

How Important are Multi-Vitamins in Preventing Cancer?

By Ty Bollinger

Multivitamins are the most common dietary supplement consumed in the U.S. and are regularly taken by at least one-third of all American adults.

Traditionally, a daily multivitamin is meant to prevent nutritional deficiency – and the combination of essential vitamins and minerals in these supplements is designed to resemble healthy dietary patterns, including regular fruit and vegetable consumption.



Multivitamins are supposed to provide the vitamins and minerals that would be obtained from healthy consumption of fruit and vegetables

Unfortunately, the official view of the mainstream medical establishment is that multivitamins do very little good. For instance, the 2010 Dietary Guidelines

for Americans bluntly states that: *“For the general, healthy population, there is no evidence to support a recommendation for the use of multivitamin/mineral supplements in the primary prevention of chronic disease.”*

Further, a State-of-the-Science conference sponsored by the National Institutes of Health (NIH)

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also concluded that present evidence is insufficient to recommend either for or against the use of [multivitamins] to prevent chronic disease.

These are surprising statements, especially considering that such evidence does exist – and in the public domain, too.

Are these so-called “experts” unaware of studies that show clear benefits of multivitamin supplements for chronic disease, and in particular, cancer prevention... or are they deliberately misleading us?

Interestingly, in a 2009 online survey, 900 physicians and 277 nurses were asked whether they used dietary supplements and whether or not they recommend dietary supplements to their patients. *The “Life...supplemented” Healthcare Professionals Impact Study (HCP Impact Study)* reported that 51 percent of physicians and 59 percent of nurses reported that they themselves used dietary supplements regularly.



The HCP Impact Study revealed that 51% of doctors and 59% of nurses use dietary supplements regularly themselves and 79% and 82% respectively recommend them to patients

The most common reason they gave for using dietary supplements? To maintain their overall health and wellness, of course.

When asked whether they recommend dietary supplements to their patients, 79 percent of physicians and 82 percent of nurses said they did. So clearly these health professionals believe that supplements work.

The Research Shows a Different Story

Dr. Andrew Saul is the editor of the Orthomolecular Medicine News Service, with over 35 years of experience in natural health education. In 2006, he was named by *Psychology Today* as one of seven “natural health pioneers.”

As a proven expert, Dr. Saul differs from the establishment view that multivitamin supplementation has no effect on cancer risk and prevalence. In his view, there are a number of peer-reviewed, studies that show strong correlations between supplements and reduced risk of various cancers.

One example is the *Physicians’ Health Study II (PHS II)*, which looked at the effects of taking a common daily multivitamin supplement on overall cancer risk in over 14,000 male American physicians. **The Study clearly showed that multivitamin supplementation reduced overall cancer risk.**

Similarly, a systematic review of 35 independent observational studies found that higher levels of 25-hydroxyvitamin D in the blood significantly reduced the risk of colorectal cancer.

(Note: The 25-hydroxy vitamin D test is the most accurate measure of vitamin D in the body.)

Yet another study carried out in 2011 shows that that gamma-tocotrienol, a cofactor found in natural vitamin E preparations, reduces prostate tumor formation by an incredible 75 percent!

And there's more...

But before we look at these studies in detail, let's first understand how fruit and vegetable consumption impacts your cancer risk today. After all, produce has been the traditional source of health-giving vitamins and minerals in our diet for centuries – well before supplements entered the picture.

Do Fruits and Vegetables Lower Cancer Risk?

Many studies have shown that higher consumption of fruits and vegetables is associated with a significantly lower risk of dying from all causes. For instance, a 2014 meta-analysis of six prospective cohort studies showed that each daily increment of one serving of fruits and vegetables lowered the risk of dying, up to a threshold of five servings.

(**Note:** A “meta-analysis” uses a statistical approach to combine the results from multiple studies to increase statistical “power” relative to individual studies, improve estimates of the size of the effect, and/or to resolve uncertainty when reports disagree. A “prospective study” watches a so-called “cohort” of subjects over a fixed period and waits for specific outcomes, such as the development of a disease – and tries to relate this to other factors, such as suspected risk or protection factors.)

So what are the effects of fruits and vegetable consumption on cancer risk?

To answer this question, another prospective study looked at the relationship between consumption of total fruits, total vegetables, and total fruits and vegetables combined, relative to cancer risk in the *European Prospective Investigation into Cancer and Nutrition (EPIC) cohort*.

Both increased intake of total fruits and vegetables combined and total vegetables reduced cancer risk in the 142,605 men and 335,873 women included in the study. Overall, this study showed a small but clear and significant association between intake of total fruits and vegetables and lowered cancer risk.

On the other hand, other studies have not always shown this relationship. For instance, a Swedish study in a large group of women did not find any connection between “fruit and vegetable intake” and overall cancer incidence.

Yet another study looked at the relationship between fruits and vegetable consumption and the incidence of cancer and deaths in two different cohorts. Nearly 72,000 female participants in the *Nurses' Health study* and nearly 38,000 male participants in the *Health Professionals' Follow-up Study* were asked to fill in food-frequency questionnaires.

The study results showed that total fruits and vegetable intake (five servings daily) was associated with a lower risk of cardiovascular disease, but not with lower overall risk of cancer incidence.



It's commonsense that regular consumption of organic produce is good for our health, so why do some studies not reflect this?

So what's going on?

We know for a fact that regular consumption of fresh, organic produce is good for our overall health and wellbeing. So why do some studies show benefits for cancer risk, while others don't? There could be many possible reasons for this. Let's take a closer look...

Fruits and Vegetables May Not Lower the Risk of *Every* Cancer

According to the National Cancer Institute (NCI), cancer is the name given to a massive collection of related diseases. The only common feature in all types of cancer is that some of the body's cells begin to divide in a disorderly way without stopping and may eventually spread into surrounding tissues.

Other than that, there are huge differences between different cancers in terms of what sets them off, how and where they grow, and whether or not they migrate to other parts of the body (known as metastasis). Further, differences in your genetics, environment, and lifestyle all affect your individual predisposition to developing cancer and how a tumor may grow inside your body.

For instance, one person may develop lung cancer as a result of years of heavy smoking, while another may not. A third person may get lung cancer because of an entirely different reason. For example, working in an unsafe environment with cancer-triggering chemicals.

Since no two cancers and cancer risks are alike, it's not really possible to group many people together (each with their own specific type of cancer risk) and detect an effect of a therapy, unless the effect is so strong that it cuts across all forms of cancer.

For instance, some very powerful drugs used in chemotherapy and radiation therapy do kill different types of cancer cells – but they also destroy normal tissue at the same time and are incredibly toxic for the body.



Chemotherapy kills cancer cells... and healthy cells along with them

Consumption of fruits and vegetables is much subtler and clearly does not affect the risk of getting all forms of cancer equally. Instead, consuming them may preferentially lower the risk of some types of cancer over others.

Of course, eating freshly grown fruits and vegetables that have not been treated with pesticides or herbicides is safe for your body... unlike many powerful but very toxic cancer therapies.

Is the Level of Nutrition in Today's Fruits and Vegetables Sufficient?

Today, most people buy their food instead of growing their own. This has spawned a massive food industry where, for the most part, the health and wellbeing of the end-consumer (that's you and me), are considered secondary to profits.

This makes no sense at all, since our health and wellbeing are intricately tied to our diet. In essence, we are what we eat.

Many people these days are also prescribed various drugs and treatments by their MD when they fall ill. There's a growing school of thought that this only further complicates the problem. That the poor quality of nutrition in today's foods (including produce), lies at the root of all our health problems and should be addressed first.

For instance, we assume spinach has a certain amount of beneficial iron in it. However, unless the soil the spinach was grown in had sufficient iron, this is simply no longer true. The fact that spinach had iron in it when levels were measured way back in the 60s doesn't mean that the spinach you're buying today has the same levels of iron.



Average nutrient levels in crops have been falling steadily since the USDA first started measuring them

In fact, data from the U.S. Department of Agriculture (USDA) clearly shows that average nutrient levels in U.S. crops have been steadily falling since they were first documented just over 80 years ago.

Not only that, you can't be sure that you're buying a typical bunch of spinach. Your bunch may have iron levels corresponding to the USDA data, or it might be less. **As an end consumer of the present-day food industry, you can no longer state with any certainty that you can and do get all your nutrients from food.** More than likely, you have no idea what's in your food and what's not.

Of course if your food is made with raw ingredients and is unprocessed, you *can* dramatically improve the nutritive quality of your diet.

Many studies carried out on lab and farm animals given corn, soy, wheat, oats, and other crops grown in soils of different mineral levels clearly show that growth rate, vigor, and functional intelligence declined, while susceptibility to various diseases increased in animals fed crops grown in depleted soils, relative to more balanced soils.

This makes intuitive sense. The nutritive value of the fruits and vegetables we eat has a direct impact on our personal health and wellbeing and helps to determine our susceptibility to various diseases – including cancer.

The sad fact is... unless you're growing your own food or sourcing it directly from a farmer you can trust, you simply can't be sure of getting all the nutrients you need from your diet alone.

Enter multivitamin supplements. Let's see what credible, peer-reviewed scientific studies have to say about their role in cancer risk.



Unless you're growing your own organic food in quality soil or sourcing it from a trustworthy farmer, there's no way to ensure you're getting all the nutrients you need from your diet alone

Multivitamins and Cancer – The Physicians’ Health Study II (PHS II)

This clinical trial represents the only large-scale, randomized, double-blind, controlled study testing the long-term effects of multivitamin supplementation for the prevention of multiple chronic diseases.

(Note: A “randomized controlled” trial aims to reduce selection bias when testing a new treatment. Participants in the trial are randomly allocated to either receive the treatment in question or a control treatment known as the “placebo.”

A “double-blind” clinical study is one in which neither the patients, nor the study researchers, nor those who analyze the results, know which participants have been subjected to which procedure – the idea being to ensure objectivity in the final analysis.)

In this study, researchers looked at the effects of multivitamin use on total as well as so-called “site-specific cancers,” including prostate and colorectal cancer. Simultaneously, they also looked at the effects on cardiovascular events, eye disease, and cognitive decline, the results of which are being published separately.

A total of 14,641 male U.S. physicians aged 50 years or older (including 1,312 men with a history of cancer at randomization) enrolled in this study starting in 1997.

During the follow-up period of 11 years, 2669 men developed confirmed cancer, including 1373 cases of prostate cancer and 210 cases of colorectal cancer.

Compared with the control group, men taking a daily multivitamin had a statistically significant reduction in the incidence of total cancer.

However, there was no significant effect on the incidence of prostate cancer, colorectal cancer, or other site-specific cancers. Further, there was no significant difference in the risk of death due to cancer between the multivitamin-treated and control groups.

However, the fact remains... in this large prevention trial of over 14,000 male physicians, daily multivitamin supplementation modestly but significantly reduced the risk of getting total cancer.

The Link Between Vitamin B and Reduced Lung Cancer Risk

High blood levels of vitamin B6, folic acid (vitamin B9), and the amino acid methionine are associated with reduced lung cancer risk. In fact, people with high levels of these three nutrients had a significantly lower risk of lung cancer, whether they had ever smoked or not!

Both B vitamins and methionine help to maintain the integrity of the all-important DNA in our body’s cells. This may be how they affect lung cancer risk.



High blood levels of vitamin B6, folic acid (vitamin B9), and methionine are associated with a lower risk of lung cancer

For this study, *the European Prospective Investigation into Cancer and Nutrition (EPIC)* recruited over 500,000 participants from 10 countries and measured their blood levels for four B vitamins – B2, B6, B9, and B12 – as well as for methionine and homocysteine.

Within the entire EPIC cohort, people with higher blood levels of vitamin B6, vitamin B9, and methionine showed an incredible 50 percent lower risk for lung cancer – and these results were seen in people who had never smoked, were former smokers, as well as in current smokers.

The Impact of Vitamin D on Colorectal and Breast Cancer

Previous epidemiological studies have suggested that low or insufficient blood levels of vitamin D can increase the risk of getting several cancers; presumably, raising blood levels would reverse this effect.

To examine this possibility, a systematic review carried out in 2009 identified 35 observational studies that looked at blood levels of 25-hydroxyvitamin D relative to the risk of colorectal, breast and prostate cancer, and colonic adenoma.

These study researchers found that the higher the levels of blood 25-hydroxyvitamin D, the lower the risk of developing colorectal cancer.

However, no such association was found for breast and prostate cancer in this review.

On the other hand, it has been shown that in women diagnosed with breast cancer, those who have higher levels of blood 25-hydroxy vitamin D survive longer. While women with lower vitamin D have higher mortality rates.

Indeed, a prospective cohort study in Germany with nearly 1,300 postmenopausal breast cancer patients clearly showed that lower blood levels of 25-hydroxy vitamin D were associated with poorer overall survival and a higher risk of death.

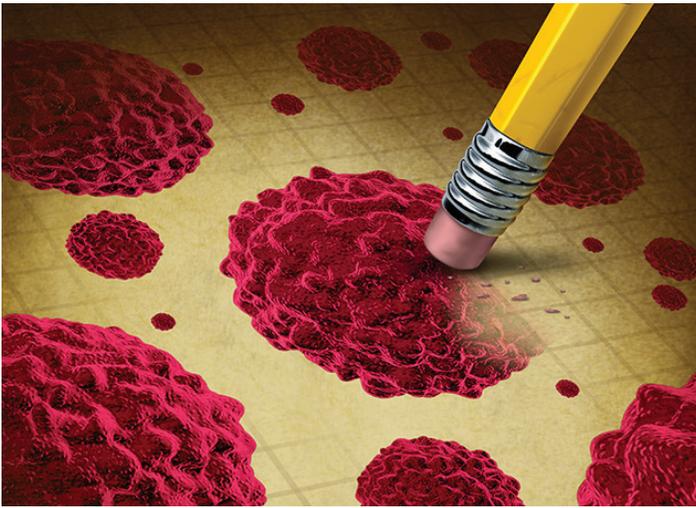


In postmenopausal women with breast cancer, those with higher blood levels of vitamin D survived longer

Intravenous Vitamin C (IVC) Reduces Tumor Size in Advanced Cancers

You can tell that oncologist Victor Marcial-Vega, MD, likes a challenge. During a talk in 2010 at the Medical Sciences Campus in the University of Puerto Rico, he explained how he and his team had specifically sought out patients with advanced, “incurable” stage IV cancers.

Of these, 40 patients received 40,000-75,000 mg of vitamin C intravenously several times a week, along with a special diet and other supplements. Incredibly, 75 percent of these patients achieved an initial tumor response rate, defined as a 50 percent or more reduction in tumor size!



In a study of 40 patients with stage IV cancer, 75% achieved a reduction in tumor size after receiving intravenous vitamin C several times a week

The *Riordan intravenous vitamin C (IVC) protocol* – now of great interest for its potential use in adjunctive cancer care – involves the slow infusion of vitamin C at high doses. IVC use has recently become very popular among integrative and orthomolecular medicine practitioners.

Vitamin C was first suggested as a tool for cancer treatment in the 50s, when its role in collagen production and protection led to the hypothesis that its replenishment would protect normal tissues from tumor invasiveness and metastasis. Also, since cancer patients are often vitamin C deficient, replenishment may improve immune system function and enhance health and wellbeing in cancer patients. Up to a four-fold survival time has been observed in terminal cancer patients treated with IVC.

There are many valid reasons for using IVC to treat cancer:

1. High blood levels of vitamin C can safely be achieved with IVC infusions.

2. At high levels, vitamin C is preferentially toxic to cancer cells and is able to prevent the formation of new blood vessels that feed tumors and help them to grow.
3. Vitamin C can accumulate in tumors, with significant tumor growth inhibition.
4. Published case studies report that IVC has anti-cancer efficacy, improves patient wellbeing, and lowers markers of inflammation and tumor growth.
5. Phase I clinical studies indicate that IVC can be administered safely, with relatively few adverse effects.

You can download the intravenous (IV) vitamin C protocol used by Dr. Marcial-Vega free of charge at <http://www.doctoryourself.com/RiordanIVC.pdf> OR <http://www.riordanclinic.org/research/vitaminc/protocol.shtml>

You can also watch a free access video on intravenous vitamin C cancer therapy for cancer at <http://www.riordanclinic.org/education/symposium/s2009> (11 lectures) and <http://www.riordanclinic.org/education/symposium/s2010> (10 lectures).

Vitamin E and Lung Cancer

According to a recent report on NBC News, *“Vitamin E does no good at all in preventing cancer or heart disease.”*

Must be they never saw (or bothered to look for) this and other similar studies.

In an ongoing study of 1,088 lung cancer cases and 1,414 healthy matched controls, researchers studied

the associations between consumption of alpha-, beta-, gamma-, and delta-tocopherol in the diet relative to lung cancer risk.

(**Note:** Tocopherols are a class of organic chemical compounds, many of which have vitamin E activity.)

Increasing intake of dietary alpha-tocopherol (300 IU vitamin E per day) was seen to lead to between a 34-53 percent reduction in lung cancer risk.

Natural Vitamin E Factor and Cancer

Gamma-tocotrienols, one of the natural constituent compounds of vitamin E, have been shown to act against a wide range of human cancers. For instance, not only do they prevent prostate cancer cell invasion, but they also sensitize prostate cancer cells to other anti-cancer drugs.

A 2008 study showed that tocotrienols are able to induce apoptosis and cell cycle arrest in human prostate cancer cells, suggesting a potential role for them in prevention of prostate cancer. In fact, this natural vitamin E factor leads to a staggering 75 percent reduction in prostate tumor formation!

In a 2011 study, gamma-tocotrienols were seen to target prostate cancer stem cells, which may account for their anti-cancer actions. Other studies have shown that tocotrienols are powerful growth inhibitors and inducers of apoptosis (“programmed cell suicide”) in human breast cancer cells.

Why Vitamin Quality is Critical

Contrary to the view espoused by Government health agencies, vitamins are very good for our health and wellbeing. As we’ve covered in this article, there are many peer-reviewed studies that

show strong correlations between regular consumption of multivitamin supplements and reduced risk of various cancers.

No, we’re not claiming that any single multivitamin supplement will cure cancer. Let’s be clear: supplements do **not** cure cancer. Food does **not** cure cancer. But clean, organic, non-GMO food can provide the body the raw materials (i.e. fuel) that it needs to heal itself. That is the where true healing/curing takes place. **It’s the body that heals!** In the words of my good buddy, Robert Scott Bell, *“the power to heal is yours!”* And much in the same manner that food can provide fuel to the body to facilitate healing, so can properly manufactured supplements.

That being said, not all supplements are created equally. Believe it or not, many vitamins that are marketed as “natural” in your local grocery store are actually **synthetic**, and to call a synthesized vitamin “natural” is an oxymoron. Natural vitamins are made by God. They’re not “created” (synthesized) from something by experts in laboratories, with various components being **isolated** from other essential components. The fact of the matter is that isolated, synthetic nutrients are not found anywhere in nature.

We all know that whole foods (like fresh vegetables, raw honey, and brown rice) are more nutritious than refined foods (like vegetable chips, white sugar, and white rice). I think everyone would agree on that fact. I mean, that’s a “no brainer.” So why should it be any different for vitamins and minerals and supplements? The reality is that synthesized supplements are not nearly as beneficial for the body as whole-food-based supplements.

Much like refined foods, synthesized supplements have oftentimes been robbed of nutrients, act more like “drugs” or “xenobiotics” (foreign substances) in your body than supplements (because they are isolated), and can actually create imbalances if taken for long periods of time.

Whereas whole-food-based supplements are exactly what their name suggests: supplements made from concentrated whole foods. The vitamins are **not** isolated, but actually a synergy of enzymes, coenzymes, trace elements, antioxidants, and other factors all working in harmony to provide your body with the fuel that it needs to stay healthy.

If you go to a junkyard, you can certainly find all the “parts” that are needed to build an automobile (tires, a steering wheel, an engine, shock absorbers, an axle, windshield wipers, seats, headlights, etc). However, if you throw all these isolated parts into a big pile, you can’t expect a BMW to emerge, can you? I mean, we all know that an automobile, in its original form, will perform better than a heaping pile of individual parts.

The same analogy applies to vitamins and minerals that have been isolated. We cannot isolate nutrients from the whole complex and then expect them to do the same job as the whole complex is designed to do. In other words, they are parts of an entire synergistic complex that serve a good purpose when they are part of the whole. But they will not provide the fuel that your body needs unless they are part of a well-orchestrated “nutritional symphony.”

A perfect example of this is calcium. It’s generally accepted that we need calcium to build and maintain strong bones and teeth and joints. But supplementing with calcium **alone** does more harm

than good. Without magnesium, vitamin D, zinc, boron **and** high quality, bioavailable protein, our bodies do not know what to do with the calcium.

Without these “cofactors,” the body’s tissue literally chokes on the calcium, sort of like filling an engine with gasoline but forgetting to give it oxygen.

Gag! Choke! Flooded engine. In the case of calcium, without the co-factors, it gets deposited in tissue (known as “calcification”) and is one of the signs of aging. Eventually it can cause premature death. Quite literally, we turn to stone.

But what happens if we mix a little air with the gasoline? **Boom!**... The engine ignites! Similarly, if we mix in zinc, vitamin D, magnesium, silicon, boron, and protein with the calcium, then the body understands what’s going on, the cells turn on, and the body begins to function at optimal levels.

Although many supplement makers try to cram as many isolated components as possible into a capsule, telling us that “the more the better,” the reality is that synthesized components can actually create imbalances in the body. What we need is bioavailable, synergistic, nutrient complexes only found in **whole-food-based** supplements.

All these reasons are why I strongly recommend whole-food-based supplements be your first choice. And because there are so many poor quality vitamins and other isolated supplements on the market, it became my personal mission to source (and eventually help create) products I could confidently take along with my entire family. That’s why we formed a new supplement company ([Epigenetic Labs](#)) so that we could make sure that you have a reliable source of bioavailable, whole-food-based supplements.

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How to Reduce Your Risk of Prostate Cancer through Diet & Nutrition – PART 2

By Suresh Nair, PhD

In Part 1 (July 2016 HAC newsletter) of this two-part article series we discussed how prostate cancer is the second most common cancer affecting men, and the second leading cause of death from cancer in men. Fortunately, prostate cancer has a nearly 90 percent survival rate after being diagnosed.

Clearly, the key is to catch prostate cancer early and manage it well. However, how exactly this needs to be done is currently being hotly debated. For instance, the PSA test may not a reliable indicator of prostate cancer risk as it was once believed.

In the meantime, a growing school of thought is beginning to subscribe to the theory that a healthy diet, proper nutrition, and an active, healthy lifestyle may help to lower prostate cancer risk significantly.



An active, healthy lifestyle and proper nutrition are key contributors to a decreased risk of prostate cancer

In Part 1 we considered vitamin D and vitamin E and their proposed role in prostate cancer risk. It seems that a deficiency of either of these two vitamins is associated with a greater risk of developing prostate cancer – or more aggressive forms of prostate cancer.

Preliminary research also suggests that modified citrus pectin (MCP) – a complex carbohydrate found in the peel and pulp of citrus fruit – may have protective effects against colon, lung, and prostate cancer.

Let us now consider the effect of various dietary components on prostate cancer risk.

The Impact of Diet on Prostate Cancer

An extensive review conducted by an expert panel on behalf of the World Cancer Research Fund and the American Institute for Cancer Research has shown clear links between specific foods and nutrients and prostate cancer risk.

For instance, foods that are rich in omega-3 fatty acids and lycopene protect against prostate cancer, as does a low-carbohydrate diet. Additionally, pulses (legumes), green tea, pomegranates, and high levels of vitamin D in the blood also lower prostate cancer risk.

On the other hand, **excess consumption of dairy or supplements containing calcium have been linked to an increased risk of prostate cancer.**

Similarly, regular consumption of sugared beverages, refined, and processed foods is associated with a greater risk of prostate cancer.



Excessive consumption of calcium through supplements or dairy foods is linked to an elevated prostate cancer risk

Organically and locally grown, pesticide-free, and non-irradiated fruits and vegetables are rich sources of vitamins, minerals, and hundreds of healthful phytochemicals. Several epidemiologic studies have found that the more fruits and vegetables you eat, the lower your overall cancer risk as well as prostate cancer risk.

Specifically, cruciferous vegetables such as broccoli, cabbage, cauliflower, and allium vegetables such as garlic, leeks, chives, and shallots contain sulfurous phytochemicals (known as sulforaphanes) that enhance your immune system, along with blocking cell growth and inducing programmed cell death (apoptosis) in cancer cells.

For instance, broccoli contains a powerful sulforaphane. Research shows that men who eat broccoli show hundreds of beneficial changes in genes that are known to play a role in fighting cancer.

Allium vegetables also appear to protect against prostate cancer, although the data is limited at present. A randomized trial with 199 men found that a mix of pomegranate, green tea, broccoli, and turmeric significantly reduced the rate of rise in PSA protein in men with prostate cancer.

The so-called “Mediterranean diet” – long associated with longevity as well as lower cardiovascular and cancer mortality – contains many foods that lower the risk of prostate cancer. Compared with western European countries, Greece has lower prostate cancer mortality. Consumption of a traditional Mediterranean diet may be responsible for lowering their risk.



Adherence to the Mediterranean diet was shown to reduce overall mortality rate by 22 percent in men already diagnosed with non-metastatic prostate cancer

A clear link exists between obesity and higher prostate cancer risk, along with a higher risk of metastasis and death among obese people who develop prostate cancer.

Next, let’s take a closer look at some dietary components and their role in prostate cancer risk.

What is the Mediterranean Diet and How Does it Benefit Health?

The Mediterranean diet includes the traditional dietary habits of the people of Cyprus, Croatia, Spain, Greece, Italy, Morocco, and Portugal. In general, it is characterized by a relatively high consumption of olive oil, legumes (pulses), unrefined cereals, fruits, vegetables, and nuts, along with moderate to high consumption of fish, moderate consumption of dairy products (mainly cheese and yogurt), moderate consumption of red wine, low consumption of meat and meat products, and last but not least enjoying meals in the sociable company of family and friends.

Extensive research shows that this diet lowers the risk of heart disease. A meta-analysis of more than 1.5 million healthy adults confirmed that following a Mediterranean-type diet meant a significantly reduced risk of both cardiovascular and overall mortality.

Additionally, the traditional Mediterranean diet also lowers the risk of cancer, obesity, and metabolic syndrome – and *“is potentially associated with defense against neurodegenerative disease and preservation of cognitive function, reduced inflammation, and defense against asthma.”*

For instance, women who eat a Mediterranean diet supplemented with extra-virgin olive oil and mixed nuts have a reduced risk of breast cancer. Increasing evidence also suggests that the Mediterranean diet can slow memory loss with age and may lower the incidence of Parkinson’s and Alzheimer’s diseases.

For all these reasons, most major scientific organizations now encourage everyone to adopt a Mediterranean-type diet to lower their risk of major chronic diseases.

In fact, in 2013 the World Health Organization took the unusual step of inscribing the Mediterranean diet in the Representative List of the Intangible Cultural Heritage of Humanity, in recognition of its many health benefits.

Dr. David Katz is a practicing physician and researcher at Yale University’s Prevention Research Center. Along with his Yale colleague Stephanie Meller, he published a study comparing major diets including low carb, low fat, low glycemic, Mediterranean, mixed/balanced (DASH), Paleolithic, vegan, and others.

While no diet clearly emerged as the best, the study did identify common elements that were clearly beneficial to health: *“A diet of minimally processed foods close to nature, predominantly plants, is decisively associated with health promotion and disease prevention.”*

It is now widely accepted by diet and nutrition experts that nutrition-rich, plant-based diets – including, but not limited to the Mediterranean diet – lead to better health outcomes.

Do Carbohydrates Have an Impact on Prostate Cancer Risk?

Some experts believe that high levels of insulin promote prostate cancer. So it makes sense that reducing carbohydrate intake – especially foods with a high glycemic index (GI) – to control your insulin levels can also help to lower your prostate cancer risk.

(**Note:** The GI is a number associated with a food that indicates the food's effect on blood glucose (also known as blood sugar) levels. A value of 100 represents the standard, equal to an equivalent amount of pure glucose. The GI represents the rise in a person's blood sugar level following consumption of a particular food and is useful for understanding how the body breaks down different carbohydrates during digestion.)

In animal models, both a zero-carbohydrate diet and a low-carbohydrate diet (both low GI) were seen to slow prostate tumor growth. **In human studies, high intake of refined carbohydrates (high GI) was associated with increased risk of prostate cancer.**



A high intake of refined carbohydrates (e.g. bread, cakes, and candy) has been shown to increase risk of prostate cancer

To lower your risk of prostate cancer, nutrition experts recommend consuming controlled quantities of complex carbohydrates rich in dietary

fiber, which are low to medium GI and also usually contain many of the vitamins and minerals your body needs to remain healthy and disease-free. Some examples of good complex carbs include pumpkin, butternut squash, sweet potato, plantain, quinoa, brown rice, bananas, organic sweet corn.

Replacing junk food in your diet with quality complex carbohydrates can help to improve insulin, cholesterol, and blood pressure regulation.

Stay away, however, from refined grains that are stripped of the fiber- and nutrient-rich bran and germ portions of the seed. Foods made with refined grains (such as those found in many breakfast cereals) are typically very poor both in terms of fiber content and nutrition.

A recent study shows that regular consumption of refined foods and sugared beverages was linked to a three-fold greater risk of prostate cancer, while higher intake of processed foods including pizza, burgers, and meat sandwiches doubled prostate cancer risk.

Above all, be sure to completely avoid or minimize your consumption of overly refined and processed foods, including sweets, cakes, pies, doughnuts, and all artificially sweetened foods and beverages. **Refined foods and sugary drinks triple the risk of prostate cancer.**

Lower Prostate Cancer Risk with Omega-3 Fats

Omega-3 fatty acids are polyunsaturated fats, or PUFAs. They include the shorter-chain alpha-linolenic acid (ALA) and the more important longer-chain eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA).

We obtain ALA when we consume plants and plant oils – specifically walnuts, edible seeds, clary sage seed oil, algal oil, flaxseeds and flaxseed oil, Sacha Inchi oil, Echium oil, and hemp oil.

Far richer dietary sources for EPA and DHA include oily fish such as cod liver, herring, mackerel, wild salmon, and sardine. Fish oils, egg oil, squid oils, and krill oil, as well as various edible seaweed and phytoplankton are also good sources.

Also, we can make the long-chain omega-3 PUFAs EPA and DHA from the shorter-chain ALA in our bodies, although the ability to do this may become impaired with age.

Laboratory experiments on cell lines and animal studies suggest that omega-3s lower overall cancer risk by suppressing inflammation, inducing programmed cell death (apoptosis), and preventing the formation of new blood vessels that fuel tumor growth.

Omega-3 PUFAs have been shown to slow the growth of prostate cancer cells in the laboratory. Further, higher consumption of omega-3s has been linked to a lower rate of death from all causes among men with non-metastatic prostate cancer in the *Health Professionals Follow-up study*.

In a study of 48 men with prostate cancer, a repeat biopsy in six months showed that eicosapentaenoic acid (EPA) supplementation prevents prostate cancer progression.

A low-fat diet with omega-3 PUFA supplementation four to six weeks prior to radical prostatectomy (a surgical procedure to remove part of or all of the prostate gland) reduced prostate cancer cell

proliferation and cell cycle progression. **In general, regular consumption of omega-3 PUFAs from fish lowers fatal prostate cancer risk.** However, more research is needed to understand the exact role of the amount and type of total fat and different fatty acids in prostate cancer risk.



In general, regular consumption of omega-3 fats from fish lowers fatal prostate cancer risk

The Calcium Connection

Increased consumption of dairy products has been shown to **nearly double the risk of prostate cancer**. Calcium is one of the primary ingredients in dairy products. It is also the most abundant mineral in the human body and is considered essential for life.

Up to 99 percent of the body's calcium is stored in bones and teeth, to support their structure and function. Your bones undergo continuous remodeling, with constant "resorption" (leaching of calcium out of bone) and deposition of calcium into new bone. However, calcium levels in the blood are very tightly controlled and do not fluctuate with dietary intake.

Milk, yogurt, and cheese are rich natural sources of calcium. Non-dairy sources include Chinese cabbage, kale, and broccoli. Spinach contains calcium, but unfortunately our bodies are not able to absorb a lot of it. Most grains, cereals, some fruit juices and drinks, and tofu are fortified with calcium.

So what is the connection between calcium consumption and prostate cancer?

In an eye-opening 2011 study, prostate cancer cells were treated with cow milk, almond milk, soy milk, casein, or lactose in a laboratory setting. Amazingly, prostate cancer cells treated with cow milk grew faster! Soy milk did not affect the growth of prostate cancer cells, while almond milk actually slowed the growth of prostate cancer cells.



In one study, almond milk slowed the growth of prostate cancer cells, while cow's milk caused the cancer cells to grow faster

Another study in 2012 looked at the consequences of consuming different doses of vitamin D and calcium in mice containing human prostate cancer cells. Interestingly, prostate cancer cells grew fastest in mice that received normal calcium and no vitamin D at all, relative to other diets. In other words, vitamin D deficiency in the presence of calcium appears to help prostate cancer cells grow better.

Several epidemiological studies have found an association between high consumption of calcium or dairy foods or both, and an increased risk of prostate cancer in men.

(**Note:** Epidemiology is the study and analysis of the patterns, causes, and effects of health and disease conditions in specific populations.)

Specifically, studies of dairy products, dietary calcium, and prostate cancer risk indicate that high total calcium consumption is linked to a greater risk of advanced and metastatic prostate cancer. For example, a 2015 review of 32 studies found that **consuming lots of milk, low-fat milk, cheese, total dietary calcium, and dairy calcium was linked to a greater prostate cancer risk.**

Interestingly, in this same review, calcium supplements and non-dairy calcium were not linked with an increased risk of developing prostate cancer. Instead, calcium supplements seemed to increase the risk of dying from prostate cancer that was already present.

Overall, consuming more than 1,500–2,000 mg of total calcium daily seems to be responsible for increased prostate cancer risk, especially advanced and metastatic cancer, when compared with consuming 500–1,000 mg daily.

Daily doses of more than 1,000 mg have also been associated with a higher risk of cardiovascular disease and death.

The Benefits of Green Tea

After water, tea is the most widely consumed beverage in the world. Traditionally made from the leaves of the *Camellia sinensis* plant, many studies suggest that green tea lowers prostate cancer risk.

For instance, prostate cancer mortality rates are the lowest in Asian countries where per capita consumption of green tea is high. Not only that, prostate cancer risk rises in Asian men who migrate to the U.S. and abandon their traditional dietary habits.

In laboratory experiments, green tea and green tea extracts have been shown to stop cancer cells from growing, and even kill them – along with preventing the formation and growth of new blood vessels in tumors, depriving them of essential nutrients.

The cancer-fighting properties of green tea are believed to be because of the presence of bioactive green tea polyphenols known as catechins. Epigallocatechin-3-gallate (EGCG) is the main catechin, making up 50-75 percent of the total catechins in green tea.

The beneficial effects of green tea may be due to EGCG's ability to block the actions of male hormones (known as androgens) on their receptor proteins in prostate cancer cells. This slows their spread and increases the rate at which they die. Preventing the activation of the androgen receptor is a successful approach to treating prostate cancer, so green tea is likely to be useful as a future therapy for this disease.

EGCG also lowers the activity of enzymes known as histone deacetylases in prostate cancer cells, which also contributes to their death. In fact, EGCG treatment has been shown to change the expression of up to 40 genes in prostate cancer cells.

One potential problem with these laboratory studies is the high doses of tea polyphenols used to treat prostate cancer cells. We may need to drink seven to nine cups of green tea or more to achieve equivalent levels of EGCG in our blood, which is unlikely to be tolerated well by our digestive system.

However, drinking such a lot of green tea may not be necessary to take advantage of its protective effects. Taking two or three cups daily (or more, depending

on your preference) should still provide significant desired health benefits.



Drinking 2-3 cups of green tea daily will likely provide positive health benefits

Studies in mice show that treatment with green tea catechins mimicking daily consumption of 6 cups of green tea delays the development of prostate tumors. In another study, mice having human prostate cancer cells that were treated daily with EGCG showed clear reductions in tumor volume and lower blood PSA levels, suggesting that EGCG could potentially be used to treat patients with advanced prostate cancer.

Moving on to human studies... in an Italian study, 60 men diagnosed with high-grade PIN were randomly assigned to receive green tea catechin capsules (600 mg daily) or a placebo every day for an entire year.

(**Note:** Prostatic intraepithelial neoplasia (PIN) is a condition in which prostate gland cells become somewhat abnormal, but still don't look like prostate cancer cells under a microscope. High-grade PIN is considered to be a pre-cancer of the prostate because it is likely to turn into prostate cancer over time.)

After six months, six of the 30 men in the placebo group were diagnosed with prostate cancer, relative to none in the green tea catechin group. After one

year, nine men in the placebo group, but only one man in the green tea catechin group were diagnosed with prostate cancer.

These findings clearly show that green tea catechins can help to prevent prostate cancer in people who are at high risk for the disease – and that this protective effect is long-lasting.

So far, all the evidence strongly indicates that green tea consumption is the most beneficial in men diagnosed with early PIN lesions, men who are at high risk of developing prostate cancer, and men who are undergoing so-called “watchful waiting.”

(**Note:** Watchful waiting is the term used to describe closely watching a patient’s condition without giving treatment, unless symptoms appear or change. This approach is typically used in conditions that progress slowly – such as prostate cancer – especially when the risks of treatment are believed to be greater than the potential benefits.)

However, **green tea appears to have limited or no benefits in patients who are already suffering from advanced prostate cancer** – especially if the cancer has already metastasized, or migrated to other parts of the body.

Because of its promising anti-cancer activity, many human clinical trials have been carried out – and are ongoing – to conclusively find out whether EGCG and green tea extract supplements can help to protect against the onset of prostate cancer. In the meantime, you can safely drink two to three cups (or more, depending on your preference) of green tea daily to help lower your risk of developing prostate cancer, usually without any serious side effects.

Please note that if you are sensitive to caffeine or on prescription medications, you should first consult your physician before adding green tea to your diet.

How to Make a Perfect Cup of Green Tea

The health benefits of green tea depend on the type and quality of leaves, how much is used, how long it is brewed for, and the temperature of brewing.

Here’s how you can simply and easily prepare this healthful beverage:

Use 2 grams (roughly 1 tsp) of organic, non-irradiated green tea leaves for every 6 ounces of water. Use filtered or spring water (avoid fluoridated tap water, paying special attention not to re-boil fluoridated tap water as the chemical will concentrate).

To make the tea, place the water in a tea kettle and heat it to 160°–180°F. Alternatively, you could heat the water to just short of boiling. Place the loose leaves in a teapot or cup (you may want to add a small amount of room temperature water – enough to dampen the tea leaves or bag before adding the water). Pour the water over the tea leaves.

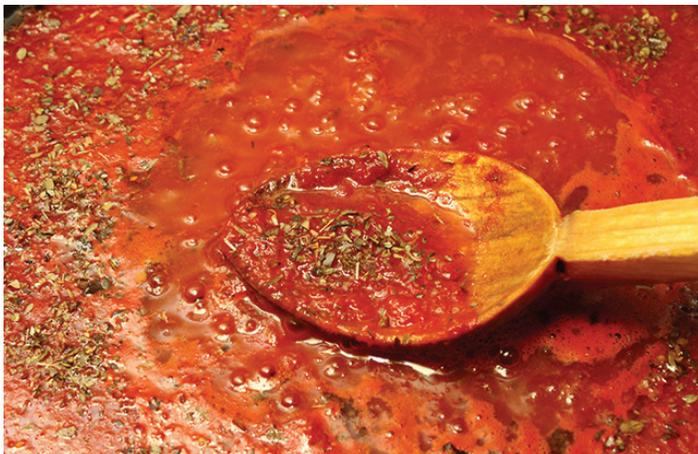
Next, place the lid on the teapot. If using a cup, cover it with a lid or a small saucer. Depending on the particular variety of green tea, it should be allowed to steep for 1–3 minutes. Small leaves generally infuse more quickly than large leaves.

Learn to Love Lycopene

Lycopene is a carotenoid, a natural pigment found in pink and red fruits and vegetables such as apricots, guavas, watermelons, pink grapefruit, red carrots, red bell peppers, and tomatoes.

In its natural state lycopene helps to protect plants from light-induced stress and also helps them make nutrients using the sun's energy. We cannot make lycopene ourselves, so we need to consume these colorful fruits and vegetables regularly to take full advantage of lycopene's health benefits.

One common source of lycopene is from tomatoes and tomato-based products such as tomato paste and tomato puree. Good fats such as olive oil and butter help to increase the absorption of lycopene from food into our bodies. For example, cooking diced tomatoes with olive oil significantly increases lycopene absorption.



Cooked tomatoes have even higher levels of lycopene than raw tomatoes

Lycopene acts as an antioxidant by countering harmful "free radicals" in our body.

(Note: A free radical is a highly reactive molecule that damages important biological structures in our

body's cells, such as DNA and proteins. Antioxidants limit the damage free radicals cause by neutralizing them.)

Multiple studies show that lycopene consumption helps to prevent prostate, lung, and stomach cancers. Not only that, lycopene consumption may also lower the risk of cardiovascular disease and stroke.

So how does lycopene consumption affect prostate cancer risk? In the laboratory, treating human prostate cancer cells with lycopene "arrested" them in their cell cycles – specifically, it stopped them from growing by blocking the expression of a protein known as cyclin D1. The more lycopene, the better it worked. Scientific evidence now suggests lycopene can block cancer cell growth at multiple stages in their growth cycle.

Epidemiological studies have shown that men who consume high amounts of dietary lycopene have a lower risk of prostate cancer. For instance, a 2004 meta-analysis found a small positive effect of tomato products on reduction of prostate cancer risk. *The Health Professionals Follow-Up study* indicated that lycopene in tomatoes helps to lower prostate cancer risk, specifically by affecting the formation and growth of new blood vessels that normally fuel tumor growth.

The National Cancer Institute's Prostate, Lung, Colorectal, and Ovarian (PLCO) Cancer Screening Trial looked at the association between lycopene consumption and prostate cancer risk. It found that increased lycopene consumption was linked to lower prostate cancer risk, but only among men who had a family history of prostate cancer.



Numerous large studies have examined the connection between lycopene and prostate cancer risk

Another study looked at prostate cancer progression in 40 patients with high-grade prostate intraepithelial neoplasia (PIN). Twenty of these men were given lycopene twice a day, while the remaining 20 were given no lycopene supplementation over a period of two years. Those patients treated with lycopene supplements showed a greater reduction in their blood PSA levels.

Not only that, adenocarcinomas were diagnosed in 6 out of the 20 patients who had not received the supplements, but only in 2 out of the 20 patients who had received lycopene. Clearly, lycopene may be an effective tool for preventing high-grade PIN from progressing to prostate cancer.

In another study, patients with localized prostate cancer who were given lycopene supplements twice daily for 3 weeks prior to prostatectomy had smaller tumors and lower serum PSA levels.

To add this healthful phytochemical in your diet, simply consume tomatoes and tomato-based products such as tomato puree, spaghetti sauce, tomato soup, salsa, ketchup, and tomato paste – which are all much more concentrated sources of lycopene than fresh tomatoes!

However, these products typically also contain high levels of salt, sugar, and preservatives, making them a lot less healthy than consuming fresh organic tomatoes.

As mentioned above, cooking tomatoes and other lycopene-rich foods in olive oil and butter helps to increase lycopene absorption. Health experts recommend that to make the most of lycopene's anti-cancer benefits, you should consume between 5,000 to 10,000 micrograms of lycopene daily, obtained from organic food sources.

Higher daily doses have been shown to cause diarrhea, nausea, and vomiting, bloating, gas, and gut irritation. So the best approach you can take is to include many different varieties of fresh or canned unadulterated, non-irradiated tomatoes and other lycopene-containing organic fruits and vegetables in your meals and salads as often as you can. Besides lycopene, other phytochemicals in these foods may also be contributing anti-cancer health benefits.



In addition to tomatoes, other sources of lycopene include pink grapefruit, watermelon, apricots, guava, red bell peppers, and red cabbage

Pomegranate: The Prostate Cancer Preventer

Originally from the region that is now modern-day Iran, the pomegranate is cultivated widely throughout the world nowadays.

This deep red fruit is chock-full of beneficial bioactive compounds known as phytochemicals. The most abundant phytochemicals in pomegranate are polyphenols including the ellagitannins, which are also found in walnuts. The red color of the fruit juice is because of natural pigments known as anthocyanins.

Plants, flowers, and fruits use pigmentation to protect themselves from harmful UV radiation from the sun and other environmental stressors. So when we consume plant foods containing pigments such as anthocyanins, they also help us to deal better with stress, radiation, and environmental toxins.

Compared to the edible pulp, the inedible pomegranate peel contains three times as many beneficial polyphenols and is used to make dietary supplements.

In a 2004 laboratory study, cold-pressed pomegranate oil, carbon dioxide-extracted seed oil, and juice and peel polyphenols – all of these prevented the growth of different prostate cancer cell lines. These effects were caused by changes in how these cancer cells grew as well as by the induction of apoptosis, or programmed cell death.

In another study, mice containing prostate cancer tumors were given pomegranate seed oil, peel polyphenols, or saline (0.9% salt solution). Mice given pomegranate extracts had significantly smaller tumor volumes relative to mice injected with saline.

The first clinical trial of pomegranate juice in men with prostate cancer showed that, on average, study participants who drank the juice had an increase in their prostate-specific antigen (PSA) doubling time, from 15 months before treatment to 54 months after treatment. In other words, their increase in PSA levels was slowed down nearly 4-fold.

Currently, further clinical trials are being carried out on the effects of pomegranate-extract pill, pomegranate juice, and pomegranate liquid extract for the treatment of prostate cancer.

To benefit from the anti-cancer benefits of the pomegranate, simply consume the fruit on its own or in fruit and vegetable salads. Fresh-pressed juice from organic, non-irradiated pomegranates is also hugely beneficial, not only for prostate cancer risk but also for cardiovascular health.



Only use fresh pomegranate juice made from the actual fruit, not processed pomegranate-flavored “drinks”

Recap & Conclusion

In Part 1 of this series you learned that a deficiency in either vitamin D or E is associated with a greater risk of developing prostate cancer, or more aggressive forms of prostate cancer. You also learned that the precise connection between blood levels of these two vitamins is not fully understood.

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

In this article (Part 2) we’ve covered the importance of eliminating simple carbohydrates and refined grains (think foods with sugar and flour), and replacing them with healthy complex carbohydrates.

You’ve learned the importance of consuming adequate levels of omega-3 fats, while being cautious with calcium and dairy.

When it comes to foods that men should consider adding into their diets... 2 to 3 cups of green tea daily, along with foods rich in lycopene, and pomegranate all appear to reduce prostate cancer risk.

About Suresh Nair, PhD



Suresh Nair is a health writer with more than 15 years of experience as a practicing laboratory scientist. He is also a former copy-editor and project manager at a medical communications company.

Suresh is a regular contributor to The Truth About Cancer, and has also written hundreds of articles for other websites and publications on health, alternative health, fitness, and nutrition as well as various other medical and clinical topics.

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

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Charlene's Cancer Fighting Kitchen

Cherry Apricot Anti-Cancer Smoothie



Ingredients:

- 1 cup fresh apricots
- ½ cup fresh dark red cherries, seeded
- 2-3 apricot kernels from the apricots above*
- 1 tablespoon cranberries
- 1 tablespoon coconut oil
- 1 cup freshly squeezed orange juice (3-5 oranges depending on size) or spring water

Directions:

1. Place all ingredients in a blender and process for 30 seconds or until smooth.
2. Distribute into glasses and enjoy.

This smoothie is an excellent cancer fighting beverage featuring lycopene from apricots, resveratrol, and B-17 from the apricot kernels.

It's anti-inflammatory, full of antioxidants, immune boosting, energizing and more. Perfect for breakfast, lunch, or a refreshing snack.

*Yield: Two 8-ounce servings
Preparation time: 10 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.

**Apricot kernels are the small seeds inside the hard apricot pit. They are an excellent source of B-17 which you can [learn more about here](#). For instructions on how to get the kernel out of the apricot pit, check out this [instructional YouTube video](#).*

Super Food Zucchini Chips



This delightful recipe is an excellent healthy choice for a snack or side dish and is so much healthier than potato chips. Zucchini is very nutritious, inexpensive, and readily available all year round; but is especially good (and often plentiful!) in the summer.

Zucchini is actually a fruit that is used like a vegetable and is rich in magnesium, vitamin C, and the B vitamins. It is also a plant source of omega-3 fatty acids and fiber, all of which spell “anti-cancer champion.”

The antioxidant and anti-inflammatory properties fight and prevent cancer along with the high fiber which activates the elimination of waste benefiting colon cancer prevention.

All in all, this delicious and flavorful snack is sure to become a household favorite.

Yield: 16 ounces of “chips”

Preparation time: 20 minutes

Ingredients:

- 3 medium zucchinis
- 1 teaspoon Spirulina powder*
- 1 teaspoon Moringa powder**
- 1 teaspoon turmeric powder
- 1 teaspoon dried oregano
- 2 tablespoons cold pressed coconut oil, melted over low heat
- 2 tablespoons freshly squeezed lemon juice
- ½ teaspoon pink or sea salt
- ½ teaspoon freshly ground black pepper

Directions:

1. Wash zucchinis and cut into slices ⅛ inch thick. Set aside in a large bowl.
2. Add Spirulina, Moringa, salt and pepper to a small bowl and gently whisk them together.
3. Add the melted coconut oil and lemon juice to a separate bowl and whisk them together.
4. Pour the dry spice mixture into the oil and lemon mixture and whisk again. Then pour the sauce over the sliced zucchini and mix with a wooden spoon or spatula gently to coat them evenly.
5. Preheat oven to 250 degrees Fahrenheit. Then rub a small amount of coconut oil on the bottom of a 9x13 glass baking dish. Place the zucchini in a single layer and then add in layers until all the zucchini is in the pan or use more than one pan.

Super Food Zucchini Chips *(continued)*

6. Put them in the oven on the center rack and bake for approximately two hours or until desired crispness. Remove from the oven allowing to cool and adding more salt and pepper as desired to taste. The chips will keep in an airtight container for three days or frozen for three months. Enjoy!

Note: This recipe can be prepared in a dehydrator at 112 degrees Fahrenheit for six to eight hours. At the halfway point flip the chips onto a screen for delicious raw chips.

**Spirulina powder can be purchased in most health food stores or [online](#).*

*** Moringa Farms is a good [online source](#) for Moringa powder. I recommend using bulk fresh ground powder instead of capsules. Another option for Moringa can be found [here](#).*



Black Wild Rice Stuffed Tomatoes



The featured ingredients in this dish include super food black wild rice and Maitake mushrooms. The black wild rice is noted for its anthocyanin antioxidants that help prevent cancer and reduce cholesterol levels which results in healthier arteries and tissues.

It lends a nutty smoky flavor, is highly nutritious and adds a special aesthetic value contrasting with the red tomatoes which are an excellent source of prostate-cancer-fighting lycopene.

The Maitake mushrooms, on the other hand, are known for their action against cancerous tumors of the breast, liver, and lungs. The spices further add to the cancer fighting arsenal making this unique recipe a keeper for your anti-cancer menu.

*Yield: 4 servings with 2 tomatoes each
Preparation time: 30 minutes*

Ingredients:

- 1 cup black wild rice, soaked 1 hour or overnight in spring water*
- 8 medium organic ripe tomatoes
- 1 cup dried Maitake mushrooms, soaked 15 minutes in 1 cup spring water**
- 2 cloves garlic, crushed
- 2 tablespoons balsamic vinegar
- ½ cup red bell pepper, diced
- ½ cup untoasted walnuts
- 1 small yellow onion, julienned

Spices and Garnish:

- ¼ cup organic hemp seed
- 1 teaspoon dried oregano
- 1 teaspoon dried thyme
- ¼ cup extra virgin olive oil
- ½ cup spring or filtered water
- Pink or sea salt, to taste
- Freshly ground black pepper, to taste

Directions:

1. Put wild rice in steamer or crockpot with sufficient water to cover one inch above the rice. Cook over low heat for 45 minutes or until rice is tender but not too soft.
2. Meanwhile, drain and reserve soak water from mushrooms. Create a sauce by adding mushrooms, walnuts, bell pepper, garlic, balsamic vinegar and half of the soak water from the mushrooms to a food processor. Blend until smooth adding soak water as needed. Set aside.
3. Wash tomatoes and slice 1/8 inch off the top. Scoop out the pulp and set aside in a bowl.

4. When the rice is tender, drain any residual water off and add onions and tomato pulp, stirring to incorporate. Then fill the tomatoes halfway with the rice mixture and pour several tablespoons of mushroom sauce on top. Add more rice to fill the tomatoes to the top, adding a little more sauce if desired and sprinkle with thyme and oregano.

5. Place tomatoes on a baking sheet and bake for 20 minutes at 300 degrees Fahrenheit.

6. Remove from oven and place tomatoes on a bed of black rice on each plate, sprinkle with hemp seed, remaining mushroom sauce, pink or sea salt with freshly ground black pepper to taste. Drizzle with olive oil and enjoy!

Serving Suggestions:

- These tomatoes can be served as the main dish along with a fresh cruciferous-based salad.
- As a light lunch the tomatoes can be eaten alone with a refreshing smoothie or Matcha tea.
- The lightly roasted tomatoes are a great side with any meat or pasta dish.

**Wild black rice can be found at stores such as Whole Foods and [online](#).*

***Maitake mushrooms can be purchased in many health food stores, Asian markets, or [online](#).*

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.

Mold: The Hidden Health Hazard in Your Home and Habitat

By Ty Bollinger

Oftentimes when I'm discussing with people the various risk factors for cancer and how best to avoid them, the conversation naturally gravitates toward the hidden causes of cancer that we don't hear much about in the media, and that most people don't even consider to be a threat.

I'm talking about something that is much more obscure than just smoking cigarettes and consuming too much alcohol... bad habits that almost everyone already knows are detrimental to health. Specifically, I mean one substance in particular that's shaping up to be perhaps the most overlooked carcinogenic substance in America today.

Some would argue that it's even more problematic than the "Big Three" contributors to cancer (poor diet, toxic exposure, and unhealthy vices like cigarettes and alcohol) due to the simple fact that almost nobody is aware of its presence, which means that almost no one is actively trying to avoid it.

This class of living organism naturally exists all around us, including in our air, our soils, and our food supply – and in some cases, even deep within the walls of our own homes.

It's a pervasive poison that's making millions of Americans sick, and it goes by a simple, four-letter name: mold.



Mold is a pervasive poison that is making millions of people sick – usually without their knowledge of the cause

While a growing number of scientists and medical professionals are starting to recognize that toxic mold is a serious problem and a major public health hazard to be avoided at all costs, the mainstream attention it's received has been surprisingly minimal at best.

You'd be hard-pressed to find any major medical association or public health agency in the U.S. today that's willing to address the problem of mold. Instead, many of these groups erroneously claim that mold isn't that big of a deal, which is perhaps why the solutions being offered are few and far between.

As we dive into the issue of toxic mold in this month's newsletter, keep in mind that the science on this controversial subject is still emerging – and we have a lot more to learn about the nature of mold and how it impacts our health.

Mold affects individuals differently depending on their environment, their unique genetic makeup, and even the types of mold to which they're exposed. Indeed, there's quite a lot that we do know about mold from a scientific perspective, and that's what I want to cover here for the benefit of you and your family.

What Mold Exposure Does to Your Body

To be honest with you, mold was never even on my radar as a possible cause of cancer – until I started hearing from individuals who, after many painstaking years of trial and error in attempting to pinpoint the cause of their inexplicable disease symptoms, stumbled upon mold as being the most probable culprit.

One of the individuals who is actively getting the word out about the dangers of mold is Dave Asprey from Bulletproof Executive. Dave's younger years were marked by obesity, chronic illness, persistent brain "fog," malaise, and a general lack of functionality – both of his physical body and his senses. After years of trial and error, he discovered that all these symptoms were a result of chronic mold exposure.

What he's learned over the years and continues to learn about the nature of mold is truly groundbreaking. He was even led to produce a documentary about the dangers of mold called *Moldy: The Movie*. Thanks to him and others like him, we're now able to pinpoint precisely how mold invades a person's body and destroys health, oftentimes without the person even knowing what's going on until it's too late.

When doctors couldn't figure out why Asprey was sick all the time – declaring him to be a hypochondriac simply because they couldn't diagnose him using conventional methods – he decided it was time to take matters into his own hands. What he learned through aggressive research and scientific "biohacking" was that he'd been exposed to mold all throughout his childhood, and that this exposure had created an autoimmune nightmare inside his body.

Mold has been around since the beginning of time, of course, but only since the industrial revolution has it become the serious health hazard that it is today. This is in large part due to the many ways in which we've polluted and abused the earth.

In a manner similar to how bacteria eventually mutate into "superbugs" after being repeatedly targeted by antibiotics (which happen to be made from mold, by the way), molds are known to grow increasingly more virulent when threatened by their competitors. In the case of our modern world, by intensive chemical agriculture and other forms of persistent environmental pollution. This diverse class of multicellular fungi manufactures poisons known as "mycotoxins" that it uses to ward off whatever competitors threaten its existence.



Intensive spraying of pesticides has contributed to the development of more virulent strains of mold that manufacture mycotoxins

Unfortunately for humans, these mycotoxins aren't selective in their toxicity. Many molds use "spores" that are adapted for dispersal to survive and reproduce in unfavorable conditions. Once mold spores are ingested through food or absorbed through the lungs, they basically go into attack mode by manufacturing mycotoxins for the purpose of attacking the body's systems. Mycotoxins are particularly harmful to our immune and neurological systems, it turns out, and are known to damage DNA and alter gene expression.

Dr. Lisa Nagy, MD, is another individual who, like Asprey, developed major health problems after being exposed to toxic mold for many years. This formerly-practicing doctor developed a debilitating combination of Addison's disease, mitochondrial myopathy, and Dysautonomia from mold exposure, which ultimately forced her to quit her job.

(**Note:** Addison's disease is a long-term disorder in which the adrenal glands don't make enough hormones. Symptoms may include abdominal pain, weakness, and weight loss. Mitochondrial myopathies are mitochondrial diseases with multiple symptoms including cognitive impairment ("brain fog"), dementia, strokes, unnatural buildup of lactic acid in the muscles, and more. Dysautonomia is used to describe various conditions in which the autonomic nervous system doesn't work properly, usually because of nerve damage.)

In the course of her subsequent research endeavors, Dr. Nagy uncovered how mycotoxins can cause an array of immunological, psychological, neuropsychological, neurological, and electrocortical damage to the body.

Symptoms of mycotoxin poisoning tend to vary dramatically from person to person. They often include allergies, irritability, inflammation, infections, difficulty concentrating or focusing (brain fog), memory loss, chronic fatigue, depression, headaches, muscle weakness, and increased sensitivity to other toxins. For example, chemical scents in perfumes and air fresheners. In more severe cases, digestive problems such as irritable bowel syndrome can develop, as can food allergies and autoimmune disorders.

Aflatoxins are one of the more common classes of mycotoxin and are known to cause cancer. They come in many forms, but they all have one thing in common – they get absorbed into cell membranes, make their way into the bloodstream and enter the liver and other vital organs where they then metabolize and bind to DNA, causing systemic DNA and gene damage. The same is true for most other aflatoxins, which invade the body and adversely affect the way it functions.



*Don't eat moldy food! Aflatoxin is a potent human carcinogen that is produced by a type of fungi called *Aspergillus flavus*. It is commonly found in food products such as peanuts and peanut butter*

Common Sources of Mold and What to Look For

The two main sources of mold exposure besides the natural environment are our homes (and other indoor spaces) and our food. Mold spores can grow almost anywhere where there's persistent moisture, and especially in areas where proper ventilation isn't present to wick it away before molds have enough time to fester. And when mold gets a hold on moist wood, drywall (sheetrock), carpet, or one of the many other organic materials for which it has an extreme affinity, there's almost no stopping it.

The drywall used in the vast majority of homes built after WWII (and especially after the 70s) is a mold magnet, believe it or not. Its porous material anatomy is a certifiable breeding ground for toxic fungi, especially on the insides of walls where moisture is often present but ventilation is poor. Mold in these areas can be particularly problematic during the winter months, especially if you use a humidifier, because the warm, moist air piped through your vents comes into contact with cold windows and drywall, creating condensation.



Without proper ventilation, drywall can become a breeding ground for mold

One of the more obvious signs that your house may have a mold problem is water stains on the walls or ceilings, or a persistent musty, "mildewy" smell. Water leaks that attract mold often form behind walls or in areas hidden from view as well, which is why it's recommended that you have your pipes professionally inspected every few years to look for potential vulnerabilities.

Even high humidity is enough to cause mold to form in your house though you may not actually see any residual signs of it – especially if it's growing behind your walls. Warm air holds more moisture than cold air, and whenever warm, humid air touches a cold surface, it releases that moisture in the form of condensation, which can instigate the formation of mold.

During the wintertime, warm inside air will escape to meet the cold outside air, producing condensation on the outer sheathing of your home. During the summertime, it goes in reverse – warm outside air will seep inside to the indoor air-conditioned environment, producing condensation on inside windows and walls. In both instances, mold-attracting moisture is created, though in different places. Keeping it at bay is a matter of addressing these points of hot-cold contact and making sure that any moisture present is quickly removed.

In a nutshell, this involves minimizing humidity in your home as much as possible and pinpointing the cool surfaces where condensation is likely to form. Newer homes are actually worse in this regard than older homes because they typically have fewer air "leaks" that help mitigate moisture buildup. "Tighter" homes, and especially those that lack proper mechanical ventilation, tend to maintain higher humidity levels, which can manifest as "sweat"

on inside windows that aren't double- or triple-paned, for instance.

Another major source of mold in your home is your food. Contamination of food and animal feed with mold-induced mycotoxins has become a global epidemic, especially in areas of high humidity. Among the foods most prone to mycotoxin contamination are grains, including wheat and its glutinous relatives, corn, white rice, peanuts, soybeans, cottonseed, mushrooms, chocolate, alcohol (especially beer and to a lesser extent wine), coffee, tap water, and grain-fed meats and dairy products.



Grains, soybeans, and corn rank among the most common foods contaminated with mycotoxins and are frequently used as food for the animals that we eat

Not only are these foods (when contaminated) highly toxic in terms of their damaging effects to the nervous system and brain, they're also potentially xenoestrogenic, meaning they mimic natural estrogen hormones but at a magnitude of up to 100 times stronger. Exposure to xenoestrogenic mycotoxins can destroy our hormone balance – provoking rapid weight gain, infertility, cardiovascular disease, damaged DNA... and even cancer.

How to Effectively Eliminate Toxic Mold from Your Life

A general rule of thumb promoted by Dave Asprey (and that I support), for avoiding mycotoxins in your diet is to steer clear of starches, sugars, grains, and alcohol as much as possible.

Asprey recommends that the vast majority of what you eat (between 50 to 70 percent of your overall caloric intake) should actually be healthy fats and oils, followed by clean proteins (20%), organic vegetables (20%), and fruits and starches (5%).

Healthy fats include most saturated varieties from quality sources including: coconut oil, palm oil, grass-fed butter, ghee, lard, and marrow as well as krill, cod liver, and fish oils; sunflower lecithin; avocados; and pastured raw cream (from grass-fed cows).

Nuts such as almonds and macadamias are also great sources of healthy fats – just be careful when purchasing nuts to pick raw, whole, and unblemished varieties to minimize your mold risk. If nuts have black spots on them, that is likely mold and they should not be eaten.

Clean proteins include meats derived from pasture-centered, grass-fed animals, responsibly-caught, wild fatty fish like salmon, collagen protein and gelatin from pastured animals, bone broth, pastured eggs, and colostrum.

Some of the best foods (low in mycotoxins and safe for most people) to eat in each of the additional categories include:

- **Beverages:** clean coffee, organic green tea, fresh coconut milk, coconut water, and mineral or filtered water

- **Organic vegetables:** asparagus, avocado, Brussels sprouts, celery, cucumber, fennel, olives, broccoli, bok choy, cabbage, kale, and spinach
- **Starches:** sweet potatoes, carrots, butternut squash, pumpkin, jasmine rice, and cassava
- **Fruit:** Avocados, cranberries, lemons, limes, raspberries, blackberries, blueberries, pineapples, strawberries, pomegranates, and tart cherries
- **Spices & Flavorings:** apple cider vinegar with the “mother” (the cloudy, fibrous mass in the bottom of the bottle), cilantro, ginger, parsley, sea salt, oregano, rosemary, thyme, turmeric, cinnamon (preferably Ceylon variety), black pepper, garlic, nutmeg, and paprika
- **Sweeteners:** organic green stevia, grade B maple syrup, raw local or Manuka honey, xylitol, erythritol, dates, and coconut sugar



Cassava is a tuberous starchy root vegetable which is not well known in North America, but is a favorite in many parts of the world

Dave Asprey’s Bulletproof product line contains many of the food categories in which mycotoxins are usually most present. His coffee, cacao, and chocolate products are excellent mycotoxin-free

alternatives to what you’ll find in the average grocery store. When combined with his [Brain Octane oil](#) (caprylic [C8] medium chain triglyceride) or [XCT Oil](#) (caprylic [C8] and capric [C10] medium chain triglycerides) coconut fats, they’re even more impressive in supporting a mycotoxin-free lifestyle.

As I had touched on earlier, many crop herbicides and pesticides, including the Roundup (glyphosate) formula manufactured by Monsanto, transform otherwise healthy soils into incubators for harmful molds. Foods grown in these soils, including genetically-modified organisms (GMOs) and conventional food crops grown using non-organic methods, are more likely to contain mycotoxins than other foods, and should thus be avoided. (I’ll be talking more about the dangers of Glyphosate in next month’s HAC newsletter.)

The worst offenders in this category are soybeans, canola (rapeseed), corn, sugar beets (which are used to make most of the sugar used in processed foods), and cottonseed.

You can help further supplement your mycotoxin-free diet with nutrients like selenium, vitamin C, activated charcoal, and zeolite, all of which support mycotoxin detoxification. Antifungal “superfoods” such as grape seed extract, berberine, and coconut oil are likewise helpful, as are full-spectrum probiotics that help give your beneficial microflora an upper hand in the fight against toxic molds.

Because it’s your body’s “master” antioxidant, glutathione is another critical element for mold detoxification. Sulfur-rich foods including garlic, cruciferous vegetables (including cabbage, broccoli, cauliflower, and Brussels sprouts), and non-denatured whey protein isolate (cold-processed

and cross-flow microfiltered) are all great sources of glutathione-producing sulfur, as is organic sulfur, also known as MSM (methylsulfonylmethane).

Tips for Fighting Toxic Mold

In your home or workplace, avoiding mold first requires identifying whether or not it's present, followed by locating spots where it might be getting inside and wreaking havoc.

Some pretty strong indicators that you likely live or work in a moldy environment include:

- You live in a humid climate where it's often damp indoors and wet outside
- Your home or workplace has been flooded at some point in time
- You live or work in structures made with drywall
- Your home or workplace has had a water leak within the past year

If any of these are true and you have been experiencing strange and unexpected health symptoms associated with mold exposure, it might be a good idea to run an EMRI (Environmental Relative Moldiness Index) Air Test in the spaces where you spend most of your time. Some labs now offer this test and it can be ordered online. You may even wish to hire a mold specialist to come out and inspect the premises, both indoors and out, to evaluate whether or not mold is present.

If you've already identified mold in your home, a complete removal and remediation of all affected materials by a qualified professional is most likely necessary. Once this is finished, you may consider

installing a supply-only ventilation system that draws air from the outside and feeds it through your air conditioning unit, ensuring that the first cold surface this air touches is the unit's cooling coils, which will capture all the condensation and prevent it from entering your home.

A simple moisture meter can also help you identify potential mold hot spots in and around your home, including possible water leaks. A dehumidifier will help address persistent moisture issues, helping to bring down relative humidity to an ideal level of 50% or below in order to prevent mold spores and dust mites from forming.



Warning: trying to clean mold yourself can be hazardous to your health. Safety equipment needs to be used and precautions taken

Additional helpful tips for keeping your home mold-free include:

- Installing storm doors and windows to keep condensation from forming
- Insulating cold water pipes to prevent warm air from hitting their cold surfaces and creating excess moisture
- Using gas and electric furnaces during the wintertime to minimize humidity or using

a wood stove, which produces dry heat when the firewood has been properly seasoned

- Opening curtains and blinds during the wintertime to help warm the interior glass and prevent moisture buildup
- Caulking and weather-stripping moisture-prone areas like bathrooms and kitchens – just be sure you also have proper ventilation in the form of exhaust fans in your bathrooms and a ducted exhaust hood in your kitchen to promote proper air circulation
- Keeping your doors and windows open as much as possible to facilitate consistent air flow
- Installing vapor barriers over bare soil and rocks in your crawlspace or basement (if you have one)
- Venting your attic and fireplace (if you have one) to avoid condensation and moisture buildup
- Installing an air barrier in the outer walls of your home to prevent moist air from reaching cold surfaces and creating condensation



Condensation on the inside of windows contributes to mold growth. Try keeping curtains and blinds open (when possible) in winter

If you suspect that you may already be suffering from mold poisoning, it might be a good idea to undergo a comprehensive mycotoxin panel test like those offered by [Bio Trek Laboratories](#) or [Biosign Labs](#).

The [Myco-M7 Series Mycotoxin Test](#) offered by Bio Trek Laboratories is currently the most advanced ELISA-based mycotoxin test offered in the U.S., offering a complete assessment of any mycotoxins that might be lurking inside your body.

Working with a qualified, mold-aware physician or health specialist to interpret these test results and help you develop an effective diet and detoxification plan custom-tailored to your needs is one option.

Finding a Doctor Who Understands Mold-Related Illness

Dr. Richard (Ritchie) Shoemaker, MD, is a recognized pioneer in the field of biotoxin related illness and author of numerous books on mold sickness. His website, [Survivingmold.com](#) has many helpful resources to take you deeper into this topic.

Now retired from regular practice, Dr. Shoemaker trains other doctors in his protocol for recognizing and treating issues related to mold exposure. You can find a list of physicians who have completed the Shoemaker Protocol at: <http://www.survivingmold.com/shoemaker-protocol/Certified-Physicians-Shoemaker-Protocol>

Alternatively, you can use the information I've presented here and elsewhere to develop your own plan if your symptoms are relatively minor. Addressing mycotoxin poisoning could be as simple as just cutting out the cheap carbs and sugar, loading up on saturated fats, proteins, and vegetables, keeping your house clean and dry, and avoiding antibiotic drugs.

As a closing note, I would also recommend avoiding vaccines if you're trying to steer clear of molds and mycotoxins. Many commercial vaccines are incubated in what are more than likely mycotoxin-contaminated eggs, the proteins from which are injected directly into your muscle tissue. The scary thing is that this process bypasses the normal immune barriers that would filter out and detoxify these poisons, making the mycotoxic threat from vaccination perhaps even more concerning than that of food and the environment. Yet another reason to say "NO" to vaccines!

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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.

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It's been another super busy month for me, Charlene, and all the team at The Truth About Cancer. We have so many exciting projects on the go that I can barely keep up with it all.

Top of the list is our upcoming [Ultimate LIVE Symposium](#) in Texas in mid-October. This is such a dream come true for Charlene and me. The caliber of the experts that will be joining us to share their wisdom just blows my mind! If there is any way at all that you can possibly join us, we would so love to see you there.

I won't get into all the other projects right now, but suffice it to say that over the next few months I'll have LOTS more to tell you about.

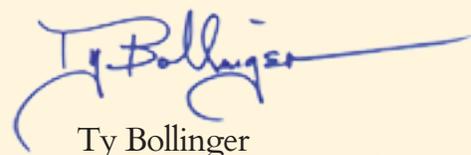
Thank you as always for your support with the Heroes Against Cancer newsletter. We put a lot of time and effort into bringing you the latest and best actionable information for preventing and treating cancer.

If you read something in one of our newsletters that has helped you... please send a note to our support team to let us know. We love, love, love hearing about how our community has healed cancer using methods and protocols we've shared.

Also, if you have suggestions for topics that you want to read about in the newsletter, please let us know those too. Your questions are one of the biggest sources of inspiration for the articles we share. You can reach my support team at: http://support.thetruthaboutcancer.com/submit_ticket

Thanks again for your ongoing support!

Until next month...



Ty Bollinger

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