

DR. BOB'S AND DR. STEVE'S RECOMMENDED VITAMIN LIST

Emerging Concepts and Clinical Implications Regarding Vitamins, Supplements, Over-the-Counter Products, Diet, Exercise, and Much More

Alcohol and Sex - There is a common misconception that patients who are on chemotherapy and/or hormone blockade should not drink alcoholic beverages. This is untrue. **Alcohol in moderation is safe to use**, unless you are taking nilutamide (one of the antiandrogens for prostate cancer). The key word regarding drinking is moderation. Feel comfortable enjoying alcohol, but not more than two or three normal-sized drinks per day, or two to three glasses of wine. Some experts believe red wine may be best for your health. People who drink one or two glasses of red wine per day probably live longer than nondrinkers. One key ingredient that is found in high concentrations in grapes and grape skins that may prove to be an ally in cancer prevention and treatment is resveratrol.

Resveratrol is an antioxidant and antifungal, and is found in raspberries, blueberries, peanuts, and some pine trees. It is thought to be one of the major reasons that consumption of red wine may be beneficial.

Drinking one to two servings per day of any type of alcohol may be beneficial. Drinking more than two servings per day is believed to be detrimental to health and longevity.

Men and/or their spouses/significant others often ask whether sex has any detrimental effects for men with prostate cancer. The answer is **no, sex is NOT harmful**. We would encourage whatever form of sexuality and intimacy our patients and their spouses/significant others enjoy. There is no chance that prostate cancer, or any other cancer, can be spread by any form of sexual activity. Having sex does **not** raise testosterone levels, and does not stimulate prostate cancer cells to grow. Women of childbearing age, whether known to be pregnant or not, should not touch Proscar or Avodart pills since these two products could be absorbed through the skin, and would prove harmful to a developing fetus.

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***All of our new papers, old papers, and all updates can be downloaded for free at our website: www.prostateweb.com.**

Multivitamin, one a day. We strongly recommend only using a nationally known brand, such as Centrum or One-A-Day. These are made by major pharmaceutical companies. If they contained ingredients other than what they list, the drug companies would be sued, because they have such deep pockets. This alone is sufficient motivation for them to ensure that their multivitamins contain exactly what their labels describe.

Vitamin C, 1,000 milligrams - We recommend avoiding purchasing vitamin C with bioflavonoids. Instead, purchase and use vitamin C with rose hips. Bioflavonoids are a form of soy, and we have the opinion that soy may be harmful for men with prostate cancer. We believe that bioflavonoids, soy products, isoflavones, modified citrus pectin, flax seed, DHA, and plant phytoestrogens all have in common their ability to lower testosterone levels. Please see additional discussion under "Soy Products." At the time a man is found to have metastatic prostate cancer, the higher his testosterone level, the much longer he will live. Similarly, after a man has been treated for prostate cancer, we strongly believe that the higher the testosterone level, the much better the prognosis. Why does the incidence of prostate cancer go up as a man ages while his testosterone level goes down?

Whenever Dr. Bob develops a cold or upper respiratory viral symptoms (URI), he personally takes 5,000 to 10,000 milligrams of vitamin C a day, in four divided doses. He also uses Echinacea with goldenseal, three times a day. If you are going to use these to help your upper respiratory infection symptoms, you need to start vitamin C and Echinacea with goldenseal at the time your symptoms first develop in order to obtain maximum benefit. If you wait more than 12 to 18 hours, there is probably little or no benefit.

Too much vitamin C can cause significant gastrointestinal upset; therefore, most people have to use much lower doses of vitamin C than used by Dr. Bob. Many experts believe that vitamin C does not help viral infections. Dr. Bob thinks that vitamin C and Echinacea with goldenseal help him fight off a cold.

No one knows how much vitamin C to recommend on a daily basis.

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Vitamin C is an antioxidant, and most experts believe antioxidants are essential and necessary to maintain good health. We recommend that all of our patients take vitamin C. Dr. Snuffy Meyers, who we greatly respect and admire, also advises taking vitamin C. The "best" correct dose to use remains unknown. We are left with opinions. We favor 500 to 1,000 milligrams per day. Dr. Bob takes 1,000 milligrams per day.

Vitamin E, 400 I.U. or 140 I.U. or (?) - Like vitamin C, this is an antioxidant, and many reports claimed it has health benefits. Some published studies suggest vitamin E may reduce the risk for developing prostate cancer. Some studies suggest vitamin E at 1,000 I.U. per day can help improve memory for patients with Alzheimer's disease.

There is a danger that vitamin E may cause an increased risk of bleeding in patients who are taking Coumadin (warfarin) or other anticoagulation medicines. We strongly advise against using vitamin E if you are taking Coumadin (warfarin), Lovenox, or other anticoagulants. Vitamin E is available in many different forms. The suffix "ol" means that the vitamin E contains all four of the tocopherols (alpha, beta, gamma and delta). If it is spelled with a "yl" for the suffix, the vitamin E only contains alpha tocopheryl, the other oils have been removed. Many believe, as we do, that the most effective forms of vitamin E are gamma and/or delta.

In the March 18, 1998 issue, *Journal of the National Cancer Institute*, Heinonen, O., et al; Volume 90:440-446 an article reported that Vitamin E supplementation reduced the risk for developing prostate cancer by 32%, and **reduced the mortality from prostate cancer by 41%**.

In another study, men were randomized to take vitamin E alone, beta carotene alone, both or placebo. Overall, patients on beta carotene had an 18% **higher** incidence of lung cancer, and an 8% higher **total** mortality compared to men who did not take any beta carotene. The dose of vitamin E used in this study was 50 milligrams alpha tocopherol. The beta carotene dose was 20 milligrams. An update of this study from the *Journal of the American Medical Association*, 2003; 290:476-85, concluded that alpha tocopherol seemed to reduce the risk for developing prostate cancer. They cautioned this conclusion requires

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confirmation from other trials before definitive public health recommendations can be made.

Beginning in August 2001, the Selenium and Vitamin E Cancer Prevention Trial (SELECT) opened to accrual. The study will recruit 32,400 men. As of August 2003, 76% of the target population had already been enrolled. Participants are randomized to receive daily selenium, 200 micrograms, in the form of selenomethionine; vitamin E, 400 I.U., a combination of both agents, or placebo.

In May 2004, the New York Academy of Sciences sponsored a meeting with the leading vitamin E researchers from around the world to review the current state of knowledge regarding vitamin E. They noted that vitamin E is known primarily as an antioxidant that helps to rid the body of damaging free radicals, which are known to wreak havoc on cells and DNA by increasing the oxidative stress associated with many diseases. The vitamin also appears to perform non-antioxidant functions that may benefit our health by exerting anti-inflammatory actions and anticoagulant effects, and by regulating genes involved in immune function. They quoted a study from *Lancet*, 1996; 347:781-786, which showed a clinical benefit for vitamin E, but also pointed out that a recent metaanalysis of seven randomized trials of antioxidant vitamins for the prevention of cardiovascular disease concluded the data at this time does not support the routine use of vitamin E supplements for this purpose. They also stated that these various trials differed in a number of major aspects, including selection of patients, stage of disease, endpoints, dosage of vitamin E, and source of the vitamin. Thus, definitive conclusions could not be made.

Cancer researchers, in particular, have paid closer attention to the gamma tocopherol form of vitamin E, since any preventive effects of alpha tocopherol on cancer have been inconsistent, except for one study showing an astounding 41% decrease in the risk of developing prostate cancer for men treated with alpha tocopherol. An article from the *Journal of the National Cancer Institute (JNCI)*, 2000; 92:2018-2023, reported that increased levels of gamma tocopherol were associated with a significantly reduced risk of prostate cancer. Gamma tocopherol also suppresses a gene, *ras-p21*, which codes a protein that promotes cancer. Since gamma tocopherol inhibits this gene, it results

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in blocking the cancer growth promoting effect of ras-p21. The article references laboratory data suggesting gamma tocopherol may also inhibit colon cancer. Tocotrienol is the major vitamin E component in palm oil, and appears to possibly be a promising compound for benefit against breast tumors. In the lab, primarily the gamma and delta versions of tocotrienol inhibited breast cancer cell growth in both estrogen-dependent and estrogen-independent cells. Therefore, if you have breast cancer, you might consider taking tocotrienols, especially those that are rich in gamma and delta forms. Tocotrienols have also been shown to potentiate the benefits of tamoxifen, an antiestrogen medication widely used to treat breast cancer. The panel additionally concluded that vitamin E shows promise in illnesses ranging from Alzheimer's disease and preeclampsia to upper respiratory infections in the elderly.

In the January 4, 2005, *Annals of Internal Medicine*; Volume 142, pages 37-46, Miller, III, Edgar R., et al., reported on a metaanalysis that looked at all vitamin E studies published from 1993 through August 2004. They identified 19 vitamin E clinical trials involving a total of approximately 136,000 patients. Nine tested vitamin E alone, ten tested vitamin E combined with other vitamins or minerals. This article did not report on any new studies; it did summarize all of the prior studies. Their conclusions are rather frightening. Nine of 11 trials testing vitamin E in dosages greater than or equal to 400 I.U. per day showed an **increased** risk for all-cause mortality compared to placebo controls. For low dose vitamin E, there might be a small mortality benefit. The article points out that "three recent meta-analysis" which did not study dose response relationships reported no overall benefit of vitamin E on survival. Several trials of high-dose vitamin E supplementation (400 I.U. per day or higher) have reported nonstatistically significant **increases** in total mortality. This metaanalysis study focused on all-cause mortality, since that is the true bottom-line that interests us.

The dosage of vitamin E in these various studies ranged from 16.5 to 2,000 I.U. per day, with a median dosage of 400 I.U. per day. Although only approximately 41,000 out of 136,000 patients were in the high-dose studies, across all trials, vitamin E supplementation **did not affect** all-cause mortality. When the result from each of the vitamin E studies are combined together, the risk of death was the same for vitamin E versus placebo. No

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survival benefit for using vitamin E was found. More detailed analysis from eight trials using low-dose supplementation found a slight improvement in survival for low-dose vitamin E versus placebo. However, 11 trials using high-dose vitamin E versus placebo found an increased risk of mortality using vitamin E. In a dose-response analysis, all-cause mortality progressively increased as vitamin E dosage increased above 150 I.U. per day. For dosages of vitamin E less than 150 I.U. per day, all-cause mortality slightly, although nonsignificantly, decreased. The major conclusion of this study, as stated eloquently by the authors is, "On the basis of our study, high-dosage vitamin supplementation is clearly unjustified."

This study also highlighted that vitamin E has anticoagulant properties, thought to result from interfering with vitamin K activity. A prior vitamin E/beta carotene study showed a statistically significant increased risk for hemorrhagic stroke among participants assigned to vitamin E. This is additional evidence that patients taking anticoagulants should not take any vitamin E. I would caution patients, however, that sudden withdrawal of high-dose vitamin E may bring on anginal symptoms in patients with coronary artery disease, although this study included only 15 patients.

Some patients are using high-dose vitamin E to help prevent progression of Alzheimer's disease. Obviously risk-benefit analysis must be individualized. Because dosages of 140 I.U. per day or less are not associated with reduced survival and, in fact, may show statistically nonsignificant improvement, as of February 2005, if you are going to use vitamin E, limit your dose to 140 I.U. per day or less. If available, utilize tocotrienol in gamma and/or delta form.

If you have increased cardiac risk factors you should limit your vitamin E intake to no more than 140 I.U. per day. Even if you do not have any increased cardiac risk factors, as of February 2005, we recommend that you not take more than 140 I.U. (try to use gamma tocopheryl, and if available gamma and delta tocotrienol) of vitamin E per day. Our opinion could change as additional information becomes available. All medical information continues to evolve.

Addendum to Vitamin E (5/2/05) - In the April 6, 2005, *Journal of the National Cancer Institute*, Volume 97, Number 7, a study

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is reported regarding the possible benefit from using vitamin E in the form of alpha tocopheryl, 400 I.U. per day, and beta carotene, 30 milligrams per day (strong antioxidants) versus placebo for patients with head and neck cancer, who were treated with radiation therapy. The study intended to treat patients for three years with these two different antioxidants. While the study was in progress, there was a report involving a different population of patients who were treated with beta carotene versus placebo. The beta carotene treated patients had an increased risk of developing cancer. As a result of this information, beta carotene was dropped from this just reported study. Patients were then randomized to receive either vitamin E alone, or placebo. Compared to patients treated with placebo, the patients receiving vitamin E supplements had a higher risk of developing a second primary cancer while they were taking the vitamin E supplement. After the supplement was discontinued, they had a lower risk of developing a new second primary cancer. Overall after eight years, the proportion of participants who developed a second cancer was similar in both arms. The study concludes that vitamin E supplementation produced unexpected adverse effects on the occurrence of second primary cancers and on cancer-free survival. This additional information reinforces our recommendation to avoid using vitamin E, except at doses of 140 I.U. per day or less.

Lycopene - A case report in the 2001 *Journal of Urology* described a patient who had advanced, metastatic, hormone refractory prostate cancer. He had bone pain and was put on hospice. He treated himself with Lyc-O-Mato, a form of lycopene. This patient's bone pain completely went away; he went off the hospice program, and remained in remission more than one year later. Natural products containing lycopene, such as tomato sauce, may be the best source for lycopene. We strongly recommend that all of our patients take lycopene. We specifically recommend the brand Lyc-O-Mato. It is distributed by Healthy Origins, Pittsburgh, Pennsylvania. The phone number is (888) 228-6650. The specific preparation that we recommend is Lyc-O-Mato in olive oil, one 15 milligrams capsule twice each day. If you ask for the "US, Too discount," you will save about 50%.

An article in *Cancer Epidemiology*, "Biomarkers and Prevention," Volume 10, August 2001, pages 861-868, studied lycopene supplementation in patients with prostate cancer. Men were

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treated with 15 milligrams of lycopene twice daily for three weeks prior to radical prostatectomy. PSA levels declined by 18% in the lycopene group, and increased by 14% in the control group. The results of this study, however, stated that "no conclusion can be drawn because of the small sample size." In this particular study, the type of lycopene came from LycoRED Natural Products Industries, Bersheba, Israel. This product was developed from specially bred and cultivated lycopene-rich tomato varieties. It contains approximately three times greater amounts of lycopene than regular tomatoes. Lyc-O-Mato contains this form of lycopene.

An article in the *British Journal of Urology*, Volume 92, 2003, pages 375-378, reports on a small study of 54 patients. Half of them were randomized to undergo orchiectomy alone; the other half orchiectomy plus lycopene beginning the same day of orchiectomy.

After two years, PSA's were 9.02 in the orchiectomy group, and 3.01 in the orchiectomy plus lycopene group. Seven patients who had orchiectomy alone progressed; only two patients on lycopene progressed, with a P value of less than .05. Twelve subjects in the orchiectomy group died (22%), whereas only seven (13%) in the orchiectomy plus lycopene group died. P value was less than .001. The editorialist comments that "if the results of this randomized, controlled trial are not a product of chance, and can be reproduced, it will have a major impact on the treatment of prostate cancer." I advise all my patients to take lycopene in olive oil, one 15 milligram capsule twice each day. The Healthy Origins product, Lyc-O-Mato in olive oil, is the only product we recommend since this product was used in the article.

In nature the best sources of lycopene include fruits that have a lot of red color to them such as tomatoes. Cooked tomatoes have more lycopene than raw tomatoes; watermelon has even more lycopene than tomatoes.

I3C - In the December 1, 2003 issue of *Cancer*, Volume 98, Number 11, pages 2511-2520, the authors, Zhang, Joanne, et al., report on the in vitro (which means testing in cancer cell lines, not animal models) results using a chemical, indole-3-carbinol (I3C). This is a naturally occurring component of Brassica vegetables such as cabbage, broccoli, and brussel sprouts. Direct treatment of cultured human breast cancer cells with I3C

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potently inhibited the growth of either estrogen responsive or estrogen independent human breast carcinoma cells. The remainder of the article goes into detail regarding the effects of I3C on human prostate cancer cell lines. Probably the most important observation is that when I3C was added to flutamide, and tested against a prostate cancer cell line named LNCaP, the combination led to more effective growth inhibition compared to either flutamide or I3C alone. In fact, the combination virtually abolished DNA synthesis. Additional experiments showed that I3C was effective at inhibiting two different prostate cancer antiandrogen responsive cell lines. However, it was only effective at inhibiting one of two androgen independent cell lines.

This research was done at the University of California at Berkeley. The take home message seems to be that use of cabbage, broccoli and/or brussel sprouts, all rich in I3C, has the potential for possibly helping to control prostate cancer and breast cancer. I personally can't stand brussel sprouts, so I hope that if I need I3C in the future, it will be available by pill. Those of you who like these vegetables and have prostate cancer (or breast cancer) might consider adding extra quantities of them to your diet. There is no data to suggest that I3C in pill or liquid form is beneficial; vegetable sources for I3C must be used.

Selenium - There is a 32,000 patient study underway to evaluate the benefit of vitamin E, 400 I.U., selenium, 200 micrograms in the form of selenomethionine, a combination of both agents or placebo. Since this study is using selenomethionine, this is the form of selenium that Compassionate Oncology recommends. Do not take a higher dose than this, since higher doses of selenium can be associated with increased toxicity. We do not know if this study will be interrupted early because the dose of vitamin E they used is 400 I.U. per day.

In the Journal of the National Cancer Institute, Volume 96, Number 9, May 5, 2004, pages 696-703, an article by Li, Haojie, et al. reports on a prospective study of plasma selenium levels and prostate cancer risk. The article also reviews other reports regarding selenium and prostate cancer. This study found that selenium levels were inversely associated with the risk of prostate cancer for men whose PSA was higher than 4 at the time their prostate cancer was diagnosed. This selenium and

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prostate cancer study followed men for 13 years, making it the longest selenium follow-up study. The statistically significant findings in this study are consistent with five of the six prospective studies on selenium. One of the studies found that men with the highest quintile of toenail selenium had a 60% lower risk of having advanced prostate cancer compared to men in the lowest quintile. Both toenail and plasma selenium levels reflect body selenium status. In this *JNCI* article, the authors reported a trend towards an inverse association between plasma selenium levels, and risk of both localized and advanced prostate cancers for subjects diagnosed in the pre-PSA era. They observed a strong inverse association only for subjects with advanced disease, diagnosed during the post-PSA era.

Another study reported that after a mean follow-up of 7.4 years, men randomly assigned to receive selenium had a 63% lower incidence of prostate cancer than men who received placebo. This study used 200 micrograms of selenium. The authors speculate that increased selenium levels may slow prostate cancer tumor progression, and reduce elevated PSA levels. This same study reported that in 36 healthy men, a statistically significant decrease in PSA levels was seen in men after just three months of selenium supplementation.

An accompanying editorial in the *JNCI* pointed out that selenium was associated with a reduced risk of advanced prostate cancer (stage C or D), and this supports the hypothesis of Li, et al. that selenium affects tumor progression rather than premalignancy. Selenium has known beneficial effects on DNA repair, inflammation, apoptosis (programmed cell death), proliferation, carcinogen metabolism, angiogenesis, and immune function.

As a result of all of this information, we strongly recommend that our patients take 200 micrograms of selenomethionine per day.

Zinc - Beginning in 1996, Compassionate Oncology recommended avoiding zinc supplementation. Almost all other prostate cancer specialists recommended zinc supplements for their prostate cancer patients. Our opinion was given validation in the July 2, 2003 issue of the *Journal of the National Cancer Institute*, Volume 95, Number 13, pages 1004-1007, which reported, "Zinc Supplement Use and Risk of Prostate Cancer" by Michael Leitzmann, et al. This study evaluated 46,974 men participating in The Health Professionals Follow-Up Study. During a 14-year follow up from 1986 through 2000, 2,901 new cases of prostate cancer were discovered. Supplemental zinc at doses up to 100 milligrams per day was not associated with an increased prostate cancer risk. However, compared with non-users, men who consumed more than 100 milligrams per day of supplemental zinc had a relative risk of **advanced** prostate cancer that was 2.29 times greater than non-users. The authors concluded that chronic zinc oversupply may play a role in prostate cancer carcinogenesis.

They additionally reported that zinc was found to antagonize the potential inhibitory effect of bisphosphonates (like Aredia or Zometa) on cancer cell invasion. By doing this, zinc could block any anticancer benefit that results from Aredia and/or Zometa.

They found that 150 milligrams per day or more of zinc has undesirable metabolic effects including immune dysfunction and impaired antioxidant defense, which may be deleterious to our defenses against cancer. Men who took supplemental zinc for ten or more years had an even higher relative risk of developing **advanced** prostate cancer.

The authors reassure us, however, that zinc obtained from food sources was not associated with an increased risk of prostate cancer. Therefore, if any of our readers are taking a zinc supplement, our advice is to discontinue it.

Soy Products, Genistein, Tofu, Modified Citrus Pectin, Flax Seed, and Phytoestrogens - We do not recommend any of these products for men with prostate cancer or women with breast cancer. We acknowledge that we are in the smallest minority of prostate cancer experts who advise against them.

We have seen a number of men who were previously treated with hormone blockade. When they went off hormone blockade, their PSA's seemed to rise too high or too fast. When we ask them if they are taking any over-the-counter products, very often they will say, yes, they are taking some form of soy or one of the other products listed above. When we tell our patients to discontinue these foods and/or over-the-counter products, their PSA's often decline. These observations have led us to advise our patients to avoid soy products, and these other foods/supplements.

There is an excellent newsletter put out by Dr. Snuffy Myers, called "Prostate Forum." You can order this newsletter by telephoning (804) 974-1303. We have nothing to do with this

publication. However, the July 2000 issue points out that soy bean oil and flax seed have large concentrations of ALA (alpha-linoleic acid). Six studies showed that levels of ALA had adverse outcomes on prostate cancer. Additional laboratory research showed there was an increased growth of prostate cancer cells when exposed to ALA. This is probably the first time that we have seen any other prostate cancer expert come out against soy bean oil. An earlier Prostate Forum newsletter had advised against the use of flax seed oil.

An article in the December 1999 journal "*Alternative Medicine Alert*" points out that phytoestrogens are nonsteroidal plant compounds that structurally resemble estradiol, and are shown to have both estrogenic and antiestrogenic activities in humans. There are three main classes of phytoestrogens: flavonoids, coumestans and resorcylic acid lactones. Isoflavones have the most potent hormone-like activity. More than 1,000 isoflavonoids are known, and they are exclusively found in leguminous seeds, such as soy beans, lentils, beans, etc. The most important isoflavones are genistein, daidzein, glycerin and two others. Like estrogen, isoflavone molecules can complex with estrogen receptors. In normal reproductive women, these phytoestrogens behave as antiestrogens, but in postmenopausal women, isoflavones behave as weak estrogens. Results from some studies suggest that soy has effects that may **adversely** affect breast cancer risk."

Concerns have been raised in medical literature that the use of high doses of isoflavones by patients with hormone sensitive cancers like prostate cancer and breast cancer could accelerate cancer growth.

An abstract in the Proceedings of the American Society of Clinical Oncology, Volume 19, 2000, reports their results from treating 41 prostate cancer patients with soy isoflavones. This study used Novasoy, 100 milligrams twice a day for a minimum of three months and a maximum of six months. Overall, there was a significant linear and quadratic **increase** in PSA over time for more than two-thirds of the men, and not one patient had a decline in their level of PSA while on Novasoy treatment. All 41 patients had an absolute increase in PSA. The best result in any of the patients was a decrease in the **rate** of rise of PSA. When you take any product and it consistently "allows" PSA increases in 41 out of 41 patients, we generally advise avoiding that product. We urge our patients not to take supplements containing these products, and limiting soy intake. We advise only moderate use of soy beans, but believe other dietary beans are safe.

A May 15, 2000 article from "Internal Medicine News" reports, "**Cognitive Decline in Men Linked to Eating Tofu.**" Tofu is a form of soy. They asked the question in the article, "Is it possible that isoflavone phytoestrogens, widely viewed as key health-promoting constituents of soy foods, might have an adverse influence on brain aging?" Anything that could potentially cause cognitive decline should obviously be avoided. A study reported at the Third International Soy Symposium in 1999 reported an increased risk of Alzheimer's disease in men who ate tofu two to three times per week compared to nonusers. This was a three-decade-long study of Japanese-Americans living in Hawaii.

Over-the-Counter Products That Might Sabotage Benefits from Triple Hormone Blockade, and Increase the Risk of Developing Hormone Resistant Prostate Cancer:

The following is a list of products that we have identified as having a potential deleterious effect on PSA levels:

1. Soy products.

2. All other similarly related products, including phytoestrogens, tofu, isoflavones, modified citrus pectin, genistein, quercetin, Novasoy TM, and red clover (8% isoflavone), etc.
3. Flax seed.
4. **Products with MSN, MGN or MSM in them.**
5. Omega-3 fatty acids and/or fish oils. We are opposed to fish oil or omega-3 supplements. If you use fish oils, use the product distributed by Source Naturals.com. This trademarked product contains Neuromins. However, I even have reservations about this product, since I believe that omega-3 fatty acids may reduce testosterone levels. Therefore, I am not enthusiastic about recommending any fish oil or omega-3 supplement. Get your fish oil from fresh fish, not supplements. Pregnant or breastfeeding women are advised to limit their fish intake to once each week because of concerns regarding mercury poisoning.
6. Zinc supplements. We advise against zinc supplements.
7. We believe progesterone products like beta sitosterol can also adversely affect your PSA; the same for other "natural" progesterone products. We advise avoiding progesterone creams. Medical literature has reported some prostate cancer patients whose disease rapidly accelerated when they were given progesterone. Up to 99% decline in PSA has been reported when progesterone was **stopped**. Therefore, we obviously strongly advise our men to avoid progesterone. Megace, a potent oral synthetic progesterone, has been reported to stimulate prostate cancer to grow in a phase II study reported in 1987. Three patients experienced an acute exacerbation of symptoms and tumor growth rate when they were treated with Megace (a form of progesterone often prescribed to help hot flashes).

The general theme that we are trying to explain is that many of our patients try to "do more" and try to improve upon our treatment results. Unfortunately, almost always their attempts to do more are counterproductive and jeopardize their chances for successful control of prostate cancer. **Trying to do more results in harm. Using over-the-counter products can sabotage your chances for having a favorable response to our treatment, and jeopardize your chances to remain in remission. This practice may markedly increase the probability for developing hormone refractory prostate cancer, which ultimately shortens**

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life.

Our full-time job is treating patients with prostate cancer. Dr. Bob completed his Harvard University Oncology/Hematology Fellowship in 1975. He has subspecialized in prostate cancer since 1991. Dr. Tucker joined Dr. Bob in the late 1990's. Compassionate Oncology works full-time trying to help defeat and control prostate cancer. Our recommendations are carefully developed and refined with continued experience and insight. Your experience is limited to yourself or to a few acquaintances. You are risking your life by ignoring our advice whenever you decide to use one of the products we tell our patients to avoid.

Diet - We no longer recommend a "low fat diet." There is great controversy about the relationship between fat intake and risk of prostate cancer. Some studies show a relationship, most studies do not. More important than total fat intake are the different types of fats in your diet. Saturated fat and trans-fatty acids need to be avoided. Other fats such as those found in fresh fish, olive oil, canola oil, and corn oil are safe, and may even lower cholesterol levels. The "Mediterranean-type diet" seems to be the most healthy diet to follow, even though it may include 30% (healthy) fat content. Diets with increased intake of fresh fruits, vegetables, nuts, whole grains, and fresh fish are considered ideal. However, a study in the *Journal of Clinical Oncology*, Volume 20, Number 17, September 2002, pages 3592-3598, followed 1,300 men for four years. This study compared a low-fat, high-fiber, high intake of fresh fruits and vegetables diet to a control group on a regular diet. After four years of study, the authors found that the risk of developing prostate cancer was the **same** and the levels of PSA were the **same** in the treatment and control groups. This result surprised many experts. However, this same conclusion was reinforced by an article in the *Journal of the National Cancer Institute*, Volume 96, Number 21, November 3, 2004 by Hung, Hsin-Chia, pages 1577-1584, entitled, "Fruit and Vegetable Intake and Risk of Major Chronic Disease." They report on a study involving 71,910 female participants in a Nurses Health Study, and another study with 37,725 male participants; the Health Professionals Follow-Up Study. The subjects eating five servings of fruits and vegetables per day had a 28% lower risk of cardiovascular disease than participants eating fewer than 1.5 servings per day. Fruits were associated with a greater

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reduction in cardiovascular risk than vegetables. The study found **no** association between fruit and vegetable intake (either total or of any particular group), in overall cancer incidence. The authors also reference another study that found no associations between total fruit and vegetable intake and incidence of specific cancers.

A Mediterranean diet does help cardiovascular conditions. We recommend this type of diet for all of our patients, whether they have a heart condition or otherwise. We strongly advise that you avoid animal, hydrogenated, saturated and/or trans-fatty acids since they increase the likelihood for developing cardiovascular complications. There are articles that report no association between fat intake and prostate cancer, and only a few reporting a weak link.

We conclude that perhaps you do not have to be quite so strict regarding your diet. Splurge, but do so in moderation.

Resveratrol - In the *Journal of the National Cancer Institute*, Volume 96, Number 20, October 20, 2004, pages 1497-1498, there is a report regarding resveratrol. Non-small cell lung cancer cells treated with resveratrol died because of the interruption of a key enzyme process. Resveratrol induced apoptosis, otherwise known as programmed cell death. Resveratrol also triggers sirtuins, which are thought to encourage longevity and overall cell vitality, including helping to prevent cells from becoming malignant. Sirtuins are capable of counteracting the damaging effects of oxygen in tissues, and seem to slow the aging process. The report speculates that it might be possible to use resveratrol anticancer effects as an aid to boost human longevity. Yeast cells treated with resveratrol lived 68% longer than controls; life spans of fruit flies were extended by 29%. Sirtuins are thought to allow cells the time to repair damage. If you block cell death, as long as it doesn't lead to cancer, you may extend the life span of the cell. Other studies found that resveratrol was beneficial against some colon cancer cell lines, and benefit was found against breast cancer cell lines. A Danish study found that drinking one or more glasses of wine per week may be associated with a lower risk of developing upper digestive tract cancer, compared to drinking beer or other alcoholic beverages. Resveratrol is thought to have some benefit for people who have hardening of the arteries

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and/or heart disease. This might explain why the French, despite a diet rich in saturated fats, have a relatively low incidence of coronary artery disease. Some researchers have proposed that resveratrol is the protective compound behind this so-called "French Paradox." In spite of all of the above, "It would be a major mistake to see resveratrol as a magic anticancer bullet," comments one of the doctors that were interviewed for this article.

Resveratrol is sold over-the-counter in the United States as a nutritional supplement. Since it is a nutritional supplement, it is not regulated by the FDA. It is unknown exactly what form of resveratrol should be used to achieve maximum physiologic benefit. Perhaps drinking one or two glasses of red wine per day may be the most effective means of delivering resveratrol to the human digestive tract.

If you elect to purchase a resveratrol supplement from a health food store, we cannot recommend any specific product, or any specific dose, since that information does not yet exist.

Please remember that all potential benefits from resveratrol are highly speculative, and entirely unproven in humans. There are many examples of other products that work miracles in lab situations, but are absolutely worthless in humans.

As of February 2005, Compassionate Oncology recommends that patients consider using resveratrol, but you need to understand that there is as yet no scientific proof that it can help any disease.

Importance of Exercise - Medical articles continue to document the benefit from doing 20 to 30 minutes of exercise almost every day. This reduces the risk of cardiovascular disease; it helps treat and prevent depression, and has been found to be the most single effective treatment for fatigue that may result from chemotherapy and/or hormone blockade. The exercise does **not** have to be aerobic or stressful. Simply walking 20 to 30 minutes per day is extraordinarily beneficial. You do not have to walk uphill. You do not have to run. Just take a 20 to 30 minute walk each day and enjoy yourselves. Perhaps your significant other can do this with you. You will both benefit.

Calcium, 1,200 milligrams, a day (for all people over age 50).

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Calcium is available in a number of different forms. Calcium carbonate includes Tums and Os-Cal. Forms of calcium citrate include Citracal plus D, or calcium citrate plus D. Calcium is also available as calcium phosphate or gluconate. It seems that the calcium carbonate forms are somewhat more likely to cause gastrointestinal side-effects, such as constipation, intestinal bloating or excessive gas. Calcium citrate is better absorbed than calcium carbonate. If you are taking calcium carbonate and are not having gastrointestinal side-effects, there is no need to switch to one of the calcium citrate brands.

We recommend taking **two Citracal plus D twice daily** (four a day). We know that hormone blockade always causes bone loss. We recommend using calcium plus vitamin D to help prevent or treat osteoporosis. We recommend 800 international units of vitamin D per day. Citracal with D contains vitamin D. Taking calcium with food increases absorption. You need vitamin D to enable you to absorb calcium. If you are taking calcitriol (a prescription), you should use plain Citracal without D, two twice a day. Calcitriol is a form of vitamin D, and too much vitamin D may cause high calcium levels and/or kidney stones. Remember if you are on calcitriol, do not take any other vitamin D; however, you still need two plain Citracal twice each day.

B Vitamins - We would recommend that you take a **B-Complex** vitamin. The B-Complex would include **vitamin B₁₂** (cyanocobalamin), as well as **vitamin B₁** (thiamine), would probably include riboflavin, and B₆. If there are any vitamins other than B, minerals or any other product in the "B-Complex," do not use it. Use a product containing only the B vitamins and nothing else.

Folic Acid, 800 micrograms, per day. An article in the October 1998, *Annals of Internal Medicine* reported that 800 micrograms of folic acid multivitamin use per day **reduced the risk of colon cancer by about 75%**. Some studies suggest that folic acid may protect against cardiovascular disease. Pregnant women benefit from folic acid since it reduces the risk of neural tube defects in fetuses. Elevated levels of homocysteine have been associated with increased risk of coronary artery disease, possibly stroke, and perhaps Alzheimer's. Although there is some controversy about this relationship, many experts agree that elevated homocysteine levels require treatment. Folic acid supplementation lowers homocysteine levels. Our standard

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recommendation is to utilize folic acid, 800 to 1,000 micrograms (1 milligram) per day, but it is also necessary to take a B-complex containing both vitamins B₆ and B₁₂ in order for folic acid to work best. The prescription form of folic acid is available in a 1 milligram size (1,000 micrograms). In earlier versions of this vitamin paper, we recommended 3 milligrams a day. An article in 2004 found that in patients who previously had coronary artery bypass, 3 milligrams of folic acid was less beneficial than 1 milligram per day. Therefore, please only take 1 milligram of folic acid each day. The highest dose of over-the-counter folic acid is 800 micrograms. If you use over-the-counter folic acid, we advise 800 to 1,200 micrograms each day.

Vitamin A and/or beta carotene - We recommend that you **do not use beta carotene or vitamin A**. It is permissible to take a multivitamin that contains beta carotene or A, but **do not supplement** this with any additional beta carotene or A. An article in the November 16, 1999, *Annals of Internal Medicine*, references a Finnish study that found supplementation with beta carotene not only fails to prevent lung cancer, but at the doses that are generally recommended, it modestly increased lung cancer incidence in cigarette smokers. Use of vitamin A has been associated with an increased risk for developing cancer compared to placebo. If your multivitamin (Centrum or One-A-Day) has a small amount of vitamin A and/or beta carotene, we believe it is safe to use. It is very difficult to find a multivitamin that does not contain vitamin A and/or beta carotene.

What was referred to as "harmless beta carotene" is actually detrimental to smokers and former smokers. Some believe it is also harmful to nonsmokers. In a different study which tested a combination of beta carotene and vitamin A, the risk of lung cancer was again increased among participants who received beta carotene, either alone or in combination with vitamin A. A third study showed an increased risk of colon polyps in smokers who took beta carotene compared to placebo. Therefore, there are three separate studies showing that beta carotene is harmful, rather than beneficial.

CoQ10 - An antioxidant which some controversial studies suggest may help patients with heart disease. We studied more than 50 patients that we treated with high-dose CoQ10 for three to six

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months looking for PSA declines. None of them had a sustained PSA decline. Some have claimed that CoQ10 could slow the aging process and halt the spread of cancer, but there are no studies that support these outrageous claims.

An article reported in July 2002 did not find any benefit for CoQ10 for patients with significant heart failure. Whether it can help patients with less significant heart disease was unknown. A July 2003 report found that CoQ10 **worsened** the prognosis in patients treated for lung cancer. Therefore, CoQ10 potentially is harmful.

We also tried CoQ10 for our patients with peripheral neuropathy (nerve damage causing numbness, tingling and/or loss of sensation). None of the 15 or so patients improved on CoQ10. CoQ10 is beneficial for patients who have Parkinson's disease. If you have Parkinson's disease, consider CoQ10, but discuss this with your neurologist.

We advised against CoQ10 until a November 1, 2004 article in the *Journal of Clinical Oncology*, Volume 22, Number 21, pages 4418-4424; lead author Roffe, et al. The authors of this article reviewed all published CoQ10 articles. They found three randomized clinical trials, and three non-randomized trials that evaluated CoQ10. In five of the six studies, patients were treated with a type of chemotherapy known as anthracyclines. The results suggested that CoQ10 provided **some** protection against cardiac side effects or liver side effects during cancer treatment. However, "because of inadequate reporting and analysis (of the CoQ10 articles), as well as questionable validity of outcome measures, the results are **not** conclusive." The article stated "suggestions that CoQ10 might reduce the toxicity of cancer treatments have not been tested by rigorous trials. Further investigations are necessary to determine whether CoQ10 can improve the tolerability of cancer treatments." The only type of chemotherapy that possibly may have had a reduction in toxicity by CoQ10 were the anthracyclines (which include Adriamycin, mitoxantrone, and epirubicin).

Coenzyme Q10 (CoQ10), also known as vitamin Q10, ubiquinone, or ubidecarenone, is one of the top ten complementary therapies being promoted on the Internet for cancer care. A coenzyme is an organic, nonprotein molecule that binds with a protein molecule to form an active enzyme. CoQ10 is synthesized

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naturally in humans. The primary action of CoQ10 involves electron transport chains for cellular respiration. This process is essential for the synthesis of ATP. CoQ10 is also metabolized to ubiquinol which prolongs the antioxidant effect of vitamin E (with the new information showing increased mortality with doses of vitamin E greater than 140 I.U. per day, is this good or bad?). CoQ10 has been widely promoted for enhancing or modulating the immune system, and proponents "suggested" that CoQ10 may suppress tumor growth. However, these claims have not been proven in any study to date. CoQ10 is manufactured as a dietary supplement by the fermentation of beets and sugar cane with yeast, and dietary CoQ10 primarily is derived from meat and poultry. Because CoQ10 is a food supplement, it is not regulated by the FDA. Deficiencies of CoQ10 do occur in humans with aging; the use of certain medications, and with diseases including cancer. The incidence of CoQ10 deficiency has been found to be significantly higher in cancer patients than in healthy controls.

The CoQ10 dosage used in these various studies ranged from 90 milligrams to 240 milligrams. Fortunately, no toxicity was reported in these studies using daily intakes as high as 300 milligrams. Safety has not been established for pregnant or lactating women. None of these studies recorded survival outcomes, or measured changes in tumor responses. Hence, it is impossible to conclude that CoQ10 helped cancer.

Very few of our patients are ever treated with the type of chemotherapy described in the CoQ10 article. A few patients are treated with Adriamycin, which is an anthracycline. If you are not being treated with Adriamycin, mitoxantrone, or epirubicin, it is difficult for us to enthusiastically recommend taking CoQ10.

One double-blind, placebo-controlled trial found that CoQ10 did **not** help in preventing hair loss, although it did seem to protect against elevation of one liver blood test, compared to placebo. Five other liver tests were not improved. In ten children with acute leukemia or non-Hodgkin's lymphoma, treated with 100 milligrams of CoQ10 twice daily, there appeared to be some possible short-term improvement in some cardiac functions, but it is difficult to determine whether this was clinically significant.

Serum levels of CoQ10 may be depleted by coenzyme-A reductase inhibitors including statins such as Lipitor (these are used for lowering elevated cholesterol levels). In a study comparing Lipitor with CoQ10 versus Lipitor and placebo, CoQ10 did **not** decrease the **incidence** of muscle side effects, but the severity **was** significantly reduced. However, it was not clear from the analysis whether the patients in the CoQ10 group had previously been treated with Lipitor. If they previously took Lipitor and did not have muscle side effects in the past, they would be unlikely to develop muscle soreness with the addition of CoQ10. It also was unclear whether all 56 patients treated with CoQ10 were included in the analysis. If some patients were not included in the analysis, this would result in a biased outcome. The authors point out that the overall methodologic quality and reporting of the trials was **poor**. Critical analyses between the treatment group and control group were absent from two of the six studies. Sample sizes were too small to form definite conclusions, with the exception of two studies. Only one of the trials was placebo-controlled and double-blinded. Only two studies mentioned the specific manufacturer of the CoQ10 product used in the trial. Neither identified the actual preparation or

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dose used.

If you are taking a statin-type drug, and wish to take CoQ10, we think that may possibly help, but this is unproven. We cannot recommend any specific product, or specific dosage, since this information is not available from controlled clinical trials.

A report from Consumer Labs found that some CoQ10 products they investigated contained no detectable CoQ10. Another product exceeded the stated concentration by 75%. Since the FDA does not supervise the manufacture of CoQ10, there may be unlisted contaminants and/or adulterants in CoQ10 products, as well as inconsistent amounts in different brands and/or batches.

Adulterants and Contaminants in Over-the-Counter Products, Including Herbal Products:

In Volume 339, Number 12, page 847 of the *New England Journal of Medicine*, 1998, is a report titled, "Adulterants in Asian Patent Medicines, by Ko, Richard. Asian patent medicines are one component of what are traditional Chinese medicines. Asian patent medicines comprise multiple products, including herbs, plants, animal parts, and minerals, which are formulated into tablets, pills, and liquids.

The California Department of Health Services, Food and Drug Branch, collected 260 Asian patent medicines from California retail herb stores. Only 14 had labels that reported pharmaceutical ingredients. Of the remaining 243 products, 17 (7%) contained undeclared pharmaceuticals. Five different prescription medicines (contaminants) were identified. One of them was a form of testosterone.

Unsuspecting prostate cancer patients who took these products would be receiving testosterone (T). It was never listed as an ingredient. Additionally, since T is by prescription only, it is illegal to be dispensed anywhere except in a pharmacy. We are sure the victims believed that taking these products was not only safe, but probably believed the person selling the product who advised that it would help their immune system, help control "cancer," and/or improve some bodily function. All are unsubstantiated, unproven, misleading, and potentially dangerous.

In the same study, 251 products were analyzed for heavy metals with shocking findings. Twenty-four products contained lead in toxic concentrations, 35 contained mercury, and 36 contained arsenic.

Therefore, of the 260 products tested, at least 83 (32%)

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contained undeclared pharmaceuticals or heavy metals, and 23 had more than one adulterant. This study did not search for other types of adulterants.

These findings are not unique. In 2004, a group looked at heavy metal adulterants found in a type of homeopathic medicine referred to as Ayurvedic medicine practice. Ayurvedic medicine originated in India more than 2,000 years ago, and relies heavily on herbal medicine products. About 80% of India's one billion population use Ayurvedic products. Because these are sold in the United States as food supplements, there is no supervision.

Herbs, minerals, and metals are used in Ayurvedic products. A study in *JAMA*; December 15, 2004, Volume 282, Number 23, pages 2268-2873 by Saper, Robert, et al., reported on the concentrations of lead, mercury, and arsenic found in these products. All Ayurvedic stores within 20 miles or less from Boston City Hall were sampled. One in five Ayurvedic health products produced in South Asia and available in Boston South Asian grocery stores contained potentially harmful levels of lead, mercury, and/or arsenic.

In England, 30% of the products sampled contained lead, mercury, or arsenic. In India, 64% contained lead and mercury, and 41% contained arsenic. Arsenic poisoning was reported in 47 children and adults in Singapore from one such product. Decreased I.Q., increased blood pressure, and kidney failure have been linked to use of Ayurvedic products.

Finally, many are familiar with PC spes. This product was pulled from the market after some batches were found to be contaminated with estrogen, Coumadin, Xanax, and/or an NSAID. A number of patients died from hemorrhage presumed related to Coumadin contamination.

Just because something is sold over-the-counter without a prescription does not mean it is nontoxic and free from side effects.

Mushrooms - An article in *Urology*, Volume 60, pages 640-644, 2002, De Vere, R., et al., reported on a study testing shiitake mushroom extract (SME). Sixty-one men with prostate cancer were treated three times daily with SME. There were no responses.

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The authors' conclusion -- "SME is ineffective in the treatment of clinical prostate cancer."

Creatine - We advise against the use of creatine since it can raise your creatinine. Creatinine measures kidney function. A number of the medicines used to treat prostate cancer could potentially elevate creatinine. Local progression of prostate cancer may increase creatinine levels. These medicines include COX-2 inhibitors and IV bisphosphonates such as Aredia and Zometa. It is best to avoid supplements containing creatine.

DHEA - For those men who have prostate cancer, DHEA should not be used. DHEA is dehydroepiandrosterone. DHEA is a male androgen that is made by the adrenal glands. Proponents claim that DHEA might improve muscle strength, lean body mass and well-being, but it has definitely worsened some patients who have prostate cancer. It accelerated the growth of prostate cancer in case reports from the medical literature. If you do not have prostate cancer, DHEA may help a little to turn fat into muscle.

Echinacea - Echinacea (also known as purple cone flower) is part of the daisy plant family. It has been used for centuries by native Americans for aches, colds, sores and as an antiseptic and analgesic. The first reference to Echinacea was in 1763 as "valuable in the treatment of saddle sores." We have not had very many patients complain to us that they had saddle sores. But, if we ever see some, we will remember how to treat them. In the early 1990's, two clinical trials in Germany found that Echinacea reduced the length and severity of the common cold.

In our opinion, taking Echinacea with goldenseal **daily** may actually adversely affect your immune system. Therefore, our advice is to only take Echinacea with goldenseal when you have an upper respiratory infection. You must start your vitamin C and Echinacea with goldenseal within the first six to 24 hours after upper respiratory symptoms begin. If you delay, it is unlikely that you will benefit from this treatment.

Some studies suggest Echinacea may be toxic to the liver when used for more than eight weeks. It should not be used if you are using other drugs that may cause liver damage, such as ketoconazole, and/or amiodarone or others.

Flax seed (lini semen, flax seed) - Used for chronic

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constipation; for colons damaged by abuse of laxatives; for irritable colon and/or diverticulitis. The only contraindication would be bowel obstruction. Side-effects do not occur if you take sufficient amount of liquids in a ratio of 1:10. The typical dosage is one tablespoon of whole or "bruised seed" (not ground), with 150 ml of liquid, two to three times daily; two to three tablespoons of milled flax seed for the preparation of flax seed mucilage (gruel). Flax seed would cause a laxative action due to increase in volume and consequent initiation of intestinal movement or peristalsis, due to stretching reflexes. It has a protective effect on the lining of the bowel because of a coating action. Unfortunately, flax seed contains high doses of soy derivatives; therefore, we do not recommend taking flax for men with prostate cancer or women with breast cancer. Flax can lower testosterone levels and we find that it can raise PSA levels. When flax is stopped, PSA levels often decline.

Garlic - Studies reporting on garlic have not convinced us of any medical benefit from using any form of garlic for any disease. We recommend that you not take it. Garlic may thin the blood; therefore, if you are on Coumadin (warfarin) or other anticoagulants, garlic may potentially cause life-threatening bleeds. We have had significant others tell us that even the "odorless" garlic products cause very bad breath that is often offensive. We do not know whether garlic may protect you from vampires.

Ginger - Ginger has been used in China for more than 2,500 years. It comes from the root of a shrub. Many studies have indicated that ginger can reduce nausea and may even help with motion sickness. Therefore, patients on chemotherapy might consider using ginger to help comfort their stomachs. Typical maximum recommended dosage is 2 to 4 grams per day. Some advise patients on anticoagulants not to use ginger since it may independently thin the blood, thereby increasing your risk for bleeding.

Ginkgo Biloba - An article in the *Journal of the American Medical Association* reported that EGb 761 is a particular extract of ginkgo biloba. It has been used in Europe to improve symptoms associated with numerous cognitive disorders (patients who are intellectually impaired). Several controlled studies revealed it improved some symptoms in patients with dementia.

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Other studies found no benefit. In a *JAMA* article, results were reported utilizing ginkgo biloba for patients with Alzheimer's disease. The findings showed some improvement. Whether ginkgo biloba can improve memory or intellect in normal patients is unproven, but more people use it for that reason than any other. General recommendation is three pills a day. (I recommend pills rather than capsules.) There are many different preparations of ginkgo biloba and the only one tested in this article was a pill which contained EGb 761. You can order this specific form of ginkgo biloba by calling 1-800-654-4432.

Patients being treated with any type of anticoagulant should avoid ginkgo, since some studies suggest Ginkgo interacts with anticoagulants. Some experts also recommend avoiding ginkgo for patients on anticonvulsants.

Ginseng - There are three main varieties of ginseng. The Chinese variety is supposed to have the most stimulation and be some type of "sexual energizer." The American ginseng is supposed to help people cope with stress. The Siberian form is claimed to improve the immune system, but I cannot find good studies supporting any of these claims, although a study published in 2003 suggested that Korean ginseng helped an occasional man with ED (erectile dysfunction).

Some believe that some forms of ginseng may increase blood pressure; some also believe it can increase blood sugar. Therefore, people on antihypertensives or diabetics may have a problem if they take ginseng. Ginseng can interact with alcohol and warfarin. Therefore, if you are taking warfarin, we recommend that you avoid ginseng, ginkgo biloba, and garlic. One study found that ginseng partially blocked the effect of Coumadin. This would cause your blood to be too thick.

Glucosamine - There is some strong clinical evidence that glucosamine helps arthritis symptoms, and maybe even arthritis itself, although a few studies do not show benefit. Glucosamine may work as effectively as some of the anti-inflammatory medicines, but without the risk of toxicity. Glucosamine does not cause heartburn, indigestion, ulcers, or bleeding. Little or no toxicity has been reported with glucosamine. With regard to the dosage of glucosamine, use the dose as recommended on the bottle. We strongly recommend glucosamine as a safe, effective treatment for some arthritis symptoms since the majority of

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evidence suggests glucosamine may help prevent (or delay) worsening of arthritis. Tylenol does not slow the progression of arthritis. You can take glucosamine in addition to any other arthritis medications.

A prostate newsletter suggested that chondroitin sulfate may be detrimental to patients with prostate cancer. Many of the glucosamine preparations that are sold include chondroitin sulfate. While we don't have a strong opinion regarding chondroitin's effect on prostate cancer, we advise against using bovine chondroitin sulfate. The reason has nothing to do with prostate cancer. Chondroitin is a form of cartilage. It is normally obtained from the trachea or windpipe of cows (that is why it is called bovine). We have been bombarded with news about mad cow disease. There have been over 90 deaths worldwide from this. Mad cow disease is caused by a virus that attacks the brains of cows. Cows get it from eating meal made from dead cows (including their brains). It is unknown whether the virus might be found in other parts of the cow such as the trachea. Since there is a possibility that mad cow virus could be found in the trachea, we advise avoiding bovine chondroitin. Chondroitin obtained from chickens should be safe and is available. It is harder to find. Or, you can use plain glucosamine.

Grapefruit - grapefruit is known to increase the blood levels of certain medications, and decrease others. These drugs include Lipitor, Zocor and Mevacor. Therefore, you should not drink grapefruit juice or eat grapefruit around the time you take your medicines. Otherwise, you risk toxic levels and/or ineffective levels. To be safe, we advise that you do not consume grapefruit or grapefruit juice for one hour before or for two hours after taking any medications.

Green Tea - There is some evidence that this may be helpful to reduce the risk of certain **gastrointestinal** cancers. It is available in capsules or as tea. Many experts believe that there may be value in any form of tea, not just green tea. As of July 2002, I have changed my recommendation and opinion regarding green tea. We urge avoiding green tea. A study reported from the American Association of Cancer Research in 2002 found that drinking green tea did **not** have a beneficial

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effect in men with advanced prostate cancer. Additional articles have appeared utilizing even higher doses of green tea for men with prostate cancer. The conclusion of the 2002 study was that green tea is ineffective. All men treated with green tea had PSA's that became elevated while on green tea. Green tea does contain phytoestrogens. As my readers know, I believe phytoestrogens are harmful for men with prostate cancer. Phytoestrogens tend to lower testosterone. While that might seem at first glance to be helpful if you have prostate cancer, I believe it can actually be harmful. For more info on this, please view my May 2003 videotaped lecture, "Everyone is Entitled to Their Own (Wrong) Opinion," or a March 2004 videotaped lecture.

Kava (or kava kava) - Kava had been touted as a "natural" tranquilizer or sleeping aid. This product has been removed from the market, since there were documented cases of liver damage from kava.

Milk thistle - Milk thistle has been in use for over 2,000 years. Pliny, the Elder, a Roman writer, A.D. 23-79, recorded that the plant's juice was excellent for "carrying off bile." The active ingredient is thought to be silymarin. Some claim milk thistle helps liver disease. I have two patients whose liver function studies clearly worsened on milk thistle, and I recommend avoiding milk thistle.

PEENUTS - Following completion of a cycle of hormone blockade, when testosterone recovers, the normal prostate gland cells will begin to grow. Typically, the prostate shrinks by about two-thirds during the 13 months of triple hormone blockade®. While you are just on finasteride maintenance® (Proscar), the prostate regrows but remains one-third smaller than it was prior to starting triple blockade. Since many of our men have significantly enlarged prostates, they can and often do develop symptoms of BPH once their triple hormone blockade® has worn off. Oftentimes men will report that they urinate more frequently at night, compared to when they were on hormone blockade. There are very effective prescription medications available to treat these lower urinary tract symptoms. An over-the-counter product called PEENUTS contains Pygeum africanum, saw palmetto, selenium, other ingredients, and "proprietary blend." This product might reduce the frequency of urination at night. You can order this only at the phone number,

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1-888-PEENUTS. We have no relationship whatsoever with the urologist who sells this product. In the past, I was of the opinion that PEENUTS had lowered PSA levels in some of our patients. However, with additional follow-up, I believe a more likely explanation was that PSA levels were fluctuating on their own. I have referred to this as a roller-coaster pattern PSA, without any clear-cut trend. Men who still have their prostate gland usually have significant fluctuations in PSA. If your PSA declined and you were taking PEENUTS, you might conclude that PEENUTS helped. A much more likely explanation is a spontaneous fluctuation.

PEENUTS contains "proprietary blend." The number, type, and quantity of the ingredients in any proprietary blend are not usually reported on the label of the product. We advise our patients to avoid products with unlisted ingredients such as proprietary blends since they can contain whatever ingredients the manufacturer wants to put in them, and they are not obligated to report the information regarding ingredients. Patients might consider taking pure preparations of saw palmetto and/or Pygeum africanum. If you do take PEENUTS, do not take additional supplemental selenium, since PEENUTS contains 200 micrograms of selenium (which is the daily dose we recommend). I do not believe PEENUTS helps prostate cancer. That is my opinion. Dr. Ron Wheeler, the urologist who formulated and sells PEENUTS, feels very differently. Originally, Dr. Wheeler marketed PEENUTS to treat prostatitis. He believes that many men with prostatitis have improved symptoms when treated with PEENUTS. However, the symptoms from prostatitis wax and wane on their own, so there is some question whether PEENUTS is truly effective or not. If you still have your prostate gland, PEENUTS may help relieve some prostate symptoms such as nocturia and perhaps prostatitis. The dose is one twice a day. If you previously had any form of local therapy, then PEENUTS would probably be ineffective.

In December 2004, we became aware of a new product from Dr. Ron Wheeler, called PEENUTS PC. This product contains 29 different ingredients and contains proprietary blend. At least seven of the listed ingredients are specifically mentioned as substances that we advise our prostate cancer patients to avoid. These include zinc, red clover, beta sitosterol, quercetin, isoflavones (Novasoy TM), green tea extract, and proprietary blend. We advise all of our patients to avoid taking PEENUTS PC if you have ever been

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diagnosed with prostate cancer.

Pygeum africanum - *Pygeum africanum* is an evergreen native to the mountains of Africa. A typical preparation is made from its bark. A standardized extract has been available in Europe since 1970 to treat mild to moderate BPH. The European trade name for this product is Tadenan. It appears that some of the active ingredients compete with androgen precursors (early forms of androgen), and decrease intraprostatic prostaglandin levels, thus resulting in reduced inflammation. This may reduce swelling. Other chemicals seem to decrease androgen production in the prostate. *Pygeum africanum* does not appear to have significant activity against 5-alpha reductase (Proscar and Avodart block this). *Pygeum africanum* may help prevent fibroblasts (scar tissue-type cells) from growing. Thus, the prostate gland tends to shrink. There have been about ten, prospective, randomized, double-blind, placebo-controlled studies of this medication for BPH, and the conclusion is that while the mechanism of action of this agent remains unclear, it is apparent that *Pygeum africanum* can be of benefit to patients suffering from mild to moderate BPH. We believe this product is safe if you are being treated for prostate cancer. Since PEENUTS contains Pygeum, you do not need to take additional Pygeum if you use PEENUTS.

Saw Palmetto - Although some studies show that saw palmetto lowers the level of 5-alpha-reductase, type 2, it does not reduce serum levels of PSA in men with metastatic prostate cancer. Proscar and Avodart inhibit 5-alpha-reductase; lower intraprostatic dihydrotestosterone levels to castrate range, and usually lower PSA levels by 50%. Saw palmetto is **not** a substitute for Proscar. You can learn more about Proscar in Dr. Bob's paper, "Proscar Greetings on Father's Day," which shows the beneficial effects of Proscar with regards to helping to control prostate cancer.

Pomegranate Juice - Forty-eight patients with rising PSA following radical prostatectomy or radiation therapy were treated with 8 ounces of pomegranate juice daily until disease progression. Their mean PSA doubling time significantly increased with treatment from a mean of 14 months before treatment to 26 months following treatment. In addition, serum samples obtained on these patients following treatment were able to decrease the growth of prostate cancer cell lines.

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Therefore, Compassionate Oncology would advise patients to consider using pomegranate juice, although this is the first time we have seen reports regarding possible benefit from this product.

SAMe - is a "natural antidepressant" that is sold over-the-counter. Some claim improvement in arthritic symptoms, as well as benefit for treating depression. The evidence, however, is weak, and we recommend against using it. There are definite serious drug interactions in patients who take SAMe and who also take prescription medications, so we urge you to avoid SAMe. There are many very effective antidepressants now available. Depression is due to a chemical deficiency in the brain. Antidepressants restore the levels to normal. This is analogous to using insulin for control of diabetes. Antidepressants are not habit-forming. Do not let depression ruin your quality of life. Ask your doctor about antidepressants. You deserve to be happy.

St. John's wort - Although in Germany, this is more commonly prescribed than Prozac, controlled studies now find that the SSRI-type antidepressants (such as Prozac, Zoloft, Paxil, Celexa, Lexapro, etc.) are clearly more effective than St. John's wort for moderate to severe depression. For mild depression, we used to think that St. John's wort was an option. However, St. John's wort has an extraordinarily large number of drug interactions, and could lower or raise the levels of your other prescription medications. Hence, we urge our patients to avoid taking St. John's wort. There are so many different superb medications that help patients with depression. Depressed patients are not weak; they can't just snap out of it; they have a true chemical deficiency in their brain. Do not be embarrassed to ask for help. Recent studies suggest that most patients may respond better when treated with more than one type of antidepressant at a time.

Where Not to Purchase Over-the-Counter Products:

We do not recommend purchasing products from health food stores, catalog services, vitamin and/or Internet sites, since the products sold are rarely, if ever, FDA approved. They are, in our opinion, more likely to contain contaminants and/or adulterants. Similarly, we strongly recommend not following the advice of, or purchasing products advertised by health newsletters, health alerts, etc., including products that may be

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described as an extending your life-type format. This is our **opinion**. Our major concern with these types of companies is that their magazine articles often seem to present themselves as providing accurate, scientific, medically proven information about treatments you should consider using. A typical article begins by describing a currently popular, very commonly prescribed pharmaceutical product. Beneficial effects are initially presented, but usually these articles then begin to talk about an alternative over-the-counter product they want you to believe provides similar benefits, or even better results than the FDA approved product. Conveniently, this alternative product is almost always available for sale from the company writing the article. These articles are just like television "infomercials." Because these products are not FDA regulated, claims do not have to be based on fact. These articles reflect what the author's or company's ask us to believe, rather than proven medical facts. They are saying, "Trust us." We say, do not. A company might tell you that their product could help prostate "health," but they are prevented by law from claiming their product helps to prevent or treat prostate cancer (or any form of cancer). A typical article might claim that their "natural products" are safer and may be even more effective than the FDA approved pharmaceutical. This is not medically or scientifically proven information. You can quickly spot this type of article since they essentially are never able to reference a prospective, randomized, double blind medical study comparing their alternative product to the pharmaceutical product. Perhaps they fear that if someone actually conducted such a study, it could disprove their claims, and demonstrate the lack of benefit from their products.

Every one of these articles or newsletters warn you that they are **not** giving you medical advice and are not claiming that any of their products are meant to treat any disease, or even improve any illness. In spite of this, somehow the reader thinks that he will be helped by taking their product. The authors just told you their product is not intended to treat any illness. You should believe them. This is usually the only claim they make that I am certain is factual and honest. The labels of every one of these products contain a disclaimer stating something like: "This product is not intended to treat any disease. Any claim of possible benefit from this product is a statement that has not been evaluated by the FDA."

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Many of these articles will attempt to frighten you so that you will be afraid to take the FDA approved drug that your doctor prescribes. The known benefits of the approved pharmaceutical may be downplayed or simply not described at all, while the risk of side effects may be greatly exaggerated. Mild or extremely rare side effects are presented in a way that might be meant to cause you distress or frighten you. If these widely prescribed medications were only a fraction as dangerous and toxic as these articles often imply, all of the major pharmaceutical companies would be bankrupt because of lawsuits from patients who sustained these "horrible" side effects.

Do not allow yourself to be fooled, tricked, or deceived. We make fun of people who purchase snake oil in cowboy movies. Have **you** purchased any snake oil lately?

Obviously, we recommend avoiding these products from any of these companies. We are simply giving our opinion on this subject. We are not accusing any company of anything. We are, however, reminding you, "Caveat Emptor" -- Let the Buyer Beware. The next time someone tries to sell you some of their snake oil, consider yourself forewarned. Be strong; resist the temptation.

Circa 1975, I first penned my **Cancer Patient's Bill of Rights**:

1. You are entitled to an honest discussion of your illness with all risks, benefits, and alternative treatments described. This discussion must be given in lay terms that are easy to understand.
2. You are entitled to relief from pain at any stage of illness.
3. You should participate in the decision-making process, with your physician serving as guide.
4. You are entitled to have your medical, emotional, and spiritual needs discussed and methods for treatment suggested and/or provided.
5. You are entitled to and encouraged to request a second or even third medical opinion at any time without having your physician feel "offended" or hurt. After all, it is your body, your health, and your life that is the primary concern. If your doctor is upset, offended, or insulted by this, we recommend transferring your care to another physician. If someone, somewhere knows how to treat you more

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effectively than Compassionate Oncology, we want to learn from their experience. If requested, we can help arrange second or third opinions for you.

6. Every patient is entitled to a return phone call the same day you place your call. If you call our office, and if we have not returned your phone call that day, you are urged to call back that same day. Perhaps we never received your message; or we were given the wrong return phone number; or the message fell out of our pocket. You should always expect your doctor to return your phone call that day, and we agree with you.

This paper expresses our opinions as of February 2005. These opinions may change from time to time and evolve as additional information becomes available. Nothing in this paper is intended as medical advice for any patient. All patients must discuss with their primary care doctor the risks, benefits, and alternative treatments available to treat the various medical conditions discussed in this paper. You and your primary care doctor are solely responsible for monitoring side effects and evaluating your response to therapy. This paper should not be used to diagnose or treat any medical condition.

As always --

Be happy,

Be well,

Live long and prosper,

DR. BOB & DR. STEVE

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Revised 5/05