

How to Reduce Your Risk of Prostate Cancer (or Even Reverse it) through Diet & Nutrition - PART 1

By Suresh Nair, PhD

Prostate cancer is the second most common cancer affecting men, with nearly a million new cases diagnosed globally every year. It is also the second leading cause of death from cancer in men. Fortunately, **prostate cancer has a nearly 90 percent survival rate after diagnosis.**

Age, race, diet, lifestyle, environmental, and genetic factors are all believed to play a role in determining prostate cancer risk. According to the American Cancer Society, roughly one in seven American men will be diagnosed with prostate cancer during his lifetime. This cancer is typically seen in 60 percent or more of American men who are 65 years or older, but most men diagnosed with prostate cancer will not die from it.



Around 60% of men over the age of 65 will develop prostate cancer

What is Benign Prostatic Hyperplasia (BPH)?

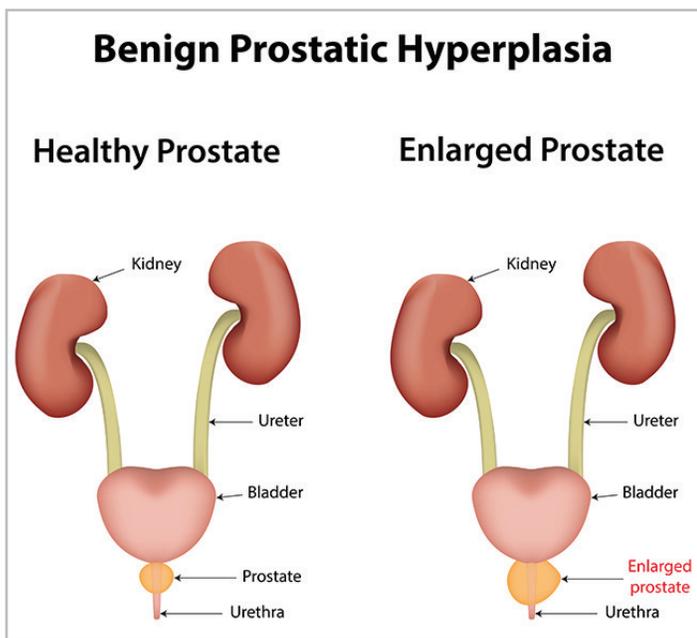
The prostate is about the size of a walnut and is located directly under the bladder in front of the rectum. It surrounds the urethra, the tube that carries urine and semen out of the body. Because of this, the prostate gland can affect urine control, known as continence.

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Thousands of tiny glands in the prostate make a fluid that forms semen, and also protects and nourishes the sperm. The prostate gland also makes a protein known as PSA (prostate-specific antigen), which helps to keep semen in a liquid state.

In some men the prostate grows bigger as they grow older, squeezing the urethra. Eventually the urethra may collapse, making it more difficult to pass urine. This condition is known as Benign Prostatic Hyperplasia (BPH).



An enlarged prostate often leads to difficulty with urination

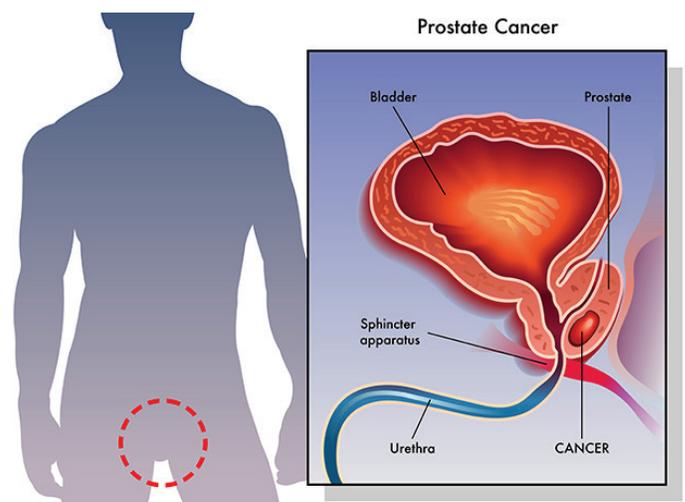
BPH is considered to be a normal part of aging in men and is likely caused by changes in hormone levels. It can lead to difficulties with getting urine started and completely stopped, a frequent feeling of needing to urinate, a weak urine stream, and the sense that the bladder has not completely emptied after urination.

In rare instances, BPH may block the bladder, making urination difficult or impossible. This can lead to bladder infections or stones, or even kidney damage.

However, it is important to remember that **BPH does not cause prostate cancer**. It also doesn't affect a man's ability to have children, nor does it cause erection problems.

Typical Prostate Cancer Symptoms

Almost all prostate cancers are known as adenocarcinomas – this is the scientific name given to cancers that begin in cells that make and release mucus and other fluids. **Prostate cancer develops when gland cells in the prostate begin to grow uncontrollably**. Overall it is a very slow to moderately rapidly progressing disease. In fact, it is estimated that up to 80 percent of men in their eighties and older may have had prostate cancer when they died – without either them or their doctors knowing about it!



Prostate cancer develops when gland cells in the prostate begin to grow uncontrollably

Often, people with prostate cancer do not experience any early symptoms. Advanced prostate cancer can cause men to urinate more often or have a weaker flow of urine, but these symptoms can also be caused by non-cancerous prostate conditions. That being said, **typical symptoms of prostate cancer include:**

- Frequent urination
- Difficulty in starting or continuing urination
- Weak urine flow
- Blood in urine or semen
- Painful or burning urination
- Some combination of all these

Fortunately, prostate cancer is one of the few cancers that can be completely cured, especially when it is localized to the prostate.

What is Metastatic Prostate Cancer?

Prostate cancer is said to have become “metastatic” or “metastasized” when it spreads to other parts of the body from the prostate. **Prostate cancer cells prefer to metastasize to lymph nodes, ribs, pelvic bones, and spine, although they may also spread to the liver or lungs.** Very rarely they may also spread to other organs, such as the brain.

During metastasis, some cancer cells break away from the original tumor and move to a blood or lymph vessel, allowing them to move freely throughout the entire body. Eventually though they stop or get stuck in capillaries – which are tiny, narrow blood vessels – at some distant location.

Some of these cancer cells break through the capillary walls and attach themselves to nearby tissues or organs. If they succeed, they may start to grow – and eventually recruit new blood vessels to bring nutrients to feed themselves, creating a growing tumor.

Not all cancer cells that break away from their original site are able to form new tumors. Many don’t survive in the bloodstream. Others may die when they reach the new tissue, while still others just sit there for years, never becoming “active.”

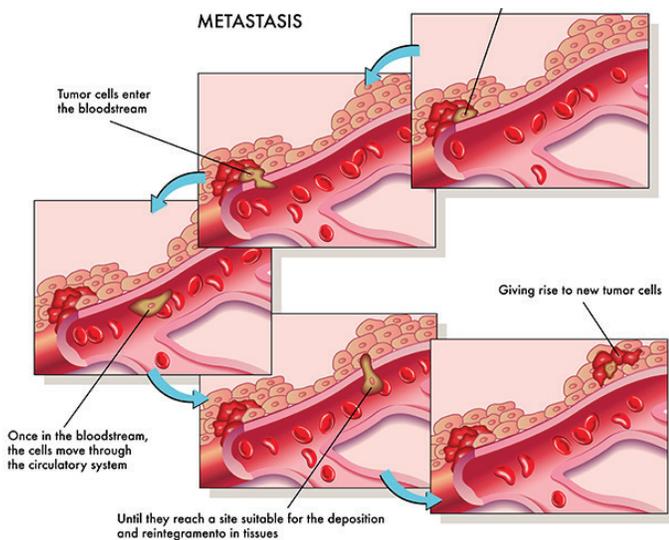
It is estimated that **roughly 50 percent of men diagnosed with local prostate cancer will develop metastatic cancer during their lifetime.** However, this cancer responds to treatment even after metastasis – and some patients survive for many years even after the cancer has migrated to distant parts of the body. Clearly, the key is to catch prostate cancer early and manage it well. However, how exactly this needs to be done is the topic of a fierce, ongoing debate.

Prostate Cancer Detection: How Reliable is the PSA Test?

Most mainstream healthcare givers will advise that a man gets his prostate-specific antigen (PSA) levels tested regularly as the best way to catch prostate cancer early and remove or treat it safely.

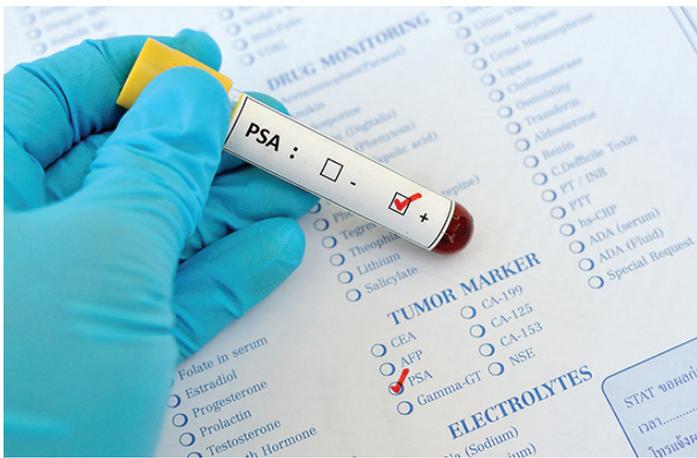
However, are higher than normal PSA levels really suggestive of prostate cancer onset? Should men with high PSA levels automatically allow themselves to get biopsied and undergo invasive treatments such as surgery and radiation therapy?

Not necessarily, because there is evidence to suggest that a biopsy or prostate removal can actually *cause*



a dormant cancer to spread throughout the rest of the body. Not only that – **according to recent evidence the PSA test may not be a reliable indicator of prostate cancer risk at all!**

Instead, high PSA levels may only indicate that there's inflammation in the body – which can include cancer, but not necessarily. It seems that general infections, benign swelling of the prostate including BPH, and even over-the-counter drugs can all elevate PSA levels.



The PSA test is not a reliable indicator of prostate cancer as there are many factors that can elevate PSA levels

In the U.S., most healthcare givers appear to be behind the curve, because in spite of the PSA test's unreliability, prostate cancers are still diagnosed by screening with a PSA blood test or with a digital rectal examination. **There is no clear evidence that either of these screening methods reduces the risk of death from prostate cancer** – or that the benefits are greater than the harms of screening.

It is certainly true that these tests are able to detect prostate cancer at an early stage, but it doesn't necessarily follow that earlier detection and subsequent treatment means better outcomes.

For instance, over 38,000 men were offered PSA testing for six 6 years and digital rectal examination for four years in the *Prostate, Lung, Colorectal, and Ovarian (PLCO) Cancer Screening Trial*. Another 38,000 men received usual care as the control group. After seven years, there was no difference in prostate cancer incidence between the screening and the control groups. Not only that, the rate of death from prostate cancer was very low and did not differ significantly between the two groups either.

While there is a clear trend toward lower mortality for prostate cancer in some countries, it's unclear whether this trend is related to screening methods. Instead, other factors such as better and safer treatment modalities may be responsible.

How to Turn On “Tumor Killer Genes”

While the debate about the efficacy of prostate cancer screening rages on, a growing school of thought believes that a healthy diet, proper nutrition, and an active, healthy lifestyle may help to lower prostate cancer risk significantly. For instance, a pilot study on American men with low risk of prostate cancer found that following an intensive healthy diet and lifestyle regime – specifically, low meat and high vegetable and fruit intake, regular exercise, yoga, and meditation – **can actually change how cancer progresses by turning on “tumor killer genes” and turning down or turning off the expression of so-called “tumor promoters.”**

While most people understand the concept of eating healthy food, not everyone understands the role that proper nutrition plays in lowering disease risk. For instance, some studies suggest a predictive link between vitamin deficiency and cancer.

A vitamin is an organic compound (containing one or more carbon atoms) and is usually a vital nutrient that we require in limited amounts for our bodies to work properly. An organic compound or related set of compounds is called a vitamin when we cannot make it in our bodies in sufficient quantities, so that we are forced to get it in our diet. For example, ascorbic acid or vitamin C is a vitamin for humans because we cannot make it in our bodies at all. However, other animals can make enough and don't need to get it in their diet, so it's not a vitamin for them.

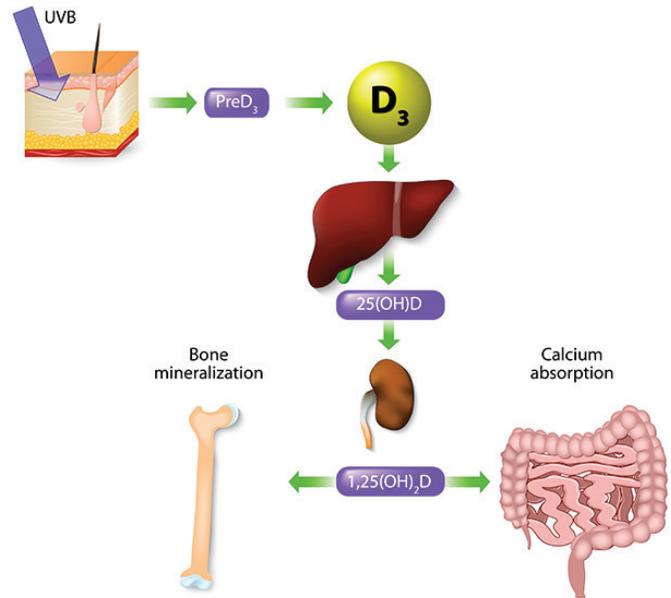
Let's take a look at the role played by vitamins in prostate cancer risk, as shown by various scientific and clinical studies.

Why Getting Adequate Vitamin D is Vital

Known as the "sunshine vitamin," up to 80-90 percent of the vitamin D we need is made in our body when our skin is exposed to sunlight – specifically to UVB radiation. The most important versions of vitamin D are vitamin D3 (cholecalciferol) and vitamin D2 (ergocalciferol). Very few foods contain vitamin D, because it only occurs naturally in low levels in some fatty fish, fish liver oils, and egg yolks. It is also present in fortified dairy and grain products.

Vitamin D is essential for strong bones because it helps the body absorb and use calcium from food. It is responsible for increasing intestinal absorption of calcium, iron, magnesium, phosphate, and zinc – and it also helps to maintain adequate blood levels of calcium and phosphate.

Metabolism of vitamin D



Traditionally, vitamin D deficiency has been associated with rickets, a disease in which the bone doesn't properly mineralize, resulting in soft bones and skeletal deformities.

We know that vitamin D helps to improve muscle strength and immune function, along with reducing inflammation. However, it is only recently that the full extent of the role played by vitamin D in protecting us against disease has been revealed.

Specifically, **vitamin D deficiency has been linked to a higher risk of developing up to 14 types of cancer**, diabetes, heart disease, osteoporosis, rheumatoid arthritis, inflammatory bowel disease, multiple sclerosis, and autism – and quite possibly many more ailments that we don't yet know of.

Multiple studies show that vitamin D deficiency increases prostate cancer risk. Vitamin D is transported in the blood by a protein known as vitamin D-binding protein (VDBP). In laboratory experiments, another protein made from VDBP

known as VDBP-macrophage activating factor (VDBP-maf) has been shown to block the ability of prostate cancer cells to grow, migrate, and move from its original area to other parts of the body (metastasis).

In another interesting experiment, researchers examined tumor growth in a mouse model of prostate cancer in which the ability to use vitamin D had been blocked – and found that tumor growth in these mice was noticeably quicker than normal. Moving on to human studies, **vitamin D levels were consistently found to be deficient over a period of 5 years in patients with non-metastatic prostate cancer.**

In another study, patients with the lowest levels of 25-hydroxyvitamin D were seen to have a higher overall risk of developing metastatic prostate cancer. This result indicates that 25-hydroxyvitamin D may play a role in prostate cancer progression – and that it may even be a reliable prognostic marker in prostate cancer patients. (Note: 25-hydroxyvitamin D is a pre-hormone made in the liver from vitamin D3 (cholecalciferol). Measuring 25-hydroxyvitamin D levels is used to determine a person's vitamin D status.)

In a case-control study, men who had lower vitamin D levels before prostate biopsy were more likely to have prostate cancer than men whose pre-biopsy vitamin D levels were higher.

Another study examined the potential link between vitamin D levels and survival in veterans. It found that veterans who were initially vitamin D deficient were significantly less likely to survive. Both initial and follow-up vitamin D deficiency meant a reduced likelihood of survival after prostate cancer diagnosis.

Another study with 1,447 cases of prostate cancer showed that men deficient in vitamin D had a 2-fold increased risk of advanced versus localized cancer and high-grade versus low-grade cancer. In other words, **lower vitamin D levels were associated with having far more aggressive cancers.**

Sunlight is by far the most reliable way of obtaining vitamin D. It comes as no surprise that men with low levels of sun exposure had an increased risk of prostate cancer. Interestingly however, among men who already had prostate cancer, less sun exposure was associated with lower risk of advanced disease.

The geographic distribution of deaths because of prostate cancer is inversely related to UV radiation exposure. In other words, **the more sunlight and UV radiation you're exposed to, the lower your risk of developing and dying from this disease.**

The sad reality is that vitamin D deficiency has reached epidemic proportions in the U.S. and many other parts of the world, simply because people do not spend enough time in the sun.



Most people are not spending enough time in the sun to produce adequate vitamin D

To manage your risk for developing up to 14 forms of cancer and many other life-altering diseases, you need to regularly monitor and maintain 25-hydroxy-vitamin D levels in your blood. Optimal vitamin D levels are between 60-100 ng/ml with the ideal range between 80-100 ng/ml for individuals looking to prevent or slow cancer growth. Having less than 50 ng/ml is considered to be vitamin D deficiency.

If you can, **letting your own body make vitamin D from sun exposure is by far the easiest and the best way to optimize your vitamin D levels.**

However, occasional sun exposure to your face and hands is not enough for this. Instead, you need to expose large portions of your skin to the sun for an average of 10-20 minutes at a time.

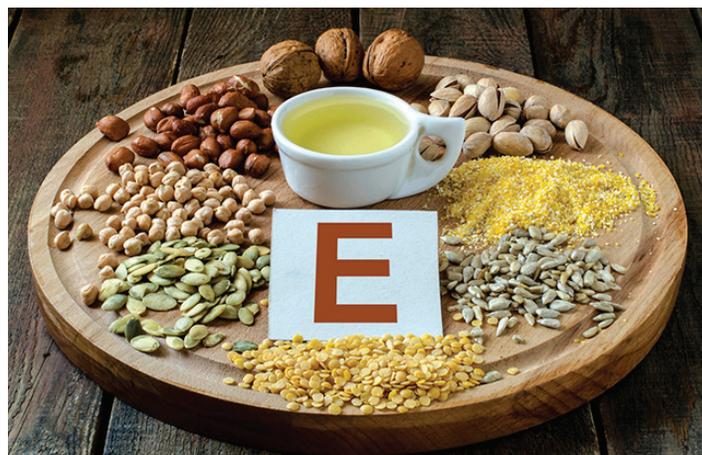
Ultraviolet light from the sun comes in two main wavelengths – UVA and UVB. UVB is the healthy wavelength that helps your skin make vitamin D. Unlike UVA, UVB levels are low in morning and evening and high at midday. So to use the sun to maximize your vitamin D production, you need to expose your skin during the middle of the day. During this period most people with fair skin will make enough vitamin D with just 10-20 minutes of sun exposure. The darker your skin, the longer exposure you will need to optimize your vitamin D production.

Depending on where you live, this amount of sun exposure may be next to impossible, particularly through the winter months. As a result, supplementation is recommended for most. As a general guideline, take 1,000 IUs per 25 pounds (11.3 kg) of body weight to slowly raise your vitamin D levels into range or take 2,000 IUs per 25 pounds of body weight to quickly raise your vitamin D levels.

Because vitamin D is a fat-soluble nutrient, it is important to take the supplement with a fat-based meal for optimal absorption.

Research on the Impact of Vitamin E for Prostate Cancer Prevention

Vitamin E was discovered in 1922 and occurs in 8 different forms – of these, alpha-tocopherol (the form commonly found in dietary supplements) is the most abundant in the body and the most biologically active. On the other hand, most dietary vitamin E is gamma-tocopherol. Food sources of vitamin E include wheat germ, nuts, nut butters, seeds, egg yolks, olives and olive oil. Vegetable oils and margarine are also sources of vitamin E, however we recommend you avoid these products due to their inflammatory properties.



Good sources of vitamin E include olive oil, nuts, seeds and egg yolks.

Studies suggest that vitamin E may protect against a number of chronic diseases, thanks to its actions as a powerful antioxidant. An antioxidant prevents or reduces the damage caused by reactive oxygen species (ROS) or free radicals. Free radicals react chemically with cellular structures such as DNA and proteins, damaging them and contributing to aging and chronic diseases such as diabetes, heart disease, and cancer.

The *NIH-AARP Diet and Health Study* set out to determine whether supplemental vitamin E and dietary gamma-tocopherol can prevent prostate cancer. Study participants filled out questionnaires and were followed for five years. At the end of the study, no association was found between vitamin E supplementation and prostate cancer risk. However, **high consumption of dietary gamma-tocopherol was seen to lower the risk of advanced prostate cancer.**

In another study, prostate cancer patients were seen to have significantly lower levels of vitamin E in their blood than healthy control subjects, although there is no evidence for cause and effect.

Participants in the *Prostate, Lung, Colorectal and Ovarian (PLCO) Screening Trial* were tested for blood levels of alpha-tocopherol and gamma-tocopherol, relative to their prostate cancer risk. An inverse relationship was observed between alpha-tocopherol levels and prostate cancer, but only in current and recently former smokers. In other words, the more alpha-tocopherol these people had in their blood, the lower their prostate cancer risk.

In the *Physicians' Health Study II*, participants who were randomly assigned to receive 400 IU of synthetic alpha-tocopherol every other day for an average of 8 years had the same rates of prostate cancer as the control group, suggesting that vitamin E may not prevent prostate cancer. Furthermore, vitamin E supplementation did not have an effect on deaths because of prostate cancer in these participants.

Other studies have suggested that genetic variations in specific genes may have an influence on the effect of alpha-tocopherol supplementation on prostate

cancer risk. Clinical trials are ongoing to determine the efficacy and safety of various forms of vitamin E – both on its own and with other therapies – for prostate cancer treatment.

As you can see, there is no clear cut evidence yet for the exact role of vitamin E in determining prostate cancer risk. However, supplementation may lower your risk and provide some protection against more aggressive forms of prostate cancer. In any case, you want to ensure that you are not deficient in vitamin E.

Should Men Consider Modified Citrus Pectin (MCP) Supplementation?

Strictly speaking, modified citrus pectin (MCP) is not part of everyone's diet. Instead, citrus pectin is a complex carbohydrate found in the peel and pulp of citrus fruit that has traditionally been used as a thickening agent for jams and jellies. When "modified" by treatment with high pH and temperature, it dissolves better in water and is more readily absorbed by the body.



"Pectin" is a carbohydrate substance that is found naturally in the inner cell wall of most plants. It is especially concentrated in the peel and pulp of citrus fruits, including grapefruits, oranges, limes, and lemons

Preliminary research suggests that MCP may protect against various types of cancer, including colon, lung, and prostate cancer by inducing so-called “programmed cell death” or apoptosis, and by interfering with tumor cell metastasis (migration of tumor cells to other areas of the body).

MCP has also been shown to activate so-called “natural killer cells,” indicating that it may be able to boost immune system activity against cancer cells.

MCP is known to target galectin-3, a protein that is involved in the growth and migration of cancer cells to other parts of the body. MCP sticks to galectin-3, making the cell “slippery” and blocking the ability of galectin-3 to promote tumor growth and metastasis.

In a 2007 laboratory study, prostate cancer cells were treated with different pectins, including citrus pectin and fractionated pectin powder (FPP). While both killed the cancer cells, FPP induced more apoptosis than regular citrus pectin – suggesting that specific structural features of pectin may be responsible for its ability to induce apoptosis (cancer cell death) in prostate cancer cells.

Another study looked at the effects of MCP on the metastasis of prostate cancer cells injected into rats. Treatment with low to moderate doses reduced lung metastases but did not affect the growth of the main tumor.

In a 2007 study, patients with advanced solid tumors including prostate cancer received 5 grams of powdered MCP 3-times daily for eight weeks. Most patients in this study reported improvements in

their physical functioning and overall health status, along with a reduction in fatigue, pain, and insomnia. Best of all, up to a quarter of these patients had stable disease after treatment.

If you think MCP will benefit you and you want to add it to your daily diet, **experts recommend taking 1 teaspoon (5 g) three times daily of PectaSol-C, the only high quality brand of MCP that has been validated for purity.**

Conclusions

So far we’ve looked at two vital nutrients, vitamin D and vitamin E, and what research has found their role to be in regard to prostate cancer risk. **In general, studies show that deficiency of either of these vitamins is associated with a greater risk of developing prostate cancer, or more aggressive forms of prostate cancer.** However, the precise connection between levels of these two vitamins in the blood and prostate cancer risk have not yet been completely understood.

Preliminary research also suggests that modified citrus pectin (MCP) may protect against colon, lung, and prostate cancer by inducing so-called “programmed cell death” or apoptosis, and by interfering with metastasis, or migration of cancer cells from the original area to other parts of the body.

In Part 2 of this series (in the August 2016 newsletter) we’ll examine how diet impacts prostate cancer risk and progression of the disease, as well as recommended foods to incorporate as part of a prevention or treatment program.

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About Suresh Nair, PhD



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As a scientist with a PhD in Molecular Biology from UPenn, his articles are always thoroughly researched and have a sound scientific basis.

Special Strategies for Juicing Greens

by Dr. David Jockers

Juicing fresh greens is a fantastic way to boost your antioxidant levels. Greens are loaded with minerals, enzymes, and vitamins to support your body's natural healing abilities... whether it be from cancer or other chronic disease.

With juicing the fiber is removed from fruits and vegetable. This allows the digestive tract to more readily absorb nutrients into the bloodstream for uptake into organs and cells. This doesn't mean the fiber needs to go to waste. You may wish to reserve some of the pulp separated during juicing and add it into foods such as salads, soups, or stews at a later time.

The nutritional content of juice is highest immediately following juicing. As time passes, air and light degrade the nutrients and the juice loses some of its nutritional value. Ideally you should use the highest quality ingredients possible such as organic fruits and vegetables. You should also always serve and store juice in glass versus a plastic container. This avoids hazardous xenoestrogenic chemicals (chemicals that mimic estrogen) which can interact with the hormones in your body and cause damaging effects over time.



Juicing fresh greens is a fantastic way to boost your antioxidant levels

What Should You Juice?

Some of my favorite things to juice include green apples, cucumbers, celery, and lemons and limes. I combine these with powerful detoxifying herbs such as cilantro and parsley, and antioxidant rich ingredients including dandelion, bok choy, kale, ginger, and spinach.

In order to keep sugar content low, it is best to keep sweeter fruits and vegetables to a minimum. For example, I do not add more than one small apple or at the very most five carrots into a single serving of fresh juice. **When juicing high sugar fruits and vegetables (i.e. beets and carrots), combine them with foods containing citric acid.** Sources of citric acid such as lemon or lime reduce the glycemic load and thereby lower the inflammatory effects of sugar from the fruit.

Fruits for Juicing

The following fruits are packed with nutrients and low in sugar, and are excellent choices for juicing.

Lemons and Limes: Lemon and lime are powerful citrus fruits loaded with vitamin C and vitamin P, also known as citrus bioflavonoids. Vitamin P has been shown to increase the antioxidant abilities of vitamin C, and together they have a synergistic health benefit.

Bioflavonoids also increase blood flow necessary for oxygenating cells and improving capillary permeability essential to maintaining healthy blood pressure. Antioxidants vitamin C and vitamin P minimize inflammation, edema, and venous backup

(blood backing up into the vein which can cause conditions such as varicose veins).

Lemons and limes are also natural antiseptics as the citric acid removes hazardous microbes in the body. Combined, the vitamins, citric acid, and electrolytes in these sour citrus fruits alkalize the body.



Lemons and limes contain citric acid which helps to balance fruits and veggies with a higher sugar content

Green Apples: Traditionally more sour than a red apple, green apples also have reduced sugar content and more acetic acid. Acetic acid is the major component in apple cider vinegar and is another antiseptic tool which stimulates function of the gall bladder, liver, stomach, and intestines. Aside from having an alkalizing effect on the body, green apples contain procyanidin. Procyanidin is an antioxidant with cancer fighting properties.

Hydrating Vegetables

Vegetables are loaded with water and electrolytes and most are low in sugar. Some of these vegetables produce a high yield of juice and should be a staple to fresh juicing. **Some of the best vegetables to juice are cucumbers, celery, and bok choy.**

Cucumbers: Cucumbers are loaded with hydrating fluids for the skin, joints, and tissue. They are rich with silica, which is an essential mineral for healthy connective tissue such as muscles, bones, and skin. Cucumbers are also loaded with ionic potassium, vitamin C, and magnesium which produce a strong alkalizing effect on the body.

Celery: Celery is a good source of folate, calcium, and magnesium, along with vitamins A, C, and K. Celery is high in water, electrolytes such as potassium and sodium, and contains dihydrostilbenoids. This type of phenol is an antioxidant that is comparable to the resveratrol found in grape skins or wine. Celery is great for juicing and helps to stabilize body pH.

Bok Choy: These water-rich cruciferous vegetables contain more than 70 phenolic antioxidants and electrolytes. Hydroxycinnamic acid is one of the most potent phenolic compounds found in bok choy and is referred to as “chain breaking” antioxidants as a result of its free radical scavenging strengths. For this reason, bok choy is being studied for its cancer prevention properties.



Bok choy is a type of Chinese cabbage that doesn't look like cabbage. Baby bok choy has a milder taste than many other cruciferous vegetables

Dark Green Leafy Vegetables

Chlorophyll is one of the greatest life-giving components on the planet. This compound gives foods their green color and is a major component of the photosynthetic process which converts the sun's energy into chemical energy.

A major indicator of the health attributes of any plant based food is the chlorophyll content. Foods rich in chlorophyll are deep green and are highly capable of building new blood cells and purifying the body from the toxic effects resulting from cancer and radiation. Chlorophyll is also extraordinarily useful in wound healing, detoxification, intestinal regularity, and deodorization of the body.

Some of the best chlorophyll rich dark greens you can include in your juice are spinach, collard greens, parsley, and kale.

Spinach: Spinach is a powerful source of chlorophyll and glycolipids which protect the digestive tract from inflammation and damage. Glycolipids are the major fatty acids which make up cell membranes of light-sensitive organs in plants containing chlorophyll. They also have strong immune boosting and cancer prevention properties. Spinach is an important source of nutrients such as copper, zinc, and selenium which stimulate immunity.

Collards: These fan-like greens are a nutritional superstar. Collards are extremely rich in vitamins A, B2, B6, C, K, and are packed with magnesium and folate. Collard greens also contain a sulfur compound known as isothiocyanates which protect the p53 gene considered to be the guardian of the genome and critical at normal cell cycle regulation. When the p53 becomes mutated, the normal cell cycle fails and cancerous developments form.

Kale: Kale contains powerful nutrients like glucosinolates and methyl cysteine sulfoxides. These detoxifying nutrients activate enzymes in the liver which play a critical role in removing the carcinogenic load on the body. Sulforaphane is an example of a type of glucosinolate and is formed when kale is masticated (chewed up) or ground. Sulforaphane has been studied for its ability to change the genetic expression of the liver allowing it to more effectively use its detoxification enzymes.

Lacinato kale contains more water and has a better flavor in my opinion than curly kale. Curly kale is more difficult to juice and I recommend saving it for other uses such as making kale chips.



Lacinato kale (also known as black kale or Italian kale) is a flat kale that works better for juicing than curly kale

Watercress: Watercress is a rapidly growing aquatic or semi-aquatic perennial and one of the oldest known leaf vegetables eaten by humans. Vitamins and minerals like B6, magnesium, and folate found in watercress are highly available to the body and assist the digestive tract. Watercress is also high in chlorophyll and carotenoid antioxidants.

Cereal Juices: Examples of cereal juices include wheatgrass, barley grass, oat grass, and rye grass. These grasses do not contain grain and are gluten free, low in carbohydrates, and are nutrient rich.

These greens are best when juiced alone without added vegetables. (Note: not every juicer can handle grasses, so be sure to consult your owner's manual before putting them through your juicer.)

Cows can live an incredibly healthy and long life consuming cereal grasses alone. Humans, however, cannot digest these tough fibers and juicing provides a great avenue for consuming these inedible but antioxidant packed grasses. Cereal grasses contain the blood detoxifying nutrient chlorophyll as well as methylating agents such as magnesium, folate, and vitamins B2 and B6. Cereal grasses are also rich in carotenoid antioxidants which can help prevent some forms of cancer and heal damage from cancer treatments.

Bitter Herbs

Bitter herbs are not popular in western society and are not regularly used. Although they may not have a pleasant flavor, their nutrient content and health benefits are outstanding. Bitter herbs boost digestive enzymes and improve liver and gallbladder function.

A process known as "bitter reflex" occurs when the bitter flavor is recognized by the tongue, signaling a series of reactions in the neuroendocrine system. The hormone gastrin within the stomach increases the output of hydrochloric acid which aids in digestion. A continued reflex occurs when the liver and gallbladder secrete bile and pancreatic enzymes. Studies indicate that the bitter reflex improves the structure and capabilities of all digestive organs.

A saying which describes the healing potential of these herbs is "bitter is good for the liver."

They cleanse the blood, digestive system, urinary tract, and kidneys.

Two major categories divide bitter herbs. One is cholagogues which improves the flow of bile. Cholagogues include parsley, dandelion, burdock root, artichoke, ginger, and goldenseal. The second category is known as hepatoprotectants. Hepatoprotectants heal and protect the liver from toxic exposure. Examples of these bitter herbs are turmeric and milk thistle. **Try to include one or more bitter herbs from each category into your juicing regimen for optimal detoxification.**

Dandelion: Dandelion greens are rich in vitamin C and bioflavonoids. They are also very high in absorbable methylating agents such as vitamin B2, B6, and folate. This herb is packed with minerals such as iron, potassium, and zinc, which help to release excess fluid out of the body, detoxifying the kidneys and liver. Dandelion greens aid in digestion, relieve swelling and inflammation, and have been used to treat jaundice, edema, gout, acne, and eczema.



Fresh young dandelion leaves (from yards that have not been sprayed with pesticides) are a wonderful free source of bitter herbs

Parsley: Highly abundant in chlorophyll, parsley contains three times the amount of vitamin C found in an orange. Vitamin C is vital for a healthy immune system and youthful skin and joints. Parsley also contains carotenoid antioxidants such as lutein and zeaxanthin which boost eye function and enable the body to heal damage from UV and radiation.

Cilantro (Coriander): Cilantro is also known by other names including dhania, coriander leaves, Chinese parsley and Mexican parsley. It contains a variety of phytonutrients and chlorophyll and is a strong heavy metal detoxifier. Extremely beneficial for blood, liver and kidney purification, include cilantro in your fresh green juice to pull heavy metals such as mercury, aluminum, and nickel out of the body.

Ginger: Ginger is known for its ability to reduce intestinal gas, smooth the intestinal tract, and stimulate gut motility (which is important for avoiding constipation). Ginger has also been shown to limit fever related nausea, motion sickness, and reduce the feeling of morning sickness, as well as aid in the production of bile beneficial for the digestion of fat.

Turmeric: Turmeric is an orange tuberous root traditionally used for centuries in Ayurvedic and Chinese medicine as well as in Asian and Indian cooking. One of the most powerful active compounds in turmeric is curcumin. Curcumin exhibits strong anti-inflammatory properties and has also been studied for its ability to detoxify the liver and increase glutathione (the “master antioxidant”) concentration.

Milk Thistle: Used by medical herbalists before the turn of the 20th century, milk thistle was used to treat varicose veins as well as liver, kidney, and spleen disorders. Today milk thistle is commonly used to boost liver, kidney, and gastrointestinal system function. Milk thistle has been shown to improve numerous health issues including psoriasis, jaundice, poor circulation, and menstrual complications.



Milk thistle grows wild in many places and can often be foraged for free. The leaves can be juiced (handle carefully and you may wish to trim off the spiky parts first). The seeds can be dried and sprinkled on salads

A Few Juicing Combinations to Try

I enjoy combining low-glycemic fruits, hydrating vegetables, dark greens, and bitter herbs for a powerful super-green juice. Some popular combinations that I frequently juice include the following:

Lemon/Ginger:

- 1 lemon, diced
- 1 small Granny Smith apple, diced
- 2 handfuls of baby spinach
- 1 handful of dandelion greens
- 1 handful of cilantro
- 1 cucumber, diced
- 1 inch of ginger root

Lime/Ginger:

- 1 small Granny Smith apple, diced
- 1 lime, diced
- 2 handfuls of watercress
- 1 handful of dill weed
- 1 handful of parsley
- 1 stalk celery
- 1 inch of ginger root

Super Detox:

- 1 small Granny Smith apple, diced
- 1 lemon OR lime
- 1 stalk bok choy
- 1 cucumber, diced
- 2 handfuls of spinach
- 1 handful cilantro
- 1 inch of ginger root
- 1 inch of turmeric root

What are some of your favorite green juicing recipes? There are countless combinations which you can create depending on what fresh ingredients are available to you.

Local farmers markets are a great resource for fresh produce, especially in the summer months. If you can't find some of the vegetables and herbs mentioned, it is always best to substitute any fresh, organic items readily available to you.

Remember, a juicing recipe is merely a suggestion. Feel free to be creative and discover what juices make you feel best.

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About Dr. David Jockers



Dr. David Jockers is a Maximized Living doctor, functional nutritionist, corrective care chiropractor, exercise physiologist, and certified strength & conditioning specialist.

He runs one of the hottest natural health websites: DrJockers.com and is the author of *SuperCharge Your Brain*, the complete guide to radically improve your mood, memory, and mindset, and the *SuperCharged Recipe book* with over 180 full-color recipes to help you take back control of your health. He is a regular contributor to thetruthaboutcancer.com and has well over 1,200 professionally published natural health articles on the web and in print magazines.

Dr. Jockers is a sought after speaker around the country on such topics as weight loss, brain health, functional exercise, natural detoxification, and disease prevention. He currently owns and operates Exodus Health Center in Kennesaw, Georgia.

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Charlene's Cancer Fighting Kitchen

Blueberry, Strawberry and Peach Smoothie



Can turmeric taste good in a smoothie? You won't even notice it in this antioxidant, anti-inflammatory, nutrient rich, bursting with flavor, cancer kicking treat.

*Yield: Two 14-ounce servings
Preparation time: 5 minutes*

For all recipes, please use fresh, organic, locally-grown ingredients whenever possible, including organic, non-irradiated spices. This will give you the maximum cancer fighting benefits.

Ingredients:

- 1 cup fresh blueberries
- 1 cup fresh peaches
- 1 cup frozen strawberries (best if you get them fresh and freeze them yourself)
- 1 cup fresh coconut milk OR purified water (coconut milk makes it creamier and adds a significant amount of healthy fat and cancer fighting nutrients)
- 2 handfuls of organic kale (can substitute spinach or go half and half, but kale is a superior cancer fighting cruciferous vegetable)
- 1 ½ teaspoons fresh turmeric root OR 1 teaspoon powdered turmeric
- ½ teaspoon Ceylon cinnamon (can substitute regular cinnamon but Ceylon is higher quality)
- Pinch of cayenne pepper, powdered

Directions:

1. Blend all ingredients together in a blender at medium speed for a few seconds, then change to high speed until fully blended.
2. Serve in a tall glass garnished with a strawberry and blueberries if desired.

Tantalizing Avocado Broccoli Sprout Soup



A rich and satisfying soup featuring the stupendous antioxidant, anti-inflammatory, and detoxifying benefits of avocados.

Broccoli sprouts contain the highest amounts of sulforaphane of any foods. Sulforaphane is a cancer destroying compound, immune booster, liver detoxifier and estrogen metabolizer, making this soup especially beneficial against estrogen-related cancers such as breast and prostate cancer.

Enjoy this raw soup cold or gently heated.

Yield: Four 10-ounce servings

Preparation time: 15 minutes

Ingredients:

- 1½ cups ripe medium Haas avocados, with skins and seeds removed
- 1 cup yellow bell pepper, with seeds removed and chopped in large pieces
- 1 red onion, chopped in large pieces
OR substitute yellow onion
- 1 pint fresh broccoli sprouts, rinsed and set aside
- 3 tablespoons lemon juice, freshly squeezed
- 2 cups spring OR filtered water
- 2 tablespoons hemp OR extra virgin olive oil

Spices:

- 1 tablespoon fresh turmeric root, finely chopped
OR 1 teaspoon powdered turmeric
- 1 handful cilantro, with stems removed, rinsed and chopped OR substitute parsley
- 2 cloves fresh garlic, crushed
- ½ teaspoon cayenne pepper powder OR flakes
- ½ teaspoon lemon zest (optional)
- Quality salt to taste, such as pink or sea salt
- Fresh ground pepper to taste

Directions:

1. Place all ingredients and spices except broccoli sprouts in a blender or food processor and blend until smooth.
2. If a warm soup is desired, pour into a pot and warm on the stove on med-low, stirring constantly until just hot to the touch.
3. Ladle into bowls and garnish with avocado slices and ¼ cup or more broccoli sprouts on top and serve with raw crackers. Enjoy!

Baby Spinach and Mixed Green Salad



Ingredients:

- 1 cup baby spinach
- 1 handful tender beet greens
- 1 handful tender baby radish leaves (optional)
- 1 handful arugula (rocket)
- 1 cup red leaf lettuce
- ½ medium cucumber, sliced
- 3 medium radishes, thinly sliced
- ¼ medium red onion, julienned
- 8-10 grape tomatoes
- Balsamic vinegar
- Extra virgin olive oil
- ¼ cup combined crushed walnuts, pumpkin seeds, and sunflower seeds
- Pink or sea salt, to taste
- Freshly ground black pepper, to taste

Directions:

1. Wash all the leafy greens and vegetables carefully and dry in a salad spinner or pat dry with a clean tea towel. Tear the leafy greens by hand or chop with a knife into medium pieces in a large bowl. The baby spinach can be left whole if desired.
2. Slice the cucumber according to preference and add to the bowl. Add the onion, radishes, and toss together gently.
3. Pour a splash of the balsamic vinegar and olive oil in the bowl and toss again to coat the ingredients evenly. Add salt and pepper to taste. Then distribute into two or more bowls according to preference. Garnish with the grape tomatoes, nuts and seeds. Enjoy!

Tender baby leafy greens are so delicious for spring and summer salads. This salad boasts spinach and beet greens with the robust flavor of rocket (arugula) and radish to spice things up.

The sweetness of grape tomatoes and richness of the nuts and seeds make this a light, yet satisfying dish loaded with anti-oxidants, anti-inflammatory and anti-cancer components that will help to build, energize, and restore your tissues while deactivating cancer cells.

The pepper increases absorption and the sea salt feeds the body with minerals to amplify the healing process.

*Yield: Two 16-ounce servings
Preparation time: 20 minutes*

About Charlene Bollinger



Charlene Bollinger is a devoted Christian, happily married wife, joyful mother of 4 beautiful home-educated children, health freedom advocate, co-founder of CancerTruth.net, former model/actress/fitness buff, and lover of healthy food and healthy living.

After losing various family members to conventional cancer treatments, she and her husband, Ty, learned the truth about cancer and the cancer industry and together work tirelessly helping others learn and live free, healthy lives.

Currently, Charlene is working on compiling a cookbook to help families learn that they can indeed cook healthy, delicious food in this toxic world. Along with her husband, Ty, she is also the co-owner of Infinity 510 Squared Partners Publishing Company.

Natural Approaches to Reversing Tooth Decay

By Ty Bollinger

They say the eyes are the window to the soul, perhaps the truest reflection of one's innermost feelings and emotions, speaking volumes even when words don't.

But the eyes aren't the only facial feature with an alluring story to tell. The mouth is likewise telling in the area of physical health, serving a purpose much greater in scope than just putting a smile on your face or chewing your food.

Hidden amidst that cascade of pearly whites is a complex, living organism made up of billions of tiny microbial cohabitators – a vibrant bacterial ecosystem amazingly similar to that of your gut.



You may be surprised to learn that your mouth contains its own bacterial ecosystem and is a telling sign of your health

Modern science is finding that this ecosystem also communicates the state of one's health. Not with words, though your mouth can obviously do that as well, but with an array of metabolic clues.

The reason why I'm bringing all of this up is that the various elements of oral health that we're about to discuss are directly linked to the health of the rest of the body. **The health status of your oral cavity really is a reflection of the state of your body as a whole.** If you know what to look for, it can reveal the presence of other underlying health conditions that need to be addressed – including cancer.

It's important to keep in mind that many common oral health problems like tooth decay aren't normal. Neither are they just the expected outcomes of eating too much sugar and forgetting to brush your teeth – although these are obviously detrimental contributing factors. **Dental caries (cavities) are often indicators of other imbalances in your system such as nutrient deficiency,** for instance, or having an overly acidic internal terrain.

While getting cavities drilled and filled is now par for the course in modern dental care, this common procedure fails to address the root cause of why they formed in the first place. It can also damage key elements of the mouth's communications system with the rest of the body, leading to problems down the road that can result in more serious procedures like crowns and root canals. Procedures that, as you'll see, are largely unnecessary and often detrimental.



While getting cavities drilled & filled is common practice, it can lead to further issues later on

Consider the insights of oral health expert Nadine Artemis of Living Libations, who sums it up like this:

“The mouth is actually alive. It’s connected to our blood system. It’s connected to digestion, the actual core of the tooth. When we can get the body activated, then we can prevent cavities, because if we just put a filling on it, then we’re not actually addressing what caused the cavity in the first place.”

Microbial Imbalances, Tooth Decay, and the Significance of Oral Ecology

Before I delve into the pitfalls of conventional dental practice and offer alternatives to many of its failed approaches, I first want to explain a little bit more about the nature of the mouth and why oral ecology is so important to health. I touched on this a bit in the introduction, but our mouths are home to a diverse microbial civilization whose job it is to pre-digest our food, protect the integrity of our teeth and gums, and guard against pathogenic invaders.

When these friendly microbes are healthy and balanced, tooth decay is more or less a non-issue. When they’re not, problems arise. Because they’re interconnected, the friendly microbes in the gut usually end up compromised as well, which is why it’s so important to support your entire microbiome, both in your digestive tract and in your mouth. (Note: The human microbiome – or human microbiota – is the entire collection of micro-organisms which live on our skin, saliva and mouth, eyes, gut, and the rest of our gastrointestinal tract.)

In his book *Missing Microbes*, Dr. Martin Blaser explains how friendly bacteria in the mouth rely on one another to function properly, keeping each other balanced and in check so gums don’t become diseased and teeth don’t rot. The presence of one bacterial strain without the others can lead to serious problems – or as Nadine Artemis puts it, the entire microbial ecosystem gets thrown out of balance when some bacteria are missing their “ancestral bacterial buddies.”

What, exactly, causes this imbalance? In many cases, overuse of antibiotics and other drug-based treatments that basically carpet-bomb the microbiome, leaving it vulnerable to failure and making your mouth vulnerable to disease and decay!



Antibiotics and some other drugs kill healthy bacteria in your gut which can make your teeth more vulnerable to decay

“The human oral cavity contains a number of different habitats, including the teeth, gingival sulcus, tongue, cheeks, hard and soft palates, and tonsils, which are colonized by bacteria,” explains a study on the human oral microbiome published in the *Journal of Bacteriology*, revealing how oral bacteria act as a sitting army to both protect and reinforce the mouth.

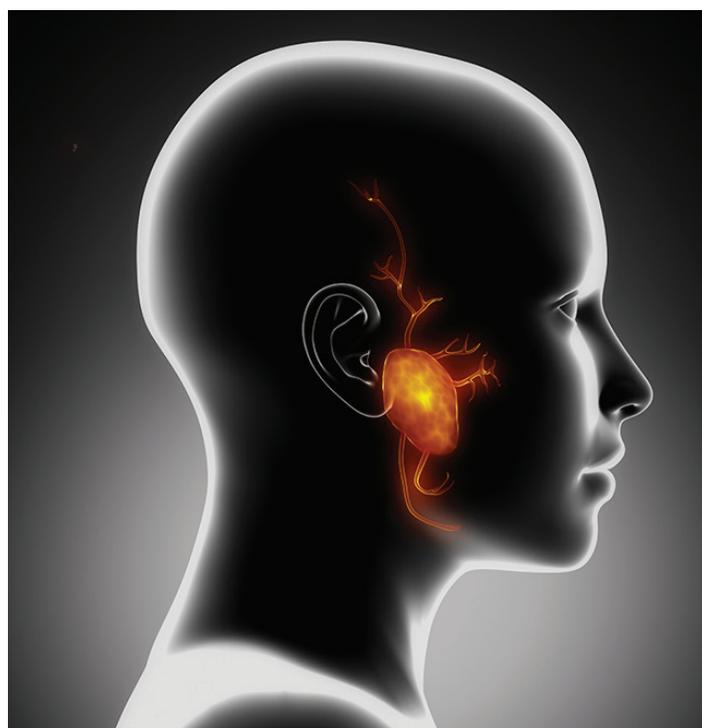
“The oral microbiome is comprised of over 600 prevalent taxa at the species level, with distinct subsets predominating at different habitats,” it adds, highlighting both the complexity in number, and simplicity in function of this amazing bacterial army. (Note: In biology, a taxon (plural taxa) is a group of one or more populations of an organism or organisms seen by taxonomists to form a single unit.)

Protecting and Supporting Your Mouth’s Microbiome Through Diet

So what can you do to protect the bacteria living in your mouth and support its proper function to avoid cavities and other oral health problems? **It all starts with properly maintaining your dentinal lymph system** – the detoxification and immune support mechanism through which your teeth get the nutrients they need from the digestive tract in order to continually remineralize, regenerate, and create new enamel.

You may already be aware that your body contains a network of lymph nodes whose job it is to collect and eliminate toxins, as well as boost your immune system. Well, your teeth are part of this network as well. Every single tooth in your mouth, believe it or not, has its own individual lymphatic system that’s hardwired to your parotid glands.

These parotid glands, which are activated by your hypothalamus, communicate with your stomach and intestinal tract where food is digested to obtain the nutrients your teeth need for strength and longevity. What prevents these parotid glands from functioning as they should is a lack of nutrients and poor microbiome ecology – both of which result, in large part, from a poor diet. **When your teeth don’t get the nutrients they need, your mouth attempts to protect them by producing more saliva, but eventually this system fails.**



Your parotid glands communicate with your stomach and intestines to obtain the nutrients needed for strong, healthy teeth

“When we’re eating a diet high in sugar, we’re having blood sugar spikes, or eating a low-fat diet devoid of fat-soluble vitamins of A, D3, and K2 and when we don’t have enough minerals in our diet, what happens is this lymph system stagnates or, even worse, it can actually reverse. This is how a cavity is formed,” Nadine Artemis of Living Libations explains.

“When the dentinal lymph system reverses, the capillaries in the tooth begin to suck in bacteria and everything else in the mouth like a straw. Rather than this royal system of nutrients coming up into the teeth, it reverses and then teeth draw in bacteria into the mouth – that’s the genesis of cavity creation.”

This, of course, is why consuming foods rich in bioavailable vitamins, trace minerals, enzymes, and other key nutrients is so critical. **If you’re undernourished, your mouth and teeth are going to eventually pay the price!** It’s also recommended that you try to keep your blood sugar levels at 80 mg/DL (4.4 mmol/L) or lower, both fasting and after a meal, if at all possible. Doing so will further help to protect your gut and mouth microbiome from harm.



Even non-diabetics benefit from keeping an eye on their blood sugar. Levels below 80 mg/DL or 4.4 mmol/L will help protect both your mouth and gut

How to Properly Maintain Your Oral Cavity

Proper nutrition should be your first line of defense in protecting both your mouth and gut against disease, which we now know work together to support and maintain the dentinal lymph system. But there’s also routine maintenance of your teeth, which includes things like flossing, brushing, and getting periodic deep-cleanings at the dentist, right? Not so fast...

Each of these things can be beneficial if done right, but the problem is that many conventional approaches involve the use of chemical agents that work *against* the microbiome rather than for it. Many toothpaste products, for instance, contain chemicals such as fluoride and various antibacterial agents that disrupt the microbiome and leave teeth vulnerable to disease. Likewise, many dentists perform procedures that are detrimental to our long-term oral health.

“Everything that’s going on with modern dentistry is about killing – this sort of periodontal scorched earth policy on the mouth’s microbiome,” Artemis warns. *“You’ve got the really heavy duty mouth rinses, the toothpaste with triclosan and sodium lauryl sulfate, and all these chemicals.”*

Then, we’re masticating [chewing] meals with glyphosate and pesticides, so our mouths are like this microcosm for the whole – everything going on with the world right now, and our microbiomes are literally off-balance, like the ‘soil’ of our mouth, just like the ‘soil’ of our guts, are so out of whack.”

Keeping this all in mind, it’s obviously important to choose the right dental care products. When it comes to flossing, stick with varieties made from natural, biodegradable silk, natural waxes, and essential oils, avoiding those that contain artificial sweeteners and chemical antibacterial agents.

The same goes for toothpastes – avoid all varieties that contain fluoride, which has been shown to degrade the gums, crumble bones, and interfere with collagen synthesis, as well as those that contain synthetic foaming agents and antibacterial chemicals like triclosan.



Most commercial toothpastes and mouthwashes contain fluoride and chemical agents that actually leave teeth vulnerable to disease

Choosing (or Making) the Right Toothpaste

Truth be told, all you really need in a good quality toothpaste is sodium bicarbonate or baking soda, a carrier oil like coconut or olive oil (if you want a traditional-type paste that's smooth rather than chalky), some essential oils for flavor and natural antibacterial activity, and perhaps some hydrogen peroxide to aid in whitening.

One basic recipe for making homemade toothpaste is to combine hydrogen peroxide (at 1% dilution) with baking soda in a 1:1 ratio. Food-grade hydrogen peroxide is preferable to the typical drug store variety, as it can be safely ingested in small amounts.

Stir the solution and let it evaporate naturally, and you'll be left with a dry powder that you can apply to your toothbrush and rub on your teeth to get rid of plaque, protect tooth enamel, and regenerate healthy gums – all while supporting your mouth's microbiome instead of destroying it.

You can also add other ingredients like thyme, tea tree, peppermint, and cinnamon oils both for flavor and added antibacterial and antiviral protection.

Essential oils like these that possess natural antimicrobial properties are selective, meaning they won't harm "good" bacteria in the process of getting rid of the "bad" kind.

Nadine Artemis and her husband Ron are huge proponents of using essential oils to support oral health, which is why they developed their own toothpaste products like [Frankincense Fresh Truth Toothpaste](#) and [Happy Gums Clay Toothpaste](#) that contain essential oils in combination with other healing elements that promote oral health.

Ozone and Oxygenation

Another important element of oral health is oxygenation, which stops harmful bacteria from breeding and spreading while getting rid of them and the toxic waste they produce in order to prevent infections. This is accomplished through the use of ozone, a regenerative substance that in addition to performing these maintenance functions also helps promote new cell growth in places where it's needed – whether it be gum tissue, tooth enamel, or even a tooth itself.

You can ozonate your mouth at home with products like [Living Libations Ozonated Happy Gum Gel](#), which you can apply directly on your teeth or use as a toothpaste. You can even apply it to your floss! Ozone can also be injected into the mouth by qualified dentists, which is more applicable in cases where an individual already has oral health problems that need to be remedied rather than prevented.

Dr. Martin Gallagher is an integrative medical specialist who utilizes what he calls "ozonotherapy," an intravenous ozone therapy that involves injecting medical-grade oxygen (O₃) directly into the bloodstream in order to target viruses, bacteria,

fungi, yeast, and molds. As with essential oils, ozone therapy is selectively toxic, meaning it only goes after harmful microbes, leaving the healthy ones alone.

“Ozonated gas has many dental uses,” explain Ron and Nadine Artemis. “Cavities exposed to ozone gas will subsequently harden. In the case of a nerve exposure, ozone water followed by ozone gas will often prevent the nerve from dying. Irrigation of a surgical site with ozone water will speed healing and help remineralize the bone. The gas injected into cavitation sites is part of a protocol to clear up the cavitation. Ozonized water is used for ingesting, gargling, and irrigating gum pockets.”

Essential Oils and Remineralization Paste

One of the amazing things about essential oils is that they block a process known as “quorum sensing,”

which is how pathogens in the mouth such as harmful bacteria communicate with other pathogens throughout the rest of the body to “strategize” a plan of attack. Essential oils like those of frankincense, oregano, neem, clove, cinnamon, tea tree, and cardamom – the “classics” long used in traditional dental care – not only block quorum sensing, but they also penetrate and destroy “biofilms” in the mouth where pathogens live.

Even better is the fact that essential oils only target the damaging bacteria, while preserving the beneficial ones that safeguard the integrity of teeth and gums. You’ll find essential oils in many so-called “remineralization” pastes that help strengthen teeth and reinforce their defenses against pathogens. See the box below for instructions on how to make your own remineralization toothpaste.

How to Make Your Own Remineralization Toothpaste

Dr. Josh Axe, a natural medicine expert (and featured expert in “The Truth About Cancer: A Global Quest”), developed his own remineralization toothpaste recipe that contains nearly everything you need for daily tooth maintenance. It takes just a few minutes to prepare and makes enough for 30 uses:

Ingredients:

- 4 tablespoons organic coconut oil (or shea butter mixed with olive oil)
- 2 tablespoons baking soda
- 1 tablespoon xylitol powder*
- 20 drops cinnamon or clove essential oil

- 20 drops peppermint essential oil
- 30 drops trace minerals (one great option is [Trace Minerals Research Concentrated Trace Mineral Drops](#))
- Toothpaste tube (or glass jar)

Directions:

1. Measure and place all ingredients into bowl and mix well, or combine in food processor.
2. Store in toothpaste tube (or glass jar with lid). If mix begins to dry out, simply add water.

**Look for non-GMO xylitol made from North American hardwood*

Tooth Serums with Botanical Biotics

Additional support for your mouth's microbiome can be found in liquid "tooth serums" that contain essential oils and other botanical biotics. Living Libations sells a [Yogi Tooth Serum](#) that contains essential oils known to support immunity and fight pathogens, as well as a special resin known as "mastic" that helps remove tooth plaque and support connective tissue within the oral cavity.

Diatomaceous Earth, Activated Charcoal, and MCT Oil

Keeping your teeth clean and cavity-free using these methods is like washing your car regularly, but what about that shiny coat of wax? Surely you want to show off those pearly whites in their Sunday best, and you can do so by using natural substances like food-grade diatomaceous earth (a type of magnetic clay); activated charcoal; and a healthful fat like concentrated medium-chain triglyceride (MCT) oil, derived from coconut and palm kernels.

Combining either the diatomaceous earth or the activated charcoal (or a mixture of both) with a little bit of MCT oil works like a tooth polish – just apply a bit to your toothbrush, swirl it around on your teeth like you would a wax sponge, and be amazed at the results. This is a safe, non-toxic way to promote whiter, healthier teeth without the use of harsh chemicals.



Combine a small amount of activated charcoal or diatomaceous earth with some MCT or coconut oil to create a non-toxic tooth polish

An excellent MCT product is Bulletproof's [Brain Octane Oil](#), which is 16 times more concentrated with MCTs than coconut oil, containing the most ketogenic (meaning it tells the body to burn fats for fuel rather than carbohydrates) type of MCT, known as C8. Brain Octane Oil, by the way, is an excellent dietary supplement to take for increased energy and fat loss.

The Dangers of Root Canals

Perhaps you're thinking to yourself: sure, these prevention and maintenance tips are great for people who don't already have dental problems, but how do I deal with more advanced tooth decay? Or what if my dentist is advising me to get a serious procedure like a root canal, claiming that this is the only way to prevent further damage from occurring?

My advice to you is the same as it would be to a cancer patient being pressured into getting chemotherapy and radiation treatments – just stop for a minute, take a deep breath, and consider all your options.

As I mentioned earlier, many of the prevention and maintenance techniques I've outlined actually *do* help in addressing even the most serious dental issues, especially when administered under the guidance of a qualified holistic dentist.

Many people don't realize this, but procedures like fillings and root canals don't fix the underlying issues that caused them in the first place. Root canals are especially problematic because dentists can't properly sterilize the tooth in which they are performed, which means likely infections later on down the road – and truth be told, most people don't even need a root canal in the first place!

Dr. Stuart Nunnally, a holistic dentist from Texas, conducted the world's first independent lab study on root canals and found that **nearly all teeth with root canals end up developing some kind of pathology**. He warns that these are mostly necrotic bacterial infections, containing pathogens as extreme as those that cause syphilis, Lyme disease, and even leprosy.

Root canals have even been linked to breast cancer. Up to 93 percent of women diagnosed with breast cancer also have one or more root canals on the same side as their cancer, according to research conducted by Dr. Robert Jones.

Dr. Josef Issels, a German physician, came to similar conclusions about root canals. Upwards of 97 percent of the "terminal" cancer patients he treated throughout his 40-year career had previously had root canals.

"The whole goal of a root canal is to take an infected tooth and...scrape out the whole pulp chamber and the nerves," Nadine Artemis explains. "What happens is then it becomes a little necrotic nest festering with pathogenic bacteria that every time you chew gets squeezed out and into your body and no blood can get there and so you basically have a full anaerobic setup for these bacteria."

Teeth that are candidates for root canals should instead be extracted using safer means, which often means properly removing the periodontal ligament. If the periodontal ligament isn't properly removed, then 10-20 years down the road it could result in a jaw cavitation, a situation in which the jawbone begins to *rot* – nobody wants this, of course!

Another option is Platelet-Rich Plasma (PRP) Therapy, a stem cell regrowth procedure that involves injecting a patient's own blood plasma into a root canal, receding gum, or shoe (a restorative covering placed over a damaged tooth cusp), which initiates a six-month-long natural healing process that minimizes the risk of bacterial infection.

Why You Should Never Get Titanium (or Any Other Heavy Metal) Implanted into Your Body

Porcelain, resin composite, and titanium fillings are some of the more common alternatives to amalgam (mercury-based) dental fillings. These are supposed to be safer than amalgams – but are they really? (By the way, if you still have amalgam fillings, I urge you to look into getting them removed by a **qualified holistic dentist**. However, they must be an experienced holistic/biological dentist or it's better not to touch them and risk releasing more heavy metals into your body.)



Titanium, often used for dental implants, can still contain heavy metals

Composite fillings are questionable because they may contain plastic-based ingredients like bisphenol-A (BPA) that interfere with hormones and are linked to causing cancer. So-called "safe"

metal fillings and implants such as titanium often contain other metals in trace amounts. For instance, if a supposedly isolated metal compound like titanium contains less than 2% of another metal such as nickel (a highly toxic, carcinogenic heavy metal), it can still be called “pure” titanium and end up in your mouth.

The well-respected Dr. Hal Huggins, founder of the Hal Huggins Institute, calls heavy metals “*the marriage of microbes and metals,*” because microbes love to feed on these metals. This is a nightmare for your teeth and body, which is why many holistic dentists now use zirconium or ceramic if they absolutely must give a patient a filling.

Just remember as a rule of thumb... *anything* but metal, and absolutely *no* mercury.

How to Find the Right Dentist

If your oral health situation requires intervention beyond what you feel comfortable addressing on your own using the information here, my recommendation is to take the time to choose a qualified holistic dentist (aka a “biological” or “environmental” dentist) trained in applying these and other methods in a clinical setting.

Here are some resources you can use to find a holistic dentist near you:

- Contact the Hal Huggins Institute which offers a list of biological dentists trained in cutting-edge holistic dentistry. You can call the Institute directly at 1-866-948-4638 or fill out the online request form for more information: <https://www.hugginsappliedhealing.com/requestform.php>
- The Weston A. Price Foundation has published a directory listing containing the names of mercury-free and biological dental practices throughout the U.S. and around the world: <http://www.westonaprice.org/holistic-healthcare/guide-to-holistic-dentistry/>
- Search for accredited members of the International Academy of Oral Medicine and Toxicology (<https://iaomt.org/>) or the International Academy of Biological Dentistry and Medicine (<https://iabdm.org/location/>).
- You can also view the profiles of dentists and learn of the services provided in the international online directory of the Holistic Dental Association (<http://holisticdental.org>).



The primary aim of holistic dentistry is to resolve your dental problems while working in harmony with the rest of your body

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About Ty Bollinger



After losing several family members to cancer (including his mother and father), Ty Bollinger refused to accept the notion that chemotherapy, radiation, and surgery were the most effective treatments

available for cancer patients. He began a quest to learn all he possibly could about alternative cancer treatments and the medical industry.

Ty has now made it his life's mission to share the most remarkable discovery he made on his quest: the vast majority of all diseases (including cancer) can be easily prevented and even cured without drugs or surgery.

Ty is a happily married husband, the father of four wonderful children, devoted Christian, best-selling author, medical researcher, talk radio host, health freedom advocate, former competitive body-builder, and also a certified public accountant.

Summer is in full swing (at least on this side of the equator) and I hope you're taking the opportunity to enjoy as much fresh, local, organic produce as possible during the season.

I love strolling past my garden and grabbing a couple of cherry tomatoes or a handful of fresh peas or beans to nibble on. And it makes my heart sing when I see my kids doing the same.

I can't say it enough... eat REAL food. If you haven't been much of a vegetable eater, this is the season to start trying some new ones. They'll never taste better than they do right now! If you don't have your own garden, do your best to search out a market in your area where local farmers sell their organic, or at least "no-spray" produce.

My other hope for you this summer is that you make time for things you enjoy. Yes, healthy eating is super important... but good health also comes from being well rested,

doing activities you enjoy, and spending time with people you love.

Charlene and I have some fun activities and day-trips planned with the kids in between some of the projects I'm working on. I can't say much yet... but just know that we've got some super exciting things to share with you in the coming months.

A reminder too about our big event coming up in the October. If you haven't heard about it, you can [read more about it here](#). Putting something like this together is a huge undertaking, but I'm committed to making this an incredible life-changing event for everyone who attends.

Until next month...



Ty Bollinger

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