lower levels of progesterone than women so they need less.

Progesterone is very poorly absorbed orally and broken down into unwanted metabolites. Fortunately, it is readily absorbed by the skin into the blood so transdermal creams are very practical and effective. Get a good cream that contains 800- 1000mg of real natural USP progesterone per two ounce jar (400-500mg per ounce) and states so clearly on the label. Avoid anything with the words "wild yam" on the label as this is known as "yam scam" in the trade. Yam does contain an alkaloid called diosgenin, which can be converted into progesterone through sophisticated chemical procedures in a laboratory but cannot transform in the body and is not a "precursor" of progesterone. Apply a mere 1/8th teaspoon directly to your scrotum (testicular sac) daily. This allows it to get into the prostate receptors.

Progesterone has been shown to be non-toxic and very safe especially in these very low amounts. You will by applying about 7mg daily of which about 5mg will actually get into your system.

Now let's quickly discuss the research to prove progesterone antagonizes estrogen, is a powerful 5-alpha reductase inhibitor (stops DHT formation) and that the prostate has specific progesterone receptors that no other hormone can attach to. We will not bother to list the journals, volumes and dates but the following studies were published in the most prestigious medical journals in the world such as Endokrinologie, Indian Journal of Experimental Biology, Gynecological Investigation, International Encyclopedia of Pharmacological Therapy, Acta Endocrinology, Journal of Clinical Endocrinology and Metabolism, Journal of Endocrinology, Journal of Steroid Biochemistry, Oncology, Annals Endocrinology, Acta Physiologica Latinoamerica, Prostate, Urology Research, Endocrinology and Archives of Gerontology and Geriatrics.

The Center for Drug Research in India did four different studies suggesting that progesterone shrank enlarged rat prostates, progesterone antagonized the stimulating effects of estrogen, that progesterone stimulates alkaline phosphatase and depressed acid phosphatase in the prostate and generally is supportive of proper prostate function.

Six different studies at the University of Milan in Italy, the University of Turku in Finland, Montreal General Hospital in Quebec, St. George's Hospital in London, the University of Mainz in Germany and the Roswell Park Memorial Institute in New York all independently had results that suggest that progesterone is a powerful 5-alpha reductase inhibitor that stops the conversion of testosterone into DHT in test animals. In fact at Staten Island College in New York and Mt. Sinai Medical School (also in New York ) progesterone was shown to raise the level of androstenedione in the prostate gland itself. Remember that a healthy prostate needs an abundance of androgens such as testosterone and androstenedione and DHEA to function well as it does in your youth.

At the University of Laval in Quebec progesterone inhibited estrogen from binding to the prostate and progesterone receptors were clearly demonstrated.

At Central Hospital University in Paris progesterone was shown to inhibit the formation of DHT as well as binding of it to the prostate. DHT content in the prostate is the single most causative factor in prostate disease.

At the Institute for Biological Medical Experiments in Buenos Aires it was shown progesterone shrank prostate weight in test animals as well as reduced 5-alpha reductase activity.

At the Biochemical Medical Laboratory in France the doctors demonstrated in human BPH tissue there are more progesterone receptors, which show how responsive the prostate is to this hormone.

At the University of Maryland in Baltimore human prostate cells were shown to have progesterone receptor sites. This was also demonstrated at the Institute of Clinical Medicine in Rome.

At the Institute of Clinical Chemistry in Bochum, Germany progesterone in human BPH tissue reduced the activity of 5-alpha reductase strongly. In 1988 a very important study was done at Nanjing Medical College in China where progesterone reduced the prostate weights of test animals and the doctors concluded this therapy should be used on humans. Since that time there has been almost no published studies on the use of progesterone for BPH and prostate cancer. Progesterone cannot be patented, progestin analogs don't do what real progesterone does and there is just no profit in what is now an over-the-counter cream.

## Chapter 6: Melatonin

When doing the research for prostate health, melatonin was often mentioned. Almost never in a book or article has there been a mention of melatonin being critical for prostate health. Yet, dozens of international scientists in countries around the world were independently using melatonin in clinical studies on prostate health and function. The hallmark of this research is that the prostate actually contains melatonin receptors that make melatonin necessary for the prostate to function at all.

This was both surprising and not surprising at the same time. You have to do an in-depth search of the scientific literature to find out how important melatonin is to prostate function. And all the studies were unrelated by separate researchers in different countries. No one has taken the time until now to gather all these studies together and report on them to the general public. Now men can know that taking an inexpensive, safe, over the counter supplement can help support their prostate health.

But it is not surprising in the sense that much has been written on the amazing effectiveness of melatonin - and some excellent books have been written. Russell Reiter in his book "Your Body's Natural Wonder Drug" does report one unpublished study on melatonin and prostate cancer.

There are a number of books available on melatonin. amazon.com lists over 50 books on melatonin such Pierpaoli's "Melatonin Miracle", Le Vert's "Melatonin: The Anti-Aging Hormone", Challem's "ABC's of Hormones" and Bock's "Stay Young the Melatonin Way".

You can see by the chart that melatonin peaks at about age 13 and falls severely until it's almost nonexistent by age 60. Melatonin is produced by the pineal gland at night as light tells the body not to produce it. So it is important to take it only after the sun goes down. It is very safe and has no known lethal dose. Even common table salt has a lethal dose. What does it do? The most important thing melatonin does is to extend the lifespan. Lab animals given melatonin in their drinking water have lived as much as one third longer. It boosts the immune system. It may be the most powerful of all known antioxidants. It promotes good cardiovascular health according to new research. It exhibits anticancer preventive properties and could help make other cancer therapies more powerful. And it is remarkably safe and non-toxic without any known side effects. Amazingly melatonin was not even identified as the pineal gland hormone until 1958 when it was finally isolated at Yale University.

There have been many studies in laboratory animals showing that melatonin in varying doses could lower prostate weight and shrink the prostate, thus facilitating the prevention of prostate cancer. These studies have been published in such journals as Endocrinology, Progress in Brain Research,

Experientia, Hormone Research, Archiva Farmacologia Toxicology, Hormone Metabolism Research, Journal of Pineal Research, Journal of Urology, European Journal of Pharmacology and many others. This clearly shows the value of melatonin in prostate disease. More recently human studies have been done due to the most impressive animal studies. At the University of Tuebingen in Germany men with prostate cancer were found to have low melatonin levels (Clin. Chim. Acta 209 (1992) p. 153-67). In a later study at the same university (Int. Cong. Series 1017 (1993) p. 311-6), they found the same phenomenon and suggested using melatonin supplements to treat prostate cancer.

At the University of Lodz in Poland researchers came to the same conclusion to use melatonin to treat prostate cancer (Int. J. Thymol. 4 (1996) p. 75-9). Studies in Endocrinology, Journal of Clinical Endocrinology and Metabolism, Frontiers of Hormone Research and others have found definite melatonin receptors in the prostate gland proving how important this hormone is for proper function, regulation and metabolism. The fact that there are now known to be melatonin receptors in our prostates only discovered in the last 10 years is very enlightening as regards treatment of diseases of the prostate.

There have also been studies where melatonin could inhibit prostate cancer in laboratory animals such as the University of Alberta in Canada, the University of Texas in Houston and San Gerardo Hospital in Italy.

A very good study was done at Tel Aviv University in Israel that showed the melatonin receptors in human prostates

can suppress prostate enlargement. They noted that BPH is due to the imbalance of estrogen and testosterone as we age and found that this excess estrogen also interferes with normal melatonin metabolism (J. Clin. Endoc. Metab. 82 (1997) p. 25 35 - 41).

There are many studies we could go on with, but the proof is overwhelming. Simply take a 3mg tablet every night. If you are very old, very sick or have outright prostate cancer you could take two tablets. **ONLY TAKE MELATONIN AT NIGHT** as it is produced at night when our eyes don't detect sunlight.

## Chapter 7: Androgens

This chapter is called "Androgens" rather than "Testosterone" as we will cover androstenedione and DHEA as well. Androgen simply refers to basically masculinizing hormones although women also have important levels of all three. Most of this will be on testosterone because it is the most relevant, most powerful, most controversial and least understood.

Testosterone falls gradually in men after the age of about 50. It does not fall steeply like DHEA or melatonin. One of the biggest myths going is that somehow testosterone is your enemy and contributes to BPH and prostate cancer. This theory is considered sacred and unquestionable. Doctors used to - and still do - castrate men and cut their testicles off to stop testosterone production. This insanity is based on the fact a doctor named Huggins noticed that castrated men did not develop BPH so he started castrating men with prostate cancer. They temporarily got better but then the cancer returned with a vengeance. Now castration is generally done with dangerous drugs that stop testosterone production and cause severe side effects. TESTOSTERONE IS YOUR FRIEND, IT HAS ALWAYS BEEN YOUR FRIEND AND WILL ALWAYS BE YOUR FRIEND. Any thinking person can see that.

If you look at the medical studies over the last 60 years it is completely obvious that testosterone does not contribute to BPH or cancer in any way. First of all there is no such condition called "hypergonadism" in men where they have high testosterone levels. Every study ever done shows that prostate disease depends on AGE and testosterone falls as we age. No study has ever shown higher testosterone levels for men with prostate disease compared to normal men. In fact, many studies have shown men with prostate diseases have low testosterone levels. But the fact remains that men under 50 rarely have prostate cancer when their testosterone is high, yet nearly all men will end up with prostate cancer in their 70's when their testosterone is low. The prostate disease rates parallel the fall in testosterone. We'll detail more than two dozen studies to prove this point since the medical profession is completely wrong about this and isn't interested in the truth of the matter. At the Veterans Administration in Los Angeles<sup>1</sup> they proved in men that no matter how low they made the testosterone levels fall it did not inhibit the cancer growth.

At the Imperial Cancer Research Fund in London<sup>2</sup> doctors gave mice huge doses of testosterone and could not get their prostates to grow.

At the Medical College of Virginia in Richmond<sup>3</sup> men were measured for serum testosterone levels and no difference could be found between cancer patients and normals.

At the Harbor General Hospital in California<sup>4</sup> it was shown that testosterone itself competes for binding in the prostate against DHT. When testosterone

levels fall more DHT success- fully binds thus causing dysfunction and DHT accumulation.

At the Leeds Medical School in England<sup>5</sup> human prostate BPH tissue was shown to be deficient in testosterone yet had excess DHT levels.

At the University of Innsbruck in Austria<sup>6</sup> doctors found the lower the testosterone as men aged the higher the BPH and cancer and individually higher testosterone levels were unrelated to disease.

Again at the Leeds Medical School in London<sup>7</sup> the same doctors did another study and found men with individually higher androgen levels did not have higher rates of disease of the prostate. As men aged and their androgen levels fell BPH and cancer rates rose dramatically to parallel the change.

At the Institute of Endocrinology in Russia<sup>8</sup> doctors found test animals with prostatitis have low levels of blood testosterone and androstenedione.

At the Bicetre Hospital in France<sup>9</sup> researchers made the point in laboratory animals very clearly where testosterone supplementation kept the prostates small and youthful, while the untreated animals prostates grew with age.

At the Granada Medical Facility in Spain<sup>10</sup> 104 men with BPH had lower testosterone levels compared to healthy men. Studies like this should leave no doubt in your mind that testosterone is your friend and low levels of it are pathological.

At the Tenous Cancer Research Institute in Wales<sup>11</sup> researchers found low testosterone in prostate cancer patients using saliva testing.

At the Moscow Medical Institute in Russia<sup>12</sup> doctors studied the hormone levels of men over 60 and found those with prostate cancer have much lower testosterone levels and higher estrogen levels giving a very low testosterone to estrogen ratio.

At the Landeskrankenanstalten Urology Clinic in Austria<sup>13</sup> men with BPH or prostate cancer had no higher testosterone levels than healthy men.

At the Institute of Cancer Research in Norway<sup>14</sup> doctors found that supplementing aged rats with testosterone reduced 5-alpha reductase activity and increased prostate enzyme activity generally leading to healthier functioning and metabolism.

At the Polish Urology Clinic in Bialystok<sup>15</sup> doctors consistently found low testosterone in men with BPH.

At the Principe Hospital<sup>16</sup> in Spain men with prostate cancer had low testosterone levels compared to healthy men as verified by both serum and

saliva testing. Again at the Principe Hospital<sup>17</sup> another study confirmed these findings with another group of men.

In China, 18 doctors studied men with BPH and found consistently low levels of testosterone generally.

A most important study done at the famous Johns Hopkins University in Baltimore<sup>19</sup> men with BPH and prostate cancer were compared to healthy men and it was found testosterone levels were unrelated to progress or severity of the disease. This study was done by some of the foremost doctors in the country and published in the most important of all medical journals regarding prostate illness appropriately enough titled "Prostate". This study in itself completely disproves the "testosterone is bad for you" theory.

At the Karolinska Institute in Sweden<sup>20</sup> another landmark study was done but this time with 2,400! men. The doctors found men with prostate cancer generally had lower testosterone levels than healthy men. Yet today doctors are still cutting off men's testicles and giving them toxic drugs to stop their testosterone production knowing this treatment never works.

At the University of Southern California in Los Angeles<sup>21</sup> doctors studied 1,127 aged men from four distinct racial groups. They found the Asian men with the highest testosterone levels had the lowest levels of prostate illness while Caucasians with the lowest testosterone levels had the highest rates of BPH and cancer.

At the Ben May Cancer Research Institute<sup>22</sup> in Chicago some very brilliant doctors studied human androgen dependent cancer cells in vitro and found that testosterone actually prevented tumor growth. They said androgen deprivation is clearly wrong and we should be studying androgen supplementation for treatment. Doctors like these are going to be responsible for putting reality into medicine instead of the current insanity of stopping testosterone production.

And yet another landmark study was done at the University of Utah in Salt Lake<sup>23</sup> where doctors found the lower the testosterone level in men the larger the prostate volume as men age. Men with higher than normal testosterone levels did not suffer more BPH.

To show the value of testosterone supplementation generally researchers at the University of New Orleans<sup>24</sup> found that 62 aged men given testosterone supplements had increased sexual interest, more sexual arousal, and better sexual enjoyment as well as improved mood. Studies are going to show more and more that men over 50 who retain youthful testosterone levels are going to be healthier and live longer and better lives.

At the University Medical Center in Norway 25 239 men were tested for serum testosterone levels and they discovered higher levels had no relation at all to BPH or cancer of the prostate.

If you want to know more about the benefits of testosterone supplementation the only book available now seems to be Eugene Shippen's "The Testosterone Syndrome". He has valuable information on testosterone, but androstenedione is a much safer way to raise your testosterone than using actual testosterone salts. Also please ignore his advice on estrogen supplementation for women and read up on natural progesterone

You can go to a doctor and get oral testosterone salts or injections or even patches. If you read the side effects on the package insert for any prescription form of testosterone itself you'll be scared to death - and with good reason. The side effects are frightening. Fortunately you can buy over-the-counter andro- stenedione tablets cheaply and raise both your androstenedione and testosterone levels safely and effectively. Androstenedione is the direct precursor of testosterone and their levels generally parallel each other. There are now many analogs of androstenedione such as 5-androstenedione, 19-norandrostenedione and many -diols instead of -diones. Avoid all of these as there is almost no studies done on these and we simply do not know what they do. Mostly these are directed at young weight lifters who should not be taking any of these in the first place. Only men over 40 should even consider raising their testosterone.

It is never talked about but it is important to raise androstenedione levels per se as well as testosterone. At Gumna University in Japan 26 androstenedione was found to be a strong 5-alpha reductase inhibitor.

At Leeds University in England 5 human prostate tissue with BPH was found to be deficient in androstenedione.

At the University of Edinburgh in Scotland 27 doctors demonstrated androstenedione was a powerful inhibitor of 5-alpha reductase activity in the human prostate and had clinical therapeutic potential.

At the University of Rochester in New York 28 doctors found an analog of androstenedione called 5-androstenediol (commonly sold over-the-counter) had potential anti-cancer activity in human prostate cells. They concluded that the current theory of androgen blockage needs to be changed.

Test your hormones with saliva and if your testosterone is low you can use a 50mg tablet of androstenedione daily and monitor your results every 3 - 6 months. If it is very low or you are very old or very sick you can take one tablet in the AM and one in the PM until your levels are normal. You can take 25mg to maintain your levels once you reach the point you want, or take one

tablet, say, 3 days per week. Please remember that vegetarians (and fish eaters) have lower levels of androgens than carnivores.

The third androgen to discuss is DHEA. Much has been argued over whether or not to take DHEA, but looking at the chart here there isn't much question if you are over 40 since your levels have already fallen by 50%. At the Urology Clinic in Budapest, Hungary (Magy. Onkol. vol. 14 (1970), p. 108-10), doctors found men with prostate cancer had low DHEA levels. There is also a condition where DHEA levels are too high, so it is good to saliva test and make sure. Take 25mg and monitor every 3 - 6 months until your levels are normal again. Life extension advocates like to keep the hormone levels they had at the age of 30 generally. You can maintain your levels either by taking a half tablet or taking it, say, 3 times a week.

It is very obvious that prostate problems do not happen until DHEA falls. It is true that BPH and prostate cancer patients do not show low DHEA levels compared to healthy people, but it is also true that these rates of disease parallel very closely the fall in DHEA after the age of 50 - the lower the DHEA level the higher the rates of both BPH and prostate cancer. DHEA has many, many other benefits to immunity, length of life and quality of life you can read about in the dozens of books that have been published on it.

1. J. Urol. 99 (1968) p. 788-92 2. Gerontol. 14 (1968) p. 133-41 3. J. Lab. Clin. Med. 76 (1970) p. 530-6 4. J. Ster. Bio. 6 (1975), p. 1373-9 5. J. Endoc. 69 (1976) p. 15P 6. Prog. Clin. Biol. Res. 6 (1975) p. 143-58 7. J. Endoc. 71 (1976) p. 99-107 8. Probl. Endokrinol. 23 (1977) p. 111-4 9. Cancer Res. 38 (1978) p. 4126-34 10. Experientia 35 (1979) p. 844-5 11. J. Endoc. 83 (1979) p. 31P 12. Vestn. Akad. Med. Nauk USSR 3 (1980) p. 72-7 13. Klin. Exper. Urol. 4 (1982) p. 1930 14. J. Ster. Bio. 22 (1985) p. 521-8 15. Roczn. Akad. Med. Supl. 42 (1984) p. 177 16. Rev. Esp. Fisiol. 46 (1990) p. 63-8 17. Rev. Esp. Fisiol. 47 (1991) p. 161-6 18. Zhonghua Yixue Zazhi 73 (1993) p. 489-90 19. Prostate 27 (1995) p. 25-31 20. Brit. J. Urol. 77 (1996) p. 433-40 21. Cancer Epidem. Bio. Prev. 4 (1995) p. 735-41 22. Proc. Nat. Acad. Sci. 93 (1996) p. 11802-7 23. J. Clin. Endoc. Metab. 82 (1997) p. 571-5 24. Hormone Behav. 31 (1997) p. 110-19 25. Cancer Epidem. Bio. Prev. 6 (1997) p. 967-9 26. Endoc. Japan 19 (1972) p. 97-106 27. Steroids 52 (1988) p. 237-47 28. Proc. Nat. Acad. Sci. 95 (1998) p. 11083-8

## Chapter 8: Estrogens

Men and women have exactly the same hormones in different amounts. There is no "estrogen" per se and estrogen is merely a convenient term to use when referring to the class of hormones collectively known as estrogens. Men have smaller amounts of estrogen - until the age of 50 when male levels rise, female levels fall and men commonly have more estrogen than women! This is a dangerous situation obviously as the testosterone : estrogen ratio is now reversed. The reversal of this ratio is the key to understanding not only prostate disease but many other male illnesses including cardiovascular health, immunity, cancer, baldness and the other ills of male aging.

There are actually three estrogens - estradiol (the most powerful and most carcinogenic), estrone, and estriol (the least powerful and sometimes even beneficial which comprises 80-90% of human estrogen). Over the last thirty years there are dozens of studies showing the harmful effect of excessive estrogen in ageing males and the reversed androgen : estrogen (including androstenedione and DHEA) ratio as the key to prostate disease. It is beyond the scope of this book and would probably bore the reader to list and discuss these dozens of studies. But we will pick 17 of them to quickly prove the point that testosterone is your friend and excess estrogen is your enemy and the reversal of the androgen : estrogen ration is the most important insight we have into prostate disease.

At the University of Glasgow in Scotland<sup>1</sup> estradiol added to human normal, BPH and cancer prostate tissue completely changed the metabolism, clearance and uptake rates of testosterone and androstenedione and increased the uptake of DHT.

At Kurume University in Japan<sup>2</sup> excess estradiol and estrone caused cancer in rat prostates whereas androgens reduced tumor weight. Estrogen dominance continued to advance cancer growth.

At Strageways Research Laboratories in England <sup>3</sup> estradiol stimulated the uptake of DHT in both human BPH and cancerous prostate tissue.

At the University of Oulu in Finland estradiol given to men raised SHBG (sex hormone binding globulin), bound free testosterone thereby lowering available testosterone in men with prostate cancer.

At the University of Bonn<sup>5</sup> in Germany men with BPH were found to convert androstenedione into estrone, which then excessively bound to their prostates.

At Sabbatsberg Hospital in Sweden<sup>6</sup> estrone was found to convert into the more dangerous and carcinogenic estradiol in human BPH tissue.

At the University of Hamburg in Germany<sup>7</sup> men with BPH were found to have excessive estradiol in their prostates in addition to high 5-alpha reductase activity and increased DHT accumulation.

At the American Health Foundation in New York<sup>8</sup> high estradiol levels characterized the prostate fluid of men with cancer.

At the Bielanski Hospital in Poland 9 men with prostate cancer generally had high serum estradiol and low serum testosterone showing the classic reversed testosterone: estrogen ratio.

At the Sloan-Kettering Cancer Institute in New York<sup>10</sup> human BPH tissue had more than twice the estradiol concentration of healthy tissue and they show excessive estrogen production is a factor in both BPH and cancer.

At Erasmus University in Holland 11 researchers found estrogen caused "striking" growth stimulation in LnCAP human prostate cancer cells which are supposedly androgen, not estrogen, dependent.

At the Schering AG Research Labs in Germany<sup>12</sup> doctors finally started promoting the therapy of reducing estrogen in men with prostate disease using aromatase inhibitors, which prevent estrogen formation.

At Bergmannsheil University in Germany<sup>13</sup> doctors found high levels of estradiol and estrone in human BPH tissue and that the reversed androgen : estrogen ratio as men age basically accounts for BPH.

At Harvard Medical School in Boston 14 320 men with BPH were compared to 320 healthy men and high plasma estradiol levels were clearly related to BPH as well as the obviously reversed testosterone : estrogen ratio. BPH was not related to androgen levels except for low levels.

At the Genoa University Medical School in Italy<sup>15</sup> researchers found estradiol stimulated growth of supposedly androgen dependent LnCAP human cancer cell lines by up to 120%. This contradicts the "testosterone is bad for you" theory as LnCAP cells are supposed to be stimulated by testosterone and androstenedione.

At Northwestern University in Chicago<sup>16</sup> doctors found that it is estrogen and SHBG that promote prostate growth and verified their results with 49 references.

At the University of Palermo in Italy<sup>17</sup> they found it is estradiol that stimulates LnCAP lines and "the current model for hormone dependence of human prostate carcinoma should be revised". In other words the medical profession has its ass backwards regarding testosterone.

Unfortunately it is difficult to lower estrogen levels. Some consider anti-

aromatase drugs to be generally dangerous and/or ineffective. We need a lot more research in this area. You can lose weight, eat a low fat diet, stop drinking alcohol, eat more fiber, exercise regularly, raise your testosterone, androstenedione and DHEA levels and use transdermal progesterone cream directly applied to your testicles. Eating fat causes high estrogen as does obesity. It is a chemical called "aromatase" which converts testosterone to estradiol and androstenedione to estrone and it is very difficult to lower aromatase or prevent aromatase activity.

#### Estrogen References:

1. Biochem. J. 126 (1972) p. 107-21
2. Kurume Med. J. 22 (1975) p. 113-34
3. Endocrinol. 74 (1977) p. 1-9
4. Invest. Urol. 17 (1979) p. 24-7
5. Horm. Metab. Res. 11 (1979) p. 635-40
6. Scand. J. Urol. Nephrol. 14 (1980) p. 135-7
7. J. Ster. Bio. 19 (1983) p. 155-61
8. Prostate 5 (1984) p. 47-53
9. Roczn. Akad. Med. Supl. 42 (1984) p. 175-6
10. Prostate 9 (1986) p. 311-8
11. J. Ster. Bio. 44 (1993) p. 573-6
12. J. Ster. Bio. 44 (1993) p. 557-63
13. J. Clin. Endoc. Metab. 77 (1993) p. 375-81
14. Prostate 26 (1995) p. 40-9
15. Endocrinol. 136 (1995) p. 2309-19
16. Prostate 28 (1996) p. 17-23
17. Ciba Found. Symp. 191 (1995) p. 269-89

## Chapter 9: Home Hormone Testing

It is commonly agreed that prostate problems are hormonally based and affected more by hormones than any other factor, yet doctors almost never test their patients for hormone levels especially testosterone. If you demand a hormone test this requires seeing a licensed medical doctor, getting blood drawn and paying about \$200 per hormone. Then you often get back results not distinguishing between bound, unavailable levels and free, bioavailable levels. In fact many doctors are simply unaware of the difference between the two.

Proteins in our bloodstream called SHBG (sex hormone binding globulins) attach themselves to the vast majority of our hormones making them biologically unavailable. Testosterone, for example, is about 98% bound leaving only about 2% to actually affect our metabolic processes.

For about twenty years now scientists have been able to accurately measure hormone levels using saliva samples but this took place only in clinics and medical studies basically. With technological advances now saliva samples can be collected at home and sent in to a laboratory for "RIA" (radioimmunoassay) analysis at a cost of only about \$40-\$60 a hormone. The World Health Organization approved this method in the 1990's due to its ease, efficiency, reliability and practicality. Now you can test estradiol, estrone, estriol, testosterone, DHEA, melatonin, pregnenolone, androstenedione or cortisol by simply spitting in a test tube.

This is a tremendous breakthrough in both traditional medicine and alternative, natural medicine yet very few people are aware of saliva testing much less know where to buy the test kits. It may take years for such a great benefit to become widely known.

No matter what illness you have medical doctors or even naturopathic doctors and chiropractors almost never test you for hormone levels of any kind. Even life extension advocates who promote the use of over-the-counter hormones like DHEA and melatonin don't suggest testing your levels to see if you need to supplement them or how much to take. Our hormones are obviously extremely critical to every aspect of our health and that includes mental functioning. It is a little known fact that men and women have exactly the same hormones only in different amounts. Women have testosterone and androstenedione, while men have all three estrogens, progesterone and even prolactin (the milk secreting hormone). People have no idea what their hormone levels are and whether they are too high or too low. You can never know the true state of your health or obtain your optimum health unless you do know your basic hormone levels.

For women, estrogen deficiency after menopause is a well established myth,

which is disproven by thousands of clinical studies in women around the world. Their real problem is progesterone deficiency. Their levels of DHEA fall badly as do the levels of melatonin and pregnenolone. Testosterone can either be too high or too low. In men estrogen rises while testosterone falls thus reversing the traditional testosterone : estrogen ratio and causing many problems such as prostate disease, breast enlargement, baldness, weight gain, heart problems and many other conditions. Also their DHEA, melatonin and pregnenolone levels fall steeply after forty. Men also have a dramatic rise in LH (leuteinizing hormone) and FSH (follicle stimulating hormone even though they have no ovaries) which also causes dangerous conditions in men.

What should a man with prostate problems do? Test for testosterone and DHEA as well as estradiol levels and any other hormones he wants to know about. Generally it is safe after the age of 50 to take melatonin supplements at night as well as pregnenolone supplements. If testosterone is low you have a choice of going to a doctor for testosterone injections (very ill advised) or patches, which are similar to nicotine patches. But be aware of the dangers of testosterone salts and read the package insert of the dangers before you consider this course. The other alternative is to take 50 to 100mg of over-the-counter androstenedione and monitor your levels every three to six months. Androstenedione is the direct precursor to testosterone in both men and women. If DHEA is low you can take 25mg of DHEA and monitor your levels every three to six months. If estradiol (the most powerful of the three estrogens) is high it is very difficult to lower this. "Anti-aromatase" drugs which prevent the metabolism of testosterone to estradiol and androstenedione to estrone are dangerous and not advised. You can, however, lose weight, stop drinking alcohol, eat less food, exercise vigorously, eat more fiber, quit eating fat and stop eating red meat as fat intake is highly correlated with high estrogen levels in both men and women especially saturated animal fat. Progesterone in men doesn't need to be tested as it is very non-toxic and rarely high.

Melatonin has to be tested in the early AM. Vegetarians will have lower levels of hormones generally. Time of day is very important for many hormones when the sample is taken.