



**How Would You Like
to Bounce in Good
Health?**

Preface

This FREE E-Book is a gift for you to enable you to achieve your own good health!

My passion in life is to help people achieve this and give them the ability to gain longevity!

This e-book is designed to help you feel educated, alerted, thoughtful, motivated and inspired to do something about your own health and your loved ones!

The doctor of the future will give no medicine, but will interest his or her patients in the care of the human frame, in a proper diet, and in the cause and prevention of disease.

--Thomas Alva Edison

Many of the articles contained in this e-book may be information that you have read before and you may feel, "Ho hum, here we go again!" Please take the time to read the content page, as you never know what you might read that may save your life or the life of a loved one sometime in the future.

It may even give you the answers to things that may be already occurring in your life and you just don't know the reason why! Many of us realise that there are often logical explanations to the things that happen to us, but at times these logical answers can be quite elusive.

My passion in life is helping people to maintain their health and, in so doing, experience longevity. No one wants to live to a "ripe old age" with terrible health, but wouldn't it be lovely to be a centurion—or even older!—and still have wonderful health!

Did you know that many races of people in the world experience just that!

Over the years I have found that people who are sick often bask in the attention their sickness brings them and as a result want the status quo to remain. This is a sorry indictment on our society that we have to go to these kinds of lengths to receive personal attention from the ones we love.

If our society was a more caring society, wouldn't it be a much happier world to live in?

It gives me much pleasure to see healthy people taking the steps to ensure that their bodies have the building blocks required to maintain good health and regeneration. Most of the organs in the body have the ability to regenerate if people give their bodies the right nutrition, remain as toxin-free as possible, eat a healthy diet and use safe personal care and household products. Did you realise that your home can be more toxic than the outside world? Many studies are beginning to emerge that are showing just such a trend.

In recent research they are even beginning to understand that the brain can heal itself, something that was thought totally impossible in the past. What they are finding is that if one part of the brain has become damaged, that with help and training another part of the brain can take over this function. Quite a fantastic discovery! I read an article where someone had a stroke and had lost the use of an arm. What they did was to restrict the use of the "good" arm and this helped the brain to do an adjustment to make the "bad" arm active again. WOW!

I have a computer full of useful information—some a bit frightening and other just fantastic information for people to be able to turn their lives around and enable them to live healthy, active lifestyles right up to the end.

I am not a medical person, just someone who has an avid interest in health and reads whatever information comes my way. For most of my life I have been an avid reader of novels, but now I simply do not have time to read them, as there are too many interesting health articles out there for me to read, and at times what I have in front of me to read can become quite overwhelming.

For over 13 years I have been trying to reach people of the world and give them the same opportunities in life that I have received. I have joined network marketing companies that sell nutritional supplements, personal care, cosmetics, household and even car products to enable me to achieve the lifestyle of my dreams.

I have been lucky enough to have medical doctors involved in some of these companies, and it has been a great joy to me to be able to ring them up and ask their advice for particular situations.

In January 2008, at age 65, I started my own website! Never once in my life did I dream that I would do such a thing! I even took my first driving lessons at the end of 2006, and I think it quite amusing that with the Australian Licensing Regulations that I will be 67 years of age before I receive my full driving license! Now here I am writing free e-books. I wonder what I will do next?

Do you know what the important thing is about these events? I had the courage to have a go!

How many of you have this same courage and would like to help both yourself and other people gain both health and wealth? I consider myself to be on the pathway to "health and wealth"! Where is your pathway leading you?

You might find my website of interest, even if it is just to check out what sort of website a woman of 65 would produce!

<http://www.healthymoneyvine.com>

If you would like more information than is contained in this book, please contact me on:
healthymoneyvine@gmail.com.

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Information shown in italics with my picture against it – are comments coming from Marilyn Vine.

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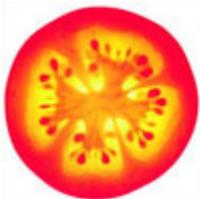
God's Pharmacy

God left us a great clue as to what foods help what part of our body!

God's Pharmacy! Amazing!



A sliced Carrot looks like the human eye. The pupil, iris and radiating lines look just like the human eye... and YES, science now shows carrots greatly enhance blood flow to and function of the eyes.



A Tomato has four chambers and is red. The heart has four chambers and is red. All of the research shows tomatoes are loaded with lycopene and are indeed pure heart and blood food.



Grapes hang in a cluster that has the shape of the heart. Each grape looks like a blood cell and all of the research today shows grapes are also profound heart and blood vitalizing food.



A Walnut looks like a little brain, a left and right hemisphere, upper cerebrums and lower cerebellums. Even the wrinkles or folds on the nut are just like the neo-cortex. We now know walnuts help develop more than three (3) dozen neuron-transmitters for brain function.



Kidney Beans actually heal and help maintain kidney function and yes, they look exactly like the human kidneys.



Celery, Bok Choy, Rhubarb and many more look just like bones. These foods specifically target bone strength. Bones are 23% sodium and these foods are 23% sodium. If you don't have enough sodium in your diet, the body pulls it from the bones, thus making them weak. These foods replenish the skeletal needs of the body.



Avocadoes, Eggplant and Pears target the health and function of the womb and cervix of the female - they look just like these organs. Today's research shows that when a woman eats one avocado a week, it balances hormones, sheds unwanted birth weight, and prevents cervical cancers. And how profound is this? It takes exactly nine (9) months to grow an avocado from blossom to ripened fruit. There are over 14,000 photolytic chemical constituents of nutrition in each one of these foods (modern science has only studied and named about 141 of them).



Figs are full of seeds and hang in twos when they grow. Figs increase the mobility of male sperm and increase the numbers of Sperm as well to overcome male sterility.



Sweet Potatoes look like the pancreas and actually balance the glycaemic index of diabetics.



Olives assist the health and function of the ovaries



Oranges, Grapefruits, and other Citrus fruits look just like the mammary glands of the female and actually assist the health of the breasts and the movement of lymph in and out of the breasts.

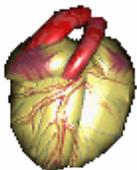
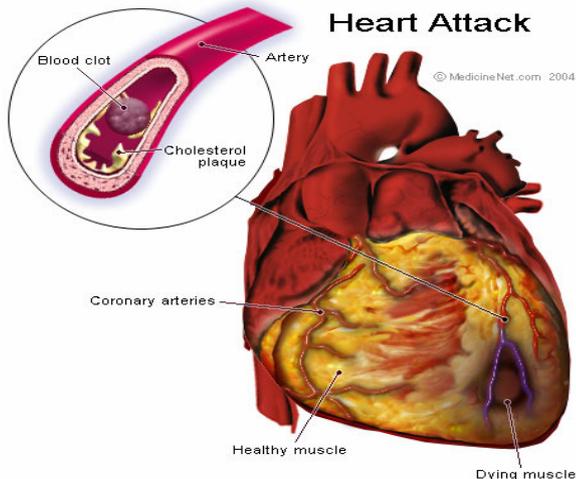


Onions look like the body's cells. Today's research shows onions help clear waste materials from all of the body cells. They even produce tears which wash the epithelial layers of the eyes. A working companion, Garlic, also helps eliminate waste materials and dangerous free radicals from the body.

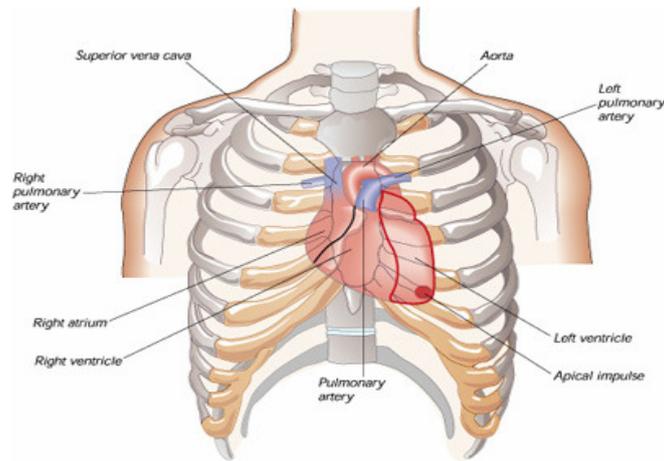


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Heart Attacks and Drinking Warm Water



This is a very good article. Not only about the warm water after your meal but about Heart Attacks. The Chinese and Japanese drink hot tea with their meals, not cold water, maybe it is time we adopt their drinking habit while eating.



For those who like to drink cold water, this article is applicable to you. It is nice to have a cup of cold drink after a meal. However, the cold water will solidify the oily stuff that you have just consumed. It will slow down the digestion. Once this 'sludge' reacts with the acid, it will break down and be absorbed by the [intestine](#) faster than the solid food. It will line the intestine. Very soon, this will turn into fats and lead to [cancer](#). It is best to drink hot soup or warm water after a meal.

[Common Symptoms Of Heart Attack...](#)

A serious note about heart attacks - You should know that not every heart attack symptom is going to be the [left arm hurting](#). Be aware of intense [pain](#) in the [jaw line](#).

You may never have the first [chest pain](#) during the course of a heart attack. [Nausea](#) and [intense sweating](#) are also common symptoms. 60% of people who have a heart attack while they are asleep do not wake up. Pain in the jaw can wake you from a sound sleep. Let's be careful and be aware. The more we know, the better chance we could survive.

A [cardiologist](#) says if everyone who reads this message sends it to 10 people, you can be sure that we'll save at least one life. Read this and send to a friend. It could save a life. So, please be a true friend and send this article to all your friends you care about.



*It is interesting to note – while I was visiting China on a 28 day tour in 1998 – **EVERY** restaurant that we had our evening meal in served **SOUP** as the last course!*

Marilyn Vine – healthymoneyvine@gmail.com

Black Raspberries Slow Cancer by Altering Hundreds of Genes

New research strongly suggests that a mix of preventative agents found in concentrated black raspberries could more effectively inhibit cancer development than single agents aimed at shutting down a particular gene. Researchers examined the effect of freeze-dried black raspberries on genes altered by a chemical carcinogen in an animal model of oesophageal cancer. The carcinogen affected the activity of 2,200 genes in the animals' esophagus in only one week. However, 460 of those genes were restored to normal activity in animals that consumed freeze-dried black raspberry powder. Black raspberries contain many vitamins, minerals, phenols and phytosterols, which are known to individually prevent cancer in animals.

Sources: [Science Blog August 28, 2008](#) and [Cancer Research August 1, 2008, 68, 6460-6467](#)



Dr Mercola advises us of the great disease fighting properties that berries have. In his comments below he will tell you about blueberries, cherries, strawberries, blackberries and cranberries. Click on the link below and read his enlightening article.



<http://articles.mercola.com/sites/articles/archive/2008/09/16/black-raspberries-slow-cancer-by-altering-hundreds-of-genes.aspx?source=nl>

More Than One in Three Common Cancers Could Be Preventable



Information was released on 26 February 2009 advising that 1 in 3 common cancers may be preventable – what wonderful news! I am sure that many of the women who have recently been diagnosed with breast cancer would be very unhappy to find out that 38% of these cancers could have been prevented just by their own actions. However, the upside is that by reading the article below, that the 38% that could have been helped may now be able to avail themselves of this information.

Dr Mercola advises in this article that “half the cancers of the world would disappear with Vitamin D levels optimized.” He also advises us of the top 11 changes we can make in our lives to help prevent cancer. Well worth a read.

Sources: » [WebMD February 26, 2009](#) www.webmd.com/cancer/news/20090226/1-in-3-common-cancers-may-be-preventable



<http://articles.mercola.com/sites/articles/archive/2009/03/19/Slash-Your-Prostate-Cancer-Risk-With-Sunlight.aspx>

Eat Apricot Kernels Every Day

“Like cancer, scurvy was believed to be incurable, then in 1747 it was discovered that it was simply caused by a lack of fresh food. Today, many people believe that eating apricot kernels, a food source rich in a vitamin called Vitamin B17, can protect against, and maybe even help to cure, cancer. Ad Lib investigates the controversial claims behind B17 and asks, is it possible that it may be to cancer what vitamin C was to scurvy?”

--Ad Lib magazine

So begins one of many articles about apricot kernels and what they can do for you. In over twenty-five years of investigation into what works with cancer and what doesn't, I have found dietary changes, vitamin B17 and a less stressful lifestyle come to the fore in successes.

So what's the deal? Apricot kernels are a favourite of a number of agrarian peoples such as the Hunzas, Abkhasians and Karakorum who have no record of cancer in their isolated states and are famous for long lifespans. Their diets are rich in a food group known as the nitrilosides. Other peoples around the world consume different sources of this factor which has come to be known, rightly or wrongly, as Vitamin B17.^{1[1]} According to scientists who have studied and published, B17 must work in conjunction with enzymes, vitamins C, D, A & E to achieve a targeted anti-cancer effect in the body. B17 cannot, and does not work alone.^{2[2]}

Vitamin B17 is a stable, chemically inert and non-toxic molecule when taken as food or as a refined pharmaceutical in appropriate quantities (Laetrile and amygdalin are two examples). Scientists discovered the compound reacts to the enzyme beta-glucosidase, located in abnormal amounts at the site of cancerous tumours. In this reaction, beta-glucosidase manufactures two potent poisons, hydrogen cyanide and benzaldehyde (a painkiller), stabilised by two molecules of glucose. These two poisons, produced in minute quantities at the cancer cell site, combine synergistically to kill the cell as part of Vitamin B17's unique and selective action.

So state scientists studying B17, who were aware that indigenous peoples consuming nitrilosidic foods were not experiencing any harmful side-effects from this reaction. On the contrary, their lives were characterised by abundant good health and longevity. Later they found healthy tissue broke down excess levels of B17 into two nutritious by-products, one of which, sodium thiocyanate, reacts with the precursor hydroxycobalamin in the liver to form another nutrient with the cyanide radical: Vitamin B12 (cyanocobalamin).

Biochemist Ernst T Krebs Jr popularised the use of B17 in the sixties and remarked: 'We hear a great deal about its use in terminal cancer, but the time to start with Vitamin B17 is now before the disease becomes clinical. The time to start is the same with any matter of adequate nutrition and that is right now. You may start now by commencing to eat the seeds of all common fruits that you eat. Apricot and peach seeds contain almost 2 percent of Vitamin B17 by weight. The apple seed, although very small, is equally rich in Vitamin B17 - so are the seeds of prunes, plums, cherries, and nectarines. The only common fruits on the hemisphere that lack nitrilosidic seeds are the citrus fruits. This lack has come about by artificial cultivation, by breeding and hybridization, since the seeds of citrus fruits on the African continent still contain Vitamin B17.'^{3[3]}

RECOMMENDATIONS

- Increase the quantity of nitrilosidic (B17) foods in your diet^{4[4]}
- Officially, by order of UK's Food Standards Agency, you're not supposed to consume more than 2-3 seeds a day or you might die of cyanide poisoning! Unofficially, I have to report the Hunzas don't do that; they sometimes eat dozens a day, harvesting the fruit growing wild in the Himalayan foothills and cracking the pits for their seeds. So far as I'm aware, Nothing's happened to them yet

^{1[1]} Day, Phillip *Health Wars*, op. cit.

^{2[2]} Day, Phillip *B17 Metabolic Therapy, A Technical Manual*, Credence, 2004

^{3[3]} Second Annual Cancer Convention, Ambassador Hotel, Los Angeles, 1974

^{4[4]} Day, Phillip *Food for Thought*, Credence, 2005

- I've been consuming kernels for years as part of my diet with nothing but benefits. I started with one or two a day and worked up to 20 – 25 of the small 'Shalkur' kernels over a week and a half (if you have larger kernels (Australian, etc), reduce to 10-15 a day). These days I sprinkle them on my salads and grind them into my veggie juices. People with cancer sometimes take more – 20/40 a day depending on bodyweight - in addition to cleaning up their diets and EXERCISING!!^{5[5]}
- Not all apricot seeds are effective. There are many 'sweet' hybrids on the market and others have been found to contain mucho pesticides. Seeds must have the characteristic bitter taste, indicating the active ingredients are present
- Don't swallow apricot seeds whole! May be chewed, pulped, grated or crushed or put into veggie juices
- Consumption should be spread throughout the day. Do not take a whole lot in one go if you are not used to them
- Cancer sufferers should refer to my book, *Cancer: Why We're Still Dying to Know the Truth*, for physicians' reports on treating their condition nutritionally
- In a minority of cases, nausea may be experienced when taking apricot kernels. In this event, consumption should be reduced or discontinued
- Do not consume kernels if you have poor liver function, jaundice, etc. Intravenous Vitamin B17 drips, administered by a qualified physician, can be used to bypass this problem (B17 tablets and IV liquids are at www.cytopharmaexpress.com)
- Please note: Some cancer sufferers believe that apricot kernels alone are all that is required to fight cancer. Consultation with a qualified health practitioner familiar with metabolic therapy is advised for further information. Apricot kernels are usually part of the nutritional support for those exercising cancer prevention for life as well as patients undergoing Phase 1 or Phase 2 metabolic therapy.

^{6[1]} **Day, Phillip** *Health Wars*, op. cit.

^{7[2]} **Day, Phillip** *B17 Metabolic Therapy, A Technical Manual*, Credence, 2004

^{8[3]} Second Annual Cancer Convention, Ambassador Hotel, Los Angeles, 1974

^{9[4]} **Day, Phillip** *Food for Thought*, Credence, 2005

^{10[5]} **Day, Phillip** *Cancer: Why We're Still Dying to Know the Truth*, Credence, 2009

To purchase any of the items mentioned above please go to
<http://interneka.com/affiliate/AIDLink.php?BID=11205&AID=34037>

Phillip Day
 The Campaign for Truth in Medicine
<http://www.campaignfortruth.com>

EClub Weekly Tip – Eclubcampaignfortruth.com

^{5[5]} **Day, Phillip** *Cancer: Why We're Still Dying to Know the Truth*, Credence, 2009

Slash Your Prostate Cancer Risk -- With Sunlight!



Would you like to know about how to slash your risk of prostate cancer just by using sunlight? I am sure you would! The British Journal of Cancer on 20 January 2009 advise us of their findings at the following link:

[British Journal of Cancer 2009; 100: 450-454](#)

Dr Mercola comments on this article at:



<http://articles.mercola.com/sites/articles/archive/2009/03/19/Slash-Your-Prostate-Cancer-Risk-With-Sunlight.aspx>

Diabetes or Pre-Diabetes Now Strikes One in Four Americans

The number of Americans with diabetes has grown to about 24 million people, or roughly 8 percent of the U.S. population. A report by the Centers for Disease Control and Prevention, based on data from 2007, indicates an increase of about 3 million cases since over just two years. The CDC estimates another 57 million people have a condition called pre-diabetes, which puts people at increased risk for the disease. Diabetes results from defects in insulin production that cause sugar to build up in the body. It is the seventh leading cause of death in the U.S.

Sources: [Physorg.com June 25, 2008](#)



For further information on this please click on the link below. Dr Mercola tells you how to avoid becoming a statistic. By following his advice he believes that this can put you on a path that will greatly improve and maybe even reverse Type 2 insulin-resistant diabetes, heart disease and many other chronic diseases of aging. You have nothing to lose by reading his entire article!



<http://articles.mercola.com/sites/articles/archive/2008/07/19/diabetes-or-pre-diabetes-now-strikes-one-in-four-americans.aspx?source=nl>

Broccoli Reverses Diabetes Damage

Eating broccoli could reverse the damage that diabetes inflicts on heart blood vessels. The key is most likely a compound in the vegetable called sulforaphane. Sulforaphane encourages production of enzymes that protect the blood vessels, and reduces the number of molecules that cause cell damage -- known as Reactive Oxygen Species (ROS) -- by up to 73%. People with diabetes are up to five times more likely to develop cardiovascular diseases such as heart attacks and strokes -- both of which are linked to damaged blood vessels.

Sources: [BBC News August 5, 2008](#) [Diabetes August 4, 2008](#)

For further information:



<http://articles.mercola.com/sites/articles/archive/2008/08/23/broccoli-reverses-diabetes-damage.aspx?source=nl>



The following information was provided to me by a friend. It is information given in relation to a 12-year-old boy and a person's mother; however, the information would be relevant to all diabetics.

Diabetes, A Simple Fix

Diabetes is mainly a lack of water, salt, magnesium (found in dark greens) and Tryptophan, an amino acid found in eggs, beans, cottage cheese 4% (cheeses) and nuts.

The sequence is drinking water, 1/2 liter and taking .75 grams of salt. You start the salt at .75 grams and after a couple days you increase it to 1.5 grams per 1/2 liter. If the persons eyelids swell or ankles and possibly their fingers, then they would drink water and take no salt until the swelling is gone. When the swelling is gone, they would start the salt again but cut back on the amount. You can mix the salt into the water or just put the salt in your mouth and drink the water over the salt. Another way to take the salt is to put it into a capsule and take it like a pill or you can salt your food very heavily. 1/2 liter is 16.9 oz and .75 grams is 1/8 tsp.

A diabetic needs to eat 6 eggs every day. They don't need any insulin for eating eggs. There are no carbs in eggs or cheese. Also any diabetic class 1 (injecting insulin) or class 2 taking a pill, should eat 8-10 oz of green beans before going to bed. The green beans are low in carbs and have enough protein, magnesium and tryptophan to carry the body through the night. Our body works harder at night when we are sleeping then when we are up during the day time. The body will have the liver convert fat to sugar and dump it into the blood stream. Remember: The brain doesn't need insulin to use sugar and there is always an excess of sugar dumped into the blood.

Green beans reproduce another plant just like eggs reproduce a chicken and nuts reproduce a tree. Cheese comes from the butter fat (cream found on top of milk) it is loaded with amino acids. Meat, chicken and fish also contain amino acids, but it must be a live kill. After the second day, most of the amino acids are gone. Dark green is chlorophyll to our body.

I don't know if you know about mg ATPs and mg GTPs. These are batteries that store energy in all our cells. Water, salt and potassium turn a generator called a cation pump that makes electricity and it is stored in these ATP's and GTP's. A person should always drink half their weight in ounces of water. A person must stop coffee, tea, soda and chocolate. A diabetic person should drink water and takes the right amount of salt, for that person at that time and follows the sequence of drinking water, 2 glasses/salt and waits 1/2 hr before eating food. After eating, they should wait 2-2 1/2 hrs and then drink more water to complete the digestive process. When the body digests food, it uses up water. As for the young lad of 12 years, he needs to do the water and salt. I

suggest he do no milk at all. Just water, salt and eat lots of eggs, beans, nuts, yogurt, cheeses (no cottage cheese for him unless that's all he has for quality protein to eat). Some young children become class one diabetics because of the milk. The milk from a cow or goat is to put weight on the calf and the calf (baby) gets its immune system (to fight bacteria) from the mother for up to one full year. By then the calf's own immune system is working 100%.

The pancreas is located behind the stomach and has three main functions. Alpha cells produce a chemical to help in digesting (breaking down) of some foods, just like bile does from the Liver-gallbladder. Another function is, beta cells produce insulin needed by the cells to be able to use the sugar we eat. Natural sugar from fruit, doesn't require any insulin. And the other function of the pancreas is to produce a bicarbonate to neutralize the Hydrochloric acid after its done its job in the stomach.

When young children become diabetics, normally they become real sick because their immune system detects an intruder bacteria from the milk they drank. The intruder (bacteria) is part of the immune system from the mother cow that is live or dead, but the child's immune system gets fired up to attack this intruder (bacteria). The problem is the beta cells of the pancreas are very similar to the intruder (bacteria) and so the child's immune system will attack their own beta cells and destroy them. In this case, water and salt will stop all the secondary problems with diabetes, eye damage, kidney damage and circulation problems. Sometimes, not all the beta cells are destroyed or possibly the pancreas will regenerate new beta cells. But if the 12 year old boy will drink 8 glasses of water spaced out thru the day and take at least 1/8 tsp of salt for every 2 glasses of water and possibly even more salt. Children require more water because there cells are expanding and expanding. That's how they grow. If the young boy, will eat lots of eggs and eat beans if possible and lots of fruit and fresh vegetables he will start to recover. His body is running on all sugar now but will convert back to electricity generated by water, salt and potassium.

He and your mother need dark green vegetables raw if at all possible. And its very important for them to eat green beans (8-10 oz) just before going to bed. The green beans can be canned, frozen or fresh. Maybe pea pods or something close in type to green beans will work. Also, if a diabetic will take liquid chlorophyll for a month or two their sugar level will stabilize almost overnight. And by eating foods that don't require any insulin, EGGS, CHEESE, FRUIT. Also eating lots of vegetables along with beans and nuts.

You can get liquid chlorophyll from pfc@prominent.coith They carry Green Magic liquid chlorophyll form Banning, California USA DeSouz's, 1-800-373-5171 The E-mail address is in Bangkok. If you can't get liquid chlorophyll then maybe capsules or hard pills will work. Liquid form you take one ounce (30cc) morning, noon and evening time, capsules or hard pills of Alfafa. If your mother will eat lots of eggs, beans, cheese, nuts and fruits, vegetables, she will come off the needle (need to inject insulin). Following the sequence of drinking water and taking the right amount of salt (each person needs to find there requirement for salt). When a diabetic eats fruit, natural fruit, they don't need insulin to use the natural sugar found in fruit. (fructose) So, if a diabetic person eats only eggs, cheese, natural fruit and beans, nuts (a balance of protein and amino acids) plus eat lots of vegetables. Eat no bread, pasta or heavy starchy things. As a diabetic follows this diet of eating these foods they will be using less and less insulin until they are off insulin.

I have had diabetics taking 40 units morning and night for 10 yrs come off the insulin totally in 2 weeks. Anyone following this suggested program will be using half the amount of insulin immediately. Remember that eating green beans before going to bed at night is very important. By doing this, the liver will not be dumping sugar in the blood stream. As for your question about drinking water and the effect it has on the body's sugar level or blood pressure. When you drink one or two glasses of water, it's like throwing a rock in a pond. You see a bunch of little ripples that extend out from the rock. All this free water goes into the cells (water not tied up doing any thing) will hydrate the cells causing a reaction in the system that will have to adjust and adjust and stabilize. After the body receives this water in the cells, it will take inventory of this newfound water and redistribute this water where needed most.

I hope this makes sense to you. Remember, that water and salt are more important than oxygen to the body. Without water, you couldn't dissolve the oxygen in the blood and without salt there would be no flow or draw. Salt is required to maintain a balance of water inside the cell and outside the cell. You know salt is very important to the brain and spine, they are in a sack of sea water.

I hope I'm not putting you to sleep. Sorry it's so long. Please let me know if I can answer any more questions you may have. All this information comes from DR B's books and tapes, plus I knew him personally and he

would work with me suggesting what a person could do to improve their health. As always, this is suggested. A person follows this water, salt and diet at their own risk and none of this replaces a medical doctor.

I will be sending you scanned pages of DR B's books in the future. Just a few important pages so you can see the importance of obtaining his books. NOTE: When a diabetic follows this program. They need to keep some orange juice handy (providing they don't have asthma) Sometimes their blood sugar will drop too low, 50 or 60 and they won't feel very good at all. Anytime they get up in the morning or throughout the day and feel badly, they need to take some quick sugar, like orange juice (it's called a rescue in the medical field. I call it a quick-fix). I mean get some sugar down quickly, not check their blood sugar, but down sugar first because following this program will require less and less insulin and all of a sudden the pancreas will start producing insulin again. So a diabetic has to be ready and made aware that any time they will not require any insulin at all. The average time to be off the insulin is somewhere around 10 days. Some come off the needle in one week. Diabetics need to take a vitamin supplement of Vitamin C 500 mg three times a day, morning, noon and evening meal. Also they need Zinc, 200mg twice a day, morning and evening meal. Flaxseed oil is critical for these people. They need 6 grams each day, in a capsule form, 2 gram with the morning meal, 2 grams at noon time and 2 gram at the evening meal. A good multi-vitamin is very important. Anyone that can't eat dairy should stay away from it. As any other thing they know they are allergic to. Every 120 days, the cells of the human body regenerate. Not all the cells do, but most do. Brain cells don't, so they say, but I think some of them do. I have worked with stroke victims and had them recover from arms and legs not working back to normal in 3 to 6 months. I drive a big truck (18-wheeler) around the USA and Canada giving medical lectures from what I have learned from DR B, and I don't charge anything for this because my travel is free. Note: always take the zinc after eating food.

Sincerely Yours,

JIM BOLEN

For further information <http://www.watercure2.org/>

Probiotics Found to Help Your Gut's Immune System

Probiotic bacteria, which are living micro-organisms that have beneficial effects on human health, have mostly been studied as treatments for different gastrointestinal diseases and allergies. However, not much is known about what kind of effects they have on the immune system in healthy adults. A new study shows that probiotics can modulate immune responses via your gut's mucosal immune system. It was found that probiotics have an anti-inflammatory potential. They caused a decrease in serum CRP levels, and a reduction in the bacteria-induced production of pro-inflammatory cytokines.

Sources: [Eurekalert June 11, 2008](#) [World Journal of Gastroenterology April 7, 2008; 14\(13\): 2029-2036](#)

For further information:



<http://articles.mercola.com/sites/articles/archive/2008/07/05/probiotics-found-to-help-your-gut-s-immune-system.aspx?source=nl>



If you are interested in helping to maintain an optimum balance of beneficial bacteria within the large intestine, please contact me on healthymoneyvine@gmail.com with "probiotic" in the subject line. I will be more than happy to pass this information on. I have undertaken research in Wikipedia which has extensive information on both probiotics and prebiotics. Wikipedia advises that probiotics are mainly active in the small intestine and prebiotics are only effective in the large intestine. The combination of the two may give a synergistic effect.

Appropriate combinations of probiotics and prebiotics are symbiotics.

If you would like further information please click on the two links below

<http://en.wikipedia.org/wiki/Probiotic>

[http://en.wikipedia.org/wiki/Prebiotic_\(nutrition\)](http://en.wikipedia.org/wiki/Prebiotic_(nutrition))

The Incredible Importance of Omega-3's

The American Journal of Clinical Nutrition has published three studies investigating the role of EPA and DHA omega-3 fats in elderly populations. In short, the story the studies tell is this: low concentrations of EPA and DHA result in an increased risk of death from all causes and accelerated cognitive decline. However, short-term intervention with EPA and DHA in the healthy elderly had no effect on mental well-being, suggesting that dietary habits that include a higher intake of omega 3's may bring certain health benefits that short-term supplementation cannot provide. All three studies underscore the importance of maintaining a high dietary omega-3 intake throughout your life.

Sources:

[American Journal of Clinical Nutrition September 2008; 88\(3\): 595-596](#)

[American Journal of Clinical Nutrition September 2008; 88\(3\): 706-713](#)

[American Journal of Clinical Nutrition September 2008; 88\(3\): 714-721](#)

[American Journal of Clinical Nutrition September 2008; Vol. 88, No. 3, 722-729](#)

For further information:



<http://articles.mercola.com/sites/articles/archive/2008/09/23/the-incredible-importance-of-omega-3-s.aspx?source=nl>

Magnesium May Be Key to Calcium's Cancer Benefits

In November 2008 it was reported that the anti-colon cancer effects of calcium may be linked to magnesium levels, suggesting a need for both minerals in reducing the risk of the disease, says a new study.

Researchers from Vanderbilt University found that low ratios of the minerals were associated with reduced risk of colorectal cancer, according to findings presented at the Seventh Annual American Association for Cancer Research International Conference on Frontiers in Cancer Prevention Research.

The potential implications of the results include accounting for the status of both nutrients in individuals before recommending supplementation with one or the other alone.

Colorectal cancer accounts for nine per cent of new cancer cases every year worldwide. The highest incidence rates are in the developed world, while Asia and Africa have the lowest incidence rates.

It remains one of the most curable cancers if diagnosis is made early.

Both high magnesium and calcium levels have been linked to reduced risks of the disease, but studies have also shown that high calcium levels inhibit the absorption of magnesium.

According to Qi Dai, MD, PhD, and co-workers, Americans have high calcium intake, but also a high incidence of colorectal cancer. *"If calcium levels were involved alone, you'd expect the opposite direction. There may be something about these two factors combined – the ratio of one to the other – that might be at play,"* said Dai.

At the AACR conference, the researchers report results from a large clinical trial that found indeed that supplementation of calcium only reduced the risk of cancer recurrence if the ratio of calcium to magnesium was low, and remained low during the intervention period.

"The risk of colorectal cancer adenoma recurrence was reduced by 32 per cent among those with baseline calcium to magnesium ratio below the median in comparison to no reduction for those above the median," said Dai.

Further research is clearly needed to explore these findings, but they do appear to add to the body of knowledge of how dietary factors affect the risk of colorectal cancer.



To read further information on this study, please go to:

<http://www.vrp.com/articles.aspx?ProdID=art2503&zTYPE=2>

Vitamin B12 Keeps Your Brain Young

Older individuals with low levels of vitamin B12 are at increased risk of having brain atrophy or shrinkage. Brain atrophy is associated with Alzheimer's disease and impaired cognitive function. Vitamin B12 deficiency is a public health problem, especially among older people.

In a study involving more than 100 volunteers aged 61 to 87, all participants underwent annual clinical exams, MRI scans and cognitive tests, and had blood samples taken. Individuals with lower vitamin B12 levels at the start of the study had a greater decrease in brain volume. Those with the lowest B12 levels had a sixfold greater rate of brain volume loss compared with those who had the highest levels. However, none of the participants were actually deficient in vitamin B12 -- they just had low levels within a normal range.

Other risk factors for brain atrophy include high blood pressure, diabetes and high cholesterol.

Sources:

[U.S. News & World Report September 8, 2008](#)

[Neurology 2008; 71: 826-832](#)

Dr Mercola Comment:



The first thing that jumped out at me about this study wasn't only the benefits of vitamin B12, but the risk that's there if your levels are low. Not deficient, necessarily, just within the low range of normal "Our results suggest that rather than maintaining one's B12 at a level that is just above the cut off for deficiency, it might be prudent to aim to keep it higher up than normal range," the study's lead researcher said. This is really important to hear, as most people would assume that if their levels are within the normal range, they're fine. In reality, you cannot always count on the "normal" reference ranges that come with your blood tests. Vitamin D is another example of a test that lists "normal" ranges that are [not nearly adequate to keep you healthy](#).



To read more of Dr Mercola's comments, please go to:

<http://articles.mercola.com/sites/articles/archive/2008/09/23/vitamin-b12-keeps-your-brain-young.aspx?source=nl>

Increased Hip Fracture Risk When Deficient in Vitamin D

US researchers have concluded lower blood concentrations of vitamin D increase the likelihood of hip fracture among menopausal women by up to 70 per cent.

For an average of seven years the researchers studied 800 50-79 year-olds selected from nearly 40,000 candidates who were not using estrogens or other bone-active therapies. The mean age of the participants was 70 years.

Of the 800 selected from 40 clinical centres across the US, 400 patients of the same sex and race had suffered hip fractures while 400 control had not.



To read further on this subject, please click on the link below:

<http://www.annals.org/cgi/content/abstract/149/4/242>

Atopic Dermatitis and Vitamin D

Vitamin D may protect skin from within: Study

Oral supplements of vitamin D may boost production of protective compounds in the skin, and may ultimately help prevent skin infections, according to a new study.

The small study focused on patients with [atopic dermatitis](#), characterised by areas of severe itching, redness and scaling, and found that supplements of [vitamin D](#) enhanced the skin's ability to produce a peptide called cathelicidin, which protects against microbial invasion.

The findings are reported in the Journal of Allergy & Clinical Immunology.

"[Our] results suggest that supplementation with oral Vitamin D dramatically induces cathelicidin production in AD lesional skin, and may also induce production in normal skin," wrote the researchers, led by Richard Gallo from the University of California, San Diego.

Atopic dermatitis (AD) is one of the first signs of allergy during the early days of life and is said to be due to delayed development of the immune system. According to the American Academy of Dermatologists it affects between 10 to 20 per cent of all infants, but almost half of these kids will 'grow out' of eczema between the ages of five and 15.



To read the full report, please click on the link below:

<http://www.skininc.com/skinscience/ingredients/30886729.html?page=1>

Vitamin D3 and the Flu



Dr Mercola in one of his articles advises that if you do come down with a case of the flu this year, vitamin D can also help to eliminate the illness. The dose of vitamin D is 2,000 IU per kilogram of body weight, taken as one dose, every day for three days.

The most important thing to keep in mind if you opt for oral supplementation is that you only want to supplement with natural vitamin D3 (cholecalciferol), which is human vitamin D.

Do NOT use the [synthetic and highly inferior vitamin D2](#).

If you start this program early on in the illness, it should be able to completely wipe out the flu.

The Common Cold

Profile

The common cold is known and loathed by all. But, as with other apparent 'disorders', the cold is really just an elimination procedure being undertaken by the body. Those who get colds regularly need to examine whether they are challenging their immune system with foods their body are rejecting: e.g. cow's milk, sugar, gluten from wheat, barley, rye, etc. Certainly, 'snotty nosed' kids who suffer from what I term 'Niagara Nose' generally have a problem with cow's milk, as I explain in a chapter in *Health Wars* dedicated to this subject, and the mucus formed is the body's way of getting toxins out of the system. Food intolerances, such as those with cow's milk, may also present themselves in kids, not only as colds, but as colic, rashes, diarrhoea, behavioural problems, the 'Terrible Twos' syndrome, etc.

Symptoms

Dry scratchy throat, general feelings of listlessness, headache, upper respiratory tract congestion, sneezing, etc. Thick mucus will be ejected through nose and mouth which contains dead organisms, toxins, white blood cells, and other debris the body is trying to expel. Colds generally last from three to ten days. Longer illness may indicate a deeper problem with immune function, which might involve the patient being too stressed, not enough rest, inadequate nutrition, dehydration, etc.

Commentary

Those with a robust immune system and clean and detoxified body do not suffer from colds; I haven't had one in twenty-six years! Chief causes of a depressed immune system will be lack of nutritious food, dehydration, food allergies, a constant intake of refined sugar and sugary drinks, and stress, which depletes vitamin C reserves in the body.

Traditional treatments

Visit any pharmacy today and you'll be confronted with racks of patented products all claiming to do something for the common cold. All most do is suppress symptoms rather than eliminate the root cause of why your body found it necessary to clean itself out to begin with. In *Wake up to Health in the 21st Century*, Steve Ransom highlights many examples of cons being perpetrated by companies pushing the latest flu and cold cures on a gullible public. Best avoid them all and address the root problems instead.

Take action

Turning off the toxin tap to avoid colds will involve changing diet in the way we have examined with previous disorders, and employing techniques to boost the immune system, assisting the body in eliminating the problem rather than suppressing the immune system's ability to do its job properly (which is all most over-the-counter cold medicines accomplish anyway). Here are some pointers for prevention as well as remedy:

- **DIET: COMMENCE THE *FOOD FOR THOUGHT* LIFESTYLE REGIMEN**, paying special attention to items to eliminate. Ensure at least 50% of the food you eat is uncooked (raw), unrefined, organic plant dietary
- **HYDRATION:** Commence drinking half your bodyweight (lbs) in ounces A DAY, i.e. a 120 lb female should drink 60 oz of water daily. For most adults, 2-3 litres of water will suffice. Do not overdo
- **DIET:** Half a teaspoon (tsp) of unrefined sea salt or, best, Himalayan salt for every ten glasses of water
- **RESTORING NUTRIENT BALANCE: COMMENCE THE BASIC SUPPLEMENT PROGRAM**, ensuring, if suffering:
 - Vitamin C complex (ascorbates plus bioflavonoids), 500-1,000 mg taken every four hours. If diarrhoea results, back dosage down to threshold level
 - Vitamin A & E emulsion, 20,000 – 25,000 IU per day during the cold
 - Zinc (elemental), 25 mg per day during the cold
 - Vitamin B6, 100 mg per day during the cold
- **IMMUNE FUNCTION:** Echinacea, 1 g, three times per day
- **IMMUNE FUNCTION:** Astragalus, 1 g, three times per day
- **TIP:** Get plenty of rest. Potent immune factors are released during deep rest. DO NOT exercise during the cold period but ensure you exercise regularly when you are well
- **TIP:** Avoid stress! Very, very, very, very important....

RESOURCES

[Simple Changes by Phillip Day](#)

[Food Matters DVD](#)

[The Essential Guide to Water and Salt](#) by F Batmanghelidj MD and Phillip Day

[Echinacea/Astragalus](#)

[Vitamin C plus bioflavonoids](#)

[Himalayan crystal salt](#)

[Reverse osmosis drinking water system](#)

Source: Phillip Day, Campaign for Truth In Medicine – Weekly Health Tip – 9 July 08

To purchase any of the items mentioned above please go to

<http://interneka.com/affiliate/AIDLlink.php?BID=11205&AID=34037>

Phillip Day

The Campaign for Truth in Medicine

<http://www.campaignfortruth.com>

EClub Weekly Tip – Eclubcampaignfortruth.com

What Doctors and Experts Say About Glutathione

Glutathione or GSH has been called the master antioxidant, and regulates the actions of lesser antioxidants such as vitamin C, and vitamin E within the body. We literally cannot survive without this antioxidant.

--Earl Mindell, R.Ph., Ph.D. "What You Should Know about the Super Antioxidant Miracle"

No other antioxidant is as important to overall health as glutathione. It is the regulator and regenerator of immune cells and the most valuable detoxifying agent in the human body. Low levels are associated with hepatic dysfunction, immune dysfunction, cardiac disease, premature aging, and death.

--Lorna R. Vanderhaeghe & Patrick J.D. Bouic, Ph.D. "The Immune System Cure"

Glutathione is the major endogenous antioxidant produced by the cell. Glutathione participates directly in the neutralization of free radicals, reactive oxygen compounds, and maintains exogenous antioxidants such as vitamins C and E in their reduced (active) forms. In addition, through direct conjugation, glutathione plays a role in the detoxification of many xenobiotics (foreign compounds) both organic and inorganic. Research suggests that abnormally low glutathione levels may increase your risk for Heart Attack.

--Eric Topol, MD, *New England Journal of Medicine*.

Glutathione has potent anti-viral properties - if tissue and serum glutathione levels are significantly increased, the replication of most pathogens are slowed or stopped. Conversely, glutathione deficiency produces a pro-viral effect.

--Paul Cheney, M.D., Ph.D. and expert in the treatment of Chronic Fatigue Syndrome.

As we age, there is a precipitous drop in glutathione levels. Lower glutathione levels have been implicated in many diseases associated with aging.

--*Journal of Clinical Epidemiology* 47: 1021-28 1994

Glutathione plays a role in eliminating many carcinogens as well as maintaining immune function.

--*Cancer Letters* 57: 91-94 1991

Strong muscular activity, such as that experienced by athletes, generates oxy radicals [free radicals] leading to muscle fatigue and poorer performance. Glutathione neutralizes these radicals.

--*Sport Medicine* 21: 213-238, 1996

Glutathione detoxifies many pollutants, carcinogens, and poisons, including many in fuel exhaust and cigarette smoke. It retards damage from radiation such as seen with loss of the ozone.

--*Annual Reviews of Biochemistry* 52: 711-780 1983



Below are some pictures of a leg that was badly ulcerated and healed just by using a LifeWave Glutathione (Y-Age) patch!

LifeWave patches are unlike any other patch technology currently sold. While other patches placed on the skin deliver substances into the body, LifeWave patches are not transdermal patches. Instead this technology is entirely new and unique. LifeWave patches do not put any substances into the body. Instead the safe natural biological substances contained within the patches are used to create specific biosignals that modulate the body's natural magnetic field in order to enhance certain specific biological reactions that are already naturally taking place. In particular LifeWave patches are designed to improve energy production from fats and increase stamina by utilizing valid but little known physical principles.

If you would like more information on this amazing product please contact me at healthymoneyvine@gmail.com and in the subject line put "Glutathione patches".

Click on <http://www.lifewave.com/marilynvine> and read about the Y-Age product. This product contains both Glutathione and Carnosine patches. A five day detox protocol is available using Y-Age and Energy Enhancer.

Or maybe you would like to go to <http://freeglobalbiz.com/marilynvine> and register an interest in receiving more information on any of the companies or products that are available. This is a no obligation website – just a simple registration of interest to allow me to make contact and pass on more information.



The Most Powerful Antioxidant Is Not a Berry, a Fruit or a Drink

It is in your body--Glutathione (GSH). Every cell in your body requires an adequate supply of Glutathione to function and to stay healthy.

Glutathione is the most powerful antioxidant in your body. Increasing Glutathione levels will naturally increase your energy, detoxify your body and strengthen your immune system.

Glutathione (GSH) is a protein produced naturally in our cells. Unfortunately, as we grow older our body produces less and less of this vital antioxidant. GSH functions both as an antioxidant and an antitoxin. It is a major defense system against illness and aging.

Our Glutathione level actually indicates our state of health and can predict longevity. Although there are more than 60,000 published papers on the beneficial effects of Glutathione supplementation, it is still largely ignored by mainstream medicine.

Glutathione also works to help improve mental functions, increases energy, improves concentration, promotes increased levels of exercise, improves chronic pain disorders, lowers blood pressure, improves heart and lung functions, and helps control the effects of diabetes.

Increasing age and other factors reduces the body's production and utilization of GSH. Research has shown that individuals who have low levels of Glutathione are susceptible to chronic illness.

Clinical data indicates our GSH levels decline by 8% to 12% per decade, beginning at the age of 20. Levels of Glutathione are further reduced by continual stress upon the immune system such as illness, infection, and environmental toxins. A lowered immune system results in higher incidents of illness and disease. This is a ferocious cycle. While you need Glutathione for a productive immune system, a weakened immune system hampers the production of Glutathione.

Unfortunately, supplements containing Glutathione alone will not increase the body's GSH Levels. It is useless to purchase supplements that merely contain Glutathione, because the digestive system breaks down ingested Glutathione and it will not be absorbed into your system.

Glutathione provides the proper nutrients needed to promote the body's own ability to manufacture and absorb Glutathione. Glutathione aids in liver support by destroying environmental poisons thus helping the liver to function as the main production site and storehouse for Glutathione.

How oxidation and inflammation are making you age, no matter how hard you work to take care of yourself. And what you can do about it.

You know all about inflammation--when you twist your ankle and it swells up to twice its size, that's inflammation. You probably also know that when you get a headache or strain your back, inflammation is the sources of the pain you feel. And, if you've read up on health conditions, you may be aware that inflammation is part of a heart attack.

These types of inflammation that we're familiar with are associated with illness or injuries. But chances are you're not aware of a very significant inflammatory reaction--one that profoundly affects your health every day of your life that is not caused by an illness or injury. I'm talking about inflammation at age cellular level, which is a normal process within the body.

To understand this kind of inflammation, it's helpful to think of the trillions of cells in your body as tiny "power plants", each working to its maximum capacity to produce the energy in a complex chemical process, of other chemical bonding oxygen.

We all know we need oxygen. Oxygen is essential, ironically, is what makes it ultimately dangerous and destructive. Oxygen is a high unstable, highly reactive substance. All materials, when exposed to oxygen, will break down the bonds they have and form new bonds. This process--oxidation--releases a great deal of energy, but it also produces multiple waste products.

You've seen oxidation hundreds of times--it's one of the most common and powerful chemical reactions on earth. Oxidation is what happens when you leave an iron pipe out in the rain and you see it rust. It's also what

happens in your fireplace when you see a log consumed in flames. Think about that log in your fireplace--think about the soothing warmth and bright light it produces. Now think about the pile of ashes that's left behind.

Something very similar happens within your cells. Energy (like the heat and light in your fireplace) is produced by the cell's oxidative reaction, but is a "pile of ashes," so to speak. The waste products left behind are called oxidants. In many cases, they can themselves be corrosive and destructive--like the rust on that pipe I mentioned earlier.

Even oxidants that are not in and of themselves harmful can really clog up the works in your cells, making the cells less efficient and less able to produce energy. And, because oxidation is present--not just in your cells--your body is under attack from as well as from within--with pollutants, food additives and other substances that can cause oxidative damage to the cells.

But as we all know, the body is an amazing self-correcting system, so of course there are natural processes in place to combat the damage oxidation does. That's where inflammation comes in. Inflammation is the natural result of a biochemical processes and reactions, the purpose of which is to undo the damage done by oxidation in the cell.

LifeWave's glutathione patches elevate the body's own glutathione supplies by 300% in 24 hours – there is no other known way of achieving this result other than with the patches.

Source: Heather Ruth, South Australia – received via e-mail – 9 June 2009



The following information was passed to me by my Homoeopath and I thought would be of interest to you.

Skin Infections

For any warts, skin infections or abnormal skin growths, use Castor Oil. Castor oil can be put on open wounds to stop infection. Keep a light coating on the skin as much as possible or use cotton gauze soaked lightly with castor oil. On warts, an alternative is coating several times a day with clear fingernail polish to seal out the air. This doesn't work if the wart is in a position that receives much rubbing.

Diet changes recommended:

High magnesium, low cane sugar diet is required. Often a homoeopathic medicine is necessary to drive out the causative condition.

To remove the castor oil from the skin, sprinkle a bit of Bicarbonate of Soda on a damp cloth and wipe off.

Lutein and Zeaxanthin Can Benefit Colon Cancer, Say Researchers

Korean researchers have found alga-extracted carotenoids such as lutein and zeaxanthin can reduce colon cancer growths.

The carotenoids extracted from two popular Asian algae forms – *Chlorella ellipsoidea* (CEE) and *Chlorella vulgaris* (CVE) – blocked growth of human [colon cancer](#) cells, the scientists found.

[Lutein](#) and [zeaxanthin](#), more commonly known for their eye health benefits, were not the only xanthophylls present in the algae but it was suggested they were the most bioactive.

They also found the extracts had a more powerful anti-cancer effect when used in combination than in isolation.

CVE was composed almost entirely of lutein and found to be 2.5 less effective at inducing apoptosis than CEE – made up of zeaxanthin along with violaxanthin and antheraxanthin.

“These results indicate that bioactive xanthophylls of C. ellipsoidea might be useful functional ingredients in the prevention of human cancers,” the researchers wrote.

But they noted both extracts were effective in battling colon cancer.

“These semi-purified extracts of CEE and CVE both inhibited the growth of HCT116 (the colon cancer cells) in a dose-dependent manner,” they said.

“Considerable evidence supports the theory that some carotenoids, such as [β-carotene](#) and [lycopene](#), may interfere with cancer-related molecular pathways and change the expression of many proteins involved in apoptosis.”

Method

The researchers obtained the extracts from a range of suppliers, which were washed, freeze-dried and refrigerated before being added to solutions and applied to the colon cancer sample cells.

HPLC analysis was used as well as a hemocytometer to give a cancer cell count. Both of the selected algae were typical with a diameter of less than 10µm.

“After 24 hours of incubation, apoptotic cells began to lift from the surface monolayer, forming assorted sizes of spherical shapes,” the researchers wrote. *“Apoptotic cells were more obviously apparent after treatment with CEE and CVE in concentrations of 80 µg/mL.”*

The researchers called for additional study: *“Further research to isolate active xanthophylls and to verify molecular mechanisms will be required to clarify fully the value of these effective constituents to cancer therapy.”*

Other research

In regard to cancer, the Korean researchers noted a recent study (Wu, L. *et al.* “Antioxidant and anti-proliferative activities of *Spirulina* and *Chlorella* water extracts”. *J. Agric. Food Chem.* **2005**, *53*, 4207–4212) that found spirulina extracts inhibited liver cancer cell growth whereas chlorella extracts produced only a minor result. They suggested this may have been the case because of “*variations in the extraction solvent*”. That study had used water extraction, whereas the current research employed organic solvents.

Another recent study (Chew, B. P. *et al.* “Dietary lutein inhibits mouse mammary tumor growth by regulating angiogenesis and apoptosis”. *Anticancer Res.* 2003, *23*, 3333–3339.) demonstrated lutein could inhibit growth in mouse mammary tumors by regulating angiogenesis and apoptosis.

Source: *Journal of Agriculture and Food Chemistry*
10.1021/jf802111x. Web release date: October 23

“Antiproliferative Effects of Carotenoids Extracted from *Chlorella ellipsoidea* and *Chlorella vulgaris* on Human Colon Cancer Cells” Authors: Kwang Hyun Cha, Song Yi Koo and Dong-Un Lee
<http://ortomolecularnews.blogspot.com/2008/10/lutein-and-zeaxanthin-can-benefit-colon.html>

Lutein, Zeaxanthin for AMD Protection: More Science

Higher intakes of the carotenoids lutein and zeaxanthin in the diet may slash the risk of age-related macular degeneration by 65 per cent, suggests a new study from Down Under. Protective effects from an increased intake of zinc-rich foods was also observed, report the researchers in the journal *Ophthalmology*, which supports finding from the Age-Related Eye Disease Study ([AREDS](#))

On the flip side, the Australian researchers reported that an increased intake of beta-carotene may increase the risk of [AMD](#) - a degenerative retinal disease that causes central vision loss and leaves only peripheral vision, and the leading cause of legal blindness for people over 55 years of age in the Western world, according to AMD Alliance International.

"In this population-based cohort study, the authors found that higher dietary intake of [lutein and zeaxanthin](#) may confer protection against long-term incident neovascular AMD or indistinct soft or reticular drusen and that zinc intake from diet and supplements combined may protect against early or any AMD. A high intake of vegetables also was protective for any AMD," states the article.

Lead author Jennifer Tan details that, of the 3654 participants signed up at the start of the *Blue Mountains Eye Study*, 2454 participants were re-examined after five and/or 10 years.

The researchers, from the University of Sydney and the University of Newcastle, report that people with the highest average intakes of dietary lutein and zeaxanthin had a 65 per cent reduced risk of neo-vascular AMD than those with the lowest average intakes.

Moreover, high zinc intake was associated with a 44 per cent reduction in any type of AMD, and a 46 per cent reduction in early AMD.

On the other hand, the highest versus lowest intakes of total beta-carotene from dietary and supplemental sources was associated with a 168 per cent increase in the risk of neo-vascular AMD, while beta-carotene from diet was associated with a 140 per cent increase in the same type of AMD.

"In this population-based cohort study, higher dietary lutein and zeaxanthin intake reduced the risk of long-term incident AMD. This study confirmed the Age-Related Eye Disease Study finding of protective influences from zinc against AMD," wrote the researchers.

"Higher beta-carotene intake was associated with an increased risk of AMD."

Tan and co-workers stated that the link between higher beta-carotene intakes and an increased risk of AMD was inconsistent with other reports.

"The authors are not aware of other studies reporting a higher risk of AMD with increasing dietary intake of beta-carotene, and they have no biological explanation for this finding," states the article. *"Thus, these findings need to be taken with caution."*

Inconsistencies

Despite protective effects from lutein, zeaxanthin and zinc, Tan and co-workers report that high intakes of beta-carotene, and vitamins C and E were not associated with reduced risks of AMD, despite earlier findings by studies such as AREDS.

"Given the inconsistency of dietary findings to date, and the potentially important therapeutic implications, further longitudinal studies and randomised clinical trials, such as AREDS II, are needed to clarify these associations," they wrote.

The results of the follow-up study, AREDS2, are eagerly awaited by many in the field. Earlier this week, English researchers stated that more definitive answers concerning lutein and eye health would be provided by the trial.

The AREDS formula, the patent for which is held by Bausch and Lomb, comprises vitamins C and E, beta carotene, zinc and copper. AREDS2 will include the antioxidant carotenoids lutein and zeaxanthin, and the omega-3 fatty acids DHA and EPA.

"The AREDS2 also is examining the effect of eliminating beta-carotene from the current AREDS formulation in patients with moderate to high AMD risk," wrote Tan and co-workers. "This may provide further insights into the association between β -carotene and AMD."

Zeaxanthin and eye health

In this month's *American Journal of Clinical Nutrition*, researchers from the Macular Pigment Research Group at the Waterford Institute of Technology in Ireland investigated the role of dietary antioxidants in protection against age-related maculopathy (ARM).

The study, which included 828 healthy Irish subjects aged between 20 and 60, found that a dietary zeaxanthin intake decreased with age, which was associated with an increased risk of ARM.

"Our finding that age, the most important and universal risk factor for ARM, is associated with a relative lack of dietary zeaxanthin, is an important finding that warrants further investigation," wrote the authors.

Speaking to NutraIngredients.com, lead researcher Stephen Beatty explained that his group did not test lutein or zeaxanthin with respect to ARM, but "simply observed that dietary intake of zeaxanthin decreases with increasing age (which is, obviously, the most important risk-factor for ARM)."

"In other words, perhaps people should take zeaxanthin supplements as they get older (with or without lutein and meso-zeaxanthin)," he added.

Source: **Ophthalmology** (Elsevier)

February 2008, Volume 115, Issue 2, Pages 334-341

"Dietary Antioxidants and the Long-term Incidence of Age-Related Macular Degeneration: The Blue Mountains Eye Study"

Authors: J.S.L. Tan, J.J. Wang, V. Flood, E. Rochtchina, W. Smith, P. Mitchell

http://www.ncbi.nlm.nih.gov/pubmed/17664009?ordinalpos=7&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum

Source: *American Journal of Clinical Nutrition*

March 2008, Volume 87, Number 3, Pages 712-722

"Diet and risk factors for age-related maculopathy"

Authors: E.D. O'Connell, J.M. Nolan, J. Stack, D. Greenberg, J. Kyle, L. Maddock, S. Beatty

<http://www.ajcn.org/cgi/content/abstract/87/3/712>



If you would like information on a product containing Lutein and Zeaxanthin and many other wonderful ingredients, then please contact me on healthymoneyvine@gmail.com with "Lutein and Zeaxanthin" in the subject line.

Migraine Headaches

Profile and Symptoms

Migraine headaches differ from usual tension headaches inasmuch as they are characterised by a throbbing pain, sometimes on one side only, sometimes preceded by 'auras' or 'prodromes'. These are warnings occurring 10-30 minutes in advance that take the form of blurring, bright spots in the field of vision, loss of vision in a specific arc of the periphery, anxiety, haloes around light bulbs, psychological piques and numbness or tingling down one side of the body.

Migraine headaches occur when blood vessels in the lining of the brain constrict and then dilate, activating pain sensors in and around the *meninges* (lining). The brain itself is not involved since it has no sensory nerves. Any auras preceding an attack will usually clear as the headache develops. The patient will often be prostrated and experience nausea, vomiting and photophobia (sensitivity to light).

Causes

Migraines are thought to be caused by the body's reaction to a number of stimuli that might trigger immune system complications. Problems in the environment, i.e. foods, chemicals, radiation, pollution, drugs, etc., are known to trigger the problem. Several clinical studies have shown that about 70% of patients with chronic daily headaches suffer from drug-induced headaches too. Many taking daily medications for whatever reason sometimes overlook the side-effects which can build over time. The following are some causes for migraines:

Food sensitivities to items like

- cow's milk, wheat, barley, etc. (gluten products), chocolate, eggs, shellfish, chocolate, benzoic acid, cheese and food additives and colourings
- Beer, wine, alcoholic beverages (local dehydration)
- Systemic dehydration
- Chemicals
- Caffeine withdrawal
- Stress
- Low serotonin levels

Hormonal changes in females

Toxins produced by fungi, yeast and bacteria

Exhaustion

Weather changes

Pollen and dust sensitivities

The Water and salt connection

Water expert Dr F Batmanghelidj attributes migraines to the internalised environment resulting from chronic long-term dehydration and its associated histamine inflammatory system:

"In my personal experience, migraine headaches seem to be brought about by dehydration; excess bed covers that will not permit the body to regulate its temperature during sleep; alcoholic beverages (hangover) initiating a process of cellular dehydration, particularly in the brain; dietary or allergic triggers for histamine release; excess environmental heat without water intake. Basically, migraine seems to be an indicator of critical body temperature regulation at times of heat stress. Dehydration plays a major role in the precipitation of migraine headaches.

The most prudent way of dealing with migraine is its prevention by the regular intake of water. Once migraine breaks the pain barriers, a cascade of chemical reactions will stop the body from further activity. At this time, one has to take pain-relieving medications with copious water. Sufficient cold or iced water may by itself be able to cool the body (and also the brain) from inside, and promote closing of the vascular system everywhere. Excess dilation of the peripheral vessels might well be the basic cause of migraine headache.¹

Commentary

There are three main types of migraines:

- **Common:** Comprising around 80% of migraines. May be frontal or bilateral and usually last from 1 to 3 days. Auras preceding these attacks are unusual.

- **Classic:** 10% of migraine sufferers experience classic migraines. Half an hour before the attack, they experience auras. The attack will be mostly unilateral, lasting from 2-6 hours and accompanied by nausea and vomiting.
- **Complicated:** 10% of sufferers will experience complicated migraines, which are characterised by a preceding aura of variable effects. The patient may suffer from speech abnormalities, a type of palsy and other neurological complications.

Most commercial research on migraines has resulted in predictable drug 'solutions' (pain killers and other modalities), which treat the symptoms, not the underlying causes. Physicians have found that removing certain foods can result in improvement in the majority of cases, since certain trigger foods can provoke the excessive release of histamine. Histamine involvement gives warning of chronic, long-term dehydration and the body's efforts at drought management. Food control is known not to be the complete answer. Migraines seem to involve a more general malaise that can include improperly formed blood vessels (pre-scurvy), platelet disorders, where blood clumps and aggregates, and also a dysfunction in the levels of the neurotransmitter hormone serotonin, responsible for relaying chemical messages in the brain. Interestingly, all these are symptoms of chronic systemic dehydration.

Take action

HYDRATION: Drink half your own bodyweight in ounces of water a day. i.e., a 140 lb female should consume 70 oz a day, approximately, 8 – 9 glasses, as well as....

Organic, unrefined salt (Himalayan, etc.). Half a teaspoon per day. Before bed, set some additional salt flakes on the tongue and allow to melt

DIET: COMMENCE THE *FOOD FOR THOUGHT* LIFESTYLE REGIMEN, ensuring that suspected food triggers are avoided and the diet is based on a four-day rotation system. Consult a nutritionist to design a suitable program. If fungal problems are suspected, switch to THE ANTI-*CANDIDA* DIETARY REGIMEN, along with appropriate supplementation

RESTORE NUTRIENT BALANCE: COMMENCE THE BASIC SUPPLEMENT PROGRAM (see back of book), ensuring:

- Magnesium, 250-400 mg, three times per day
- Dried ginger, 500 mg, four times per day

TIP: Clear out toxic products from the home and replace with safe alternatives. Ensure artificial sweeteners, colourings and additives are avoided

EXERCISE: Embark on a gentle aerobic exercise regimen which increases heart rate for 40-60 minutes a day, four times per week; (cycling, hill-climbing, stair-climbing, sports, etc.)

RESOURCES

[The Essential Guide to Water and Salt](#) by F Batmanghelidj MD and Phillip Day

[Water, the Stuff of Life](#) (booklet) by Phillip Day

[Himalayan crystal salt](#)

[Reverse osmosis drinking water system](#)

[Phillip Day video](#) on RO system and installation

Source: EClub – 4 June 2008

Credence Publications – Campaign for Truth in Medicine

To purchase any of the items mentioned above please go to

<http://interneka.com/affiliate/AIDLlink.php?BID=11205&AID=34037>

Phillip Day

The Campaign for Truth in Medicine

<http://www.campaignfortruth.com>

EClub Weekly Tip – Eclubcampaignfortruth.com

Parkinsons

Dr Saul advises that medical scientists have spent the last few hundred years carefully describing diseases which are in reality the end results of civilized-diet malnutrition. Researchers have expended colossal amounts of time and money searching for drug cures for nutritional disorders. And, they have dismissed out of hand even the possibility that pharmaceutical therapy for malnutrition might actually be the dead end it has so frequently been shown to be.

Parkinson's disease proves to be a case in point.



To read further on Dr Andrew Saul has to say, please click on the link:
<http://www.doctoryourself.com/parkinson.html>

Probiotic Bacteria's Immune Enhancing Mechanism Reported

Dutch scientists have reported that the potential immune system enhancing effects of probiotics may be due to an activation of specific genes in the walls of our intestines.

The scientists, led by Professor Michiel Kleerebezem of NIZO Food Research, identified patterns of gene expressions in the cells of the intestinal wall that may trigger mechanism for immune tolerance.

The study is claimed to be the first scientific evidence of how [probiotics](#) influence the immune system in humans. The findings are published online in the *Proceedings of the National Academy of Sciences* (PNAS Online Early Edition).

A potential immune-enhancing effect from probiotic bacteria has been reported by many scientific groups, but the mechanism by how these effects may be occurring has not been elucidated, according to the Dutch researchers behind the new study.

Scientists from Top Institute Food and Nutrition, NIZO food research, Maastricht University, Wageningen UR, and Radboud University Nijmegen performed an *in vivo* human study in order to investigate the response of certain genes to *Lactobacillus plantarum*.

The randomised, double blind, placebo controlled, crossover study involved the ingestion of live *L. plantarum*, heat-killed *L. plantarum*, or placebo. Biopsies were taken from the duodenum of the subjects and their gene expression pattern analysed.

Using gene expression analysis, Prof Kleerebezem and his co-workers report differences between the expression profiles of people who consumed the live *L. plantarum*, compared to the heat-killed *L. plantarum* or placebo.

"*Striking differences*" in pathways dependent on a protein complex called nuclear factor kappa B (NF-kB) were observed. NF-kB plays an important role in the regulation of the immune system's response to infection.

"*Our in vivo study identified mucosal gene expression patterns and cellular pathways that correlated with the establishment of immune tolerance in healthy adults,*" they concluded.

According the FAO/WHO, probiotics are defined as "*live microorganisms which when administered in adequate amounts confer a health benefit on the host*".

Immune-booster

In terms of boosting immune function, *Lactobacillus fermentum* was recently reported to boost the [immune health](#) of long distance runners, protecting them from respiratory illnesses. The Lactobacillus strain was associated with an enhancement in the activity of T cells, key players in the immune system (*Br. J. Sports Med.*, doi 10.1136/bjism.2007.044628)

Scientists at the Institute of Food Research (IFR) conducted a human study and reported that *Lactobacillus casei* Shirota may modulate the immune response to grass pollen, and help hay fever sufferers (*Clin. Exp. Allergy*, doi: 10.1111/j.1365-2222.2008.03025.x)

An improvement in the immune function of white blood cells in alcoholics has also been reported by a small study by researchers at University College London. This study also used *Lactobacillus casei* Shirota supplements (*J. Hepatology*, doi: 10.1016/j.jhep.2008.02.015)

Source: *Proceedings of the National Academy of Sciences* Published online ahead of print 3 February 2009, doi:10.1073/pnas.0809919106 "Differential NF-kappaB pathways induction by *Lactobacillus plantarum* in the duodenum of healthy humans correlating with immune tolerance" Authors: P. van Baarlen, F.J. Troost, S. van Hemert, C. van der Meer, W.M. de Vos, P.J. de Groot, G.J.E.J. Hooiveld, R.-J.M. Brummer, M. Kleerebezem <http://www.focusedtrainers.com/forum/showthread.php?p=8046>

Vitamin D is a Key Player in Your Overall Health

Vitamin D, once linked to only bone diseases such as rickets and osteoporosis, is now recognized as a major player in overall human health. In a paper published in the August issue of the *American Journal of Clinical Nutrition*, Anthony Norman, an international expert on vitamin D, identifies vitamin D's potential for contributions to good health in the adaptive and innate immune systems, the secretion and regulation of insulin by the pancreas, the heart and blood pressure regulation, muscle strength and brain activity.

Access to adequate amounts of vitamin D is also believed to be beneficial towards reducing the risk of cancer.

Norman also lists 36 organ tissues in the body whose cells respond biologically to vitamin D, including bone marrow, breast, colon, intestine, kidney, lung, prostate, retina, skin, stomach and uterine tissues.

According to Norman, deficiency of vitamin D can impact all 36 organs. Already, vitamin D deficiency is associated with muscle strength decrease, high risk for falls, and increased risk for colorectal, prostate and breast and other major cancers.

An unrelated study also suggests that low vitamin D is associated with Parkinson's disease. The majority (55 percent) of Parkinson's disease patients in the study had insufficient levels of vitamin D.

Meanwhile, the American Academy of Pediatrics has doubled its recommendation for a daily dose of vitamin D in children, in the hopes of preventing rickets and promoting other health benefits. The new guidelines now call for children to receive 400 international units (IU) of vitamin D per day, beginning in the first few days of life.

"... Evidence has shown this could have life-long health benefits," said Dr. Frank Greer of the American Academy of Pediatrics.

Sources: [Eurekalert October 9, 2008](#)

[American Journal of Clinical Nutrition August 2008, Vol. 88, No. 2, 491S-499S](#)

[Archives of Neurology October 2008, Vol. 65, No. 10](#)

[Reuters October 13, 2008](#)



To read Dr Mercola's comments on the above article, which I believe are very important comments and ones we should all be well aware of, go to:



<http://articles.mercola.com/sites/articles/archive/2008/11/01/Vitamin-D-is-a-Key-Player-in-Your-Overall-Health.aspx>

Vitamin and Food Supplements – Where Are the Bodies?



People who wish to use alternative therapies instead of the usual allopathic route are told many things including the fact that it causes people to die. Dr Andrew Saul speaks before the Parliament in Canada on “Vitamin and Food Supplements – Where are the Bodies?” He gives comprehensive coverage on vitamins, their toxicity, their benefits and the lack of deaths associated with using vitamins. Please go to Appendix A and read Dr Saul’s full presentation. I believe you will be pleasantly surprised!



Do you play golf and maybe suffer from diabetes? Then I believe you will be interested in this one! Once you have read the article may I suggest that you contact your Golf Club and find out what they use and perhaps suggest to them that they change to something that is not quite so harmful!

Diabetes: Why Golfers Are More Likely to Become Diabetic

19 June 2008

People who like to get out on the golf course for a round or two - thinking it's good for their health - are actually increasing their chances of diabetes.

Researchers have discovered that the pesticides commonly used on golf courses and other public areas can double the risk of diabetes. Pesticides that contain the chemical trichlorfon are especially associated with diabetes, and are to be added to the other known risks, such as obesity and diet.

Trichlorfon is an organo-phosphate insecticide that is used by professional groundsmen to maintain turf, such as golf courses, and it is also sold to the public. Not surprisingly, the greatest at-risk groups are gardeners and others who regularly work with the pesticides.

Researchers from America's National Institutes of Health estimate that the risk can be as high as 200 per cent in workers who are exposed to the pesticides for more than 100 days in their working life.

(Source: National Institutes of Health: <http://www.niehs.nih.gov/news/releases/2008/longterm.cfm>)

Children and Vitamin D

with Dr John Cannell



I do not know who Dr Cannell is, however, I found the correspondence from him of interest.

Comment from Elaine Hollingsworth:

There was a day when all babies were exposed to the sun on a daily basis, on orders from their paediatricians now, dermatologists are warning to keep their babies out of the sun with disastrous results!

Elaine Hollingsworth – Doctors Are Dangerous Newsletter – 29 October 2008
PO Box 1400, Mudgeeraba, Queensland – 4213 – AUSTRALIA

Dear Dr. Cannell:

Two years ago in March, my five month old baby girl died from heart failure, called "idiopathic cardiomyopathy." She was my first child, I breast fed her, we did everything her pediatrician said to do; he told us not to let her into the sun and to always use sunblock if we went outside. He never mentioned vitamin D. The heart doctors did everything they could think of before she died but they never measured her vitamin D level. I just read about a study that found my baby may have died from untreated vitamin D deficiency. Do you know about that study?

Jena , New York .

Dear Jena :

I'm sorry to tell you that I do. It appears likely that infantile idiopathic cardiomyopathy may just be another word for undiagnosed and untreated vitamin D deficiency. English cardiologists recently concluded that "the heart failure associated with vitamin D deficiency in infants is surprising," but added "the outcome is good" in the children treated with vitamin D. They should have said the "outcome is good if the diagnosis is made." The outcome is often fatal when the diagnosis is missed. It appears to me that the major mistake is that unless the serum calcium is low, pediatric cardiologists never measure vitamin D levels. Of course, if they did measure vitamin D levels, would they order the right test? If they did order the right test would they know how to interpret it or would they rely on the outdated and dangerous reference ranges of American labs, such as LabCorp and Quest? As you will see below, genetics plays a much bigger role in 25(OH)D levels than anyone suspected and we must assume the same is true of tissue levels of activated vitamin D. Thus these children should be given enough vitamin D to normalize the kinetics of 25(OH)D, enough to get their 25(OH)D levels into the upper part of the reference range, 60-80 ng/ml.

[Maiya S, et al. Hypocalcaemia and vitamin D deficiency: an important, but preventable, cause of life-threatening infant heart failure. Heart. 2008 May;94\(5\):581-4.](#)

Five years ago, the New England Journal of Medicine reported on 435 cases of pediatric cardiomyopathy in the USA and failed to make the diagnosis of vitamin D deficiency in even one of the children. Sixty-eight percent of the cases were idiopathic, that is, no known cause. However, if the authors or the editors would have just looked at their data a little closer; children in the north were more likely to get cardiomyopathy than children in the south and the disease more common in black children than white children. Those two facts alone should have alerted the authors and the NEJM editors that vitamin D deficiency may be a common (and equally important, easily treatable) cause of pediatric cardiomyopathy.

[Lipshultz SE et al. The incidence of pediatric cardiomyopathy in two regions of the United States. N Engl J Med. 2003 Apr 24;348\(17\):1647-55.](#)

Jena, it appears quite possible that your baby girl died from lack of vitamin D. Just think, in the year 2008, infants in the United States are dying from the lack of a simple vitamin, from lack of sunshine. I hope Dr. Barbara Gilchrist and the dermatologists (or should I say cosmetologists) soon stop blaspheming the Sun God or the Sun God's wrath will take even more of our children.

Dear Dr. Cannell:

My two children (age 5 and 7) have had asthma almost since they were born. In the winter, they are in and out of the hospital, it's horrible it is to see your child struggling for breath. Last fall I started both of my children on 2,000 IU of vitamin D a day and over the last year the asthma has just faded away. I'm afraid to stop their asthma medications but they don't seem to need them anymore. When I forget to give their asthma meds, I can't see any difference. Before the vitamin D, if I missed a dose of their asthma meds, I would know it very quickly. Could it be the vitamin D?
Joanne , Minnesota

Dear Joanne:

It seems increasingly likely that childhood asthma is but another presentation of vitamin D deficiency. At least two researchers at Harvard think so; they think it is the result of maternal vitamin D deficiency.
[Litonjua AA, Weiss ST. Is vitamin D deficiency to blame for the asthma epidemic? J Allergy Clin Immunol. 2007 Nov;120\(5\):1031-5.](#)
[Weiss ST, Litonjua AA. Maternal diet vs lack of exposure to sunlight as the cause of the epidemic of asthma, allergies and other autoimmune diseases. Thorax. 2007 Sep;62\(9\):746-8.](#)

However, I have heard from a number of parents who wrote to tell me their child's asthma went away after taking vitamin D. Also, a paper is in press that shows low vitamin D levels are a risk factor for exacerbations of asthma in children.

[Low vitamin D levels linked to asthma exacerbations](#)

So, it appears that childhood asthma can also be caused by simple childhood vitamin D deficiency, and thus perhaps cured by simple vitamin D. If so, asthma is yet another disease the dermatologists worsened, one killing about 200 American children every year, by imprecating the Sun God.

Dear Dr. Cannell:

My teenage son has type 2 diabetes. I started him on 5,000 IU of vitamin D a day about 6 months ago. Three things have happened so far, he started losing weight, his blood sugars improved, and his acne went away. I know you have written about diabetes and weight loss with vitamin D but I can't remember anything about acne?
Mary , North Dakota

Dear Mary:

I have had some reports that vitamin D cured acne but frankly, I didn't believe them. Then I ran across this 1938 paper. You can read the entire paper yourself and see what 5,000 to 14,000 IU per day did for these patients with severe acne. When I was a kid, I always wondered why my pimples got better in the summer and worse in the winter.
[Maynard MT. Vitamin D in Acne: A Comparison with X-Ray Treatment. Cal West Med. 1938 Aug;49\(2\):127-32.](#)

As far as vitamin D improving type-2 diabetes, in my experience, that is the rule not the exception. How much it will improve it probably depends on how much vitamin D you give and how much weight the child loses together with his diet. Higher levels 25(OH)D prevent the disease but so far, I am not aware of any randomized controlled trials showing a treatment effect but, in the past, about half my adult type-2 patients were eventually able to go off their diabetic meds with proper doses of vitamin D. Dr. Knekt, at the National Public Health Institute in Finland, just discovered that men with the highest 25(OH)D levels (>30 ng/ml) had an 82% lower risk of developing type-2 diabetes in the future compared to men with the lowest levels but no effect was found in women. And get this, in Finland the average 25(OH)D level for all 7503 people tested was 43 nmol/L or 17 ng/m. For men it was 18 ng/ml and for women only 15 ng/m and that was a representative sample of Finnish adults!!!

[Knekt P, et al. Serum vitamin D and subsequent occurrence of type 2 diabetes. Epidemiology. 2008 Sep;19\(5\):666-71.](#)

Dear Dr. Cannell:

I read somewhere that cavities in children are a sign of vitamin D deficiency. Is that true?
George, Utah

Dear George:

Yes, it is true. Several months after your child begins taking adequate doses of vitamin D, cavities will stop forming. Actually, Professor McBeath did a placebo controlled trial in New York City orphanages in 1934 of 425 children. The children received either no vitamin D or 330, 465, or about 1,000 IU (The paper uses Steenbock units, one Steenbock unit is 3.3 IUs) of vitamin D a day as cod liver oil. Also, remember, cod liver oil in the 1930s had much more vitamin D than modern cod liver oil. McBeath said he conducted this study because several earlier studies showed ultraviolet irradiation gave "striking results" in stopping cavity formation. McBeath's results were quite amazing in preventing new cavities. Like the paper on acne above, you can read the entire study yourself. Remember that 1,000 IU of vitamin D is not enough for many children to obtain levels of 50 ng/ml, however, this study showed that even 1,000 IU virtually stopped new caries from developing.

[McBeath EC. Vitamin D Studies, 1933-1934. Am J Public Health Nations Health. 1934;24\(10\):1028-30.](#)

Dear Dr. Cannell:

I don't understand what you have against vitamin A. All vitamins are good and have to be taken together, especially A and D. I give both my children a tablespoon of Nordic Naturals Arctic Cod Liver Oil every day. Also, I disagree with what you have written about vitamin D preventing colds and flu, my children are sick most of the winter.

Mary, Pennsylvania

Dear Mary:

Did you ever stop to read what is on the label of [Nordic Naturals Arctic Cod Liver Oil](#)? You are giving your children between 3,000 to 6,000 IU of vitamin A per day but only 3-60 IU of vitamin D. In fact, you are slowly poisoning your children.

A recent Cochrane review found vitamin A supplements increased total mortality by 16%, perhaps through its antagonism of vitamin D.

[Bjelakovic G, et al. Antioxidant supplements for prevention of mortality in healthy participants and patients with various diseases. Cochrane Database Syst Rev. 2008;\(2\):CD007176.](#)

Another, recent Cochrane review concluded that, although vitamin A significantly reduced the incidence of acute lower respiratory tract infections in children with low retinol, as occurs in the third world, it appears to increase risk and/or worsen the clinical course of such infections in children in developed nations.

[Chen H, et al. Vitamin A for preventing acute lower respiratory tract infections in children up to seven years of age. Cochrane Database Syst Rev. 2008;\(1\):CD006090.](#)

As for the evidence that vitamin D decreases respiratory infections, Wayse et al compared 80 children with lower respiratory infections to healthy controls and found children with the lowest 25(OH)D levels were eleven times more likely to become infected. Furthermore, sixty thousand IU of vitamin D a week administered for six weeks to 27 children suffering from frequent respiratory infections resulted in a complete disappearance of such infections for the following six months.

[Wayse V, Yousafzai A, Mogale K, Filteau S. Association of subclinical vitamin D deficiency with severe acute lower respiratory infection in Indian children under 5 y. Eur J Clin Nutr 2004;58:563-567.](#)

[Rehman PK. Sub-clinical rickets and recurrent infection. J Trop Pediatr 1994;40:58.](#)

As readers know, I first hypothesized vitamin D will prevent colds and flu in [November of 2005 in this newsletter](#). Also, our second paper on influenza is the third most accessed paper in Virology Journal this year, in spite of being out only six months. It is free to download.

On the Epidemiology of Influenza

As to all vitamins being good, I assume you mean all vitamins are good in the proper doses and if the body is not getting enough from diet. Vitamin A deficiency in the USA is practically non-existent. The real problem is subclinical vitamin A toxicity, which appears to be fairly common. Please stop poisoning your children with cod liver oil and start them on adequate doses of vitamin D.

Dear Dr. Cannell:

How much vitamin D should I give my children?
Robert , New Mexico

Dear Robert:

It depends on their preexisting blood levels of 25-hydroxy-vitamin D. How much sun do your children get in New Mexico ? How much do they weigh? Do they use sunblock? How much milk or fish do they consume? Let me add one more thing, a stunner. It also depends on their genetics. Three twin studies, one in osteoarthritis, one is asthma, and one in multiple sclerosis, all found a significant heritability for 25(OH)D. (Heritability should not be mistaken for genetic percentage.)

[Hunter D, et al. Genetic contribution to bone metabolism, calcium excretion, and vitamin D and parathyroid hormone regulation. J Bone Miner Res. 2001 Feb;16\(2\):371-8.](#)

[Wjst M, et al. A genome-wide linkage scan for 25-OH-D\(3\) and 1,25-\(OH\)2-D3 serum levels in asthma families. J Steroid Biochem Mol Biol. 2007 Mar;103\(3-5\):799-802.](#)

[Orton SM, et al. Evidence for genetic regulation of vitamin D status in twins with multiple sclerosis. Am J Clin Nutr. 2008 Aug;88\(2\):441-7.](#)

The heritability of 25(OH)D levels may also explain the enormous variation in 25(OH)D response that people show when they take vitamin D. Some only show slight increases and others more robust increases in 25(OH)D, perhaps due to genetic variations in how quickly 25(OH)D is made and how quickly it is catabolized. Furthermore, Orton et al found a significant association of 25(OH)D levels with the enzyme that activates vitamin D, which is a mystery, at least to me.

What this probably means is that how much activated vitamin D you have in any tissue of your body is under both genetic and environmental control. It varies between children, explaining why one child gets sick and the other does not. Activated vitamin D almost assuredly varies among organs as well, explaining why one vitamin D deficient child gets asthma, another frequent infections, another heart disease, another rickets, another diabetes, and another cavities. When the vitamin D deficiency occurs in the womb, the results also vary in later life, from autism to type-1 diabetes to cancer. All this is simply another argument for the need for 25(OH)D testing and supplementation to the mid point of the normal reference range. Do not accept 40 ng/ml as adequate, it is not.

However, as a general rule, breast fed infants need 1,000 IU per day, bottle fed infants an extra 600 IU per day. Children generally need about 1,000 IU for every 25 pounds of body weight. So a 75 pound nine-year-old needs about 3,000 IU per day. This is in the absence of significant sun-exposure, that is, they don't need to take it in the summer if they spend time outside without sunblock. However, tremendous individual variation exists in 25(OH)D response to vitamin D.

Dear Dr. Cannell:

What vitamin D should I use?
Vincent , California

Dear Vincent:

Anywhere. Vitamin D in 1,000 IU tablets by [Nature Made](#) are available in most pharmacies in the USA and Canada . On the internet, [Bio Tech Pharmacal](#) has prices that are hard to beat and has 1,000 and 5,000 IU capsules and they send a \$1,000.00 check to the Vitamin D Council every month. [Life Extension Foundation](#) also has 1,000 and 5,000 IU capsules. [Ddrops](#) are now available in the USA from Carlson with 400, 1,000 and 2,000 IU per drop, perfect for children. [LifeSpan Nutrition](#) has a variety of [vitamin D preparations](#) . LifeSpan was the earliest financial supporter of the Vitamin D Council.

If price is no object, and you want the most expensive product on the market, Purity Products will soon begin telemarketing [Dr. Cannell's Advanced Vitamin D](#). The idea is to bring vitamin D into people's living rooms, via radio and TV, no inexpensive task, that is, to get people taking vitamin D who are not taking it now. To do so, I helped develop a preparation that contains cofactors vitamin D seems to need to work optimally in the body and that are often lacking in modern diets, such as zinc, boron, magnesium, vitamin K, etc. If the product survives its test marketing, Purity will mass market it on thousands of radio shows and, hopefully, tens of thousands of people not taking vitamin D will begin taking it. If that happens, my family will make enough money so I can start researching and writing about vitamin D full-time. However, in the interest of full disclosure, you can save some money and get the same cofactors by taking less expensive vitamin D and eating spinach every day.

Dear Dr. Cannell:

Anything new on your theory that vitamin D is involved in autism?
Sally, New York

Dear Sally:

Science News reported that two Swedish doctors recently proposed vitamin D deficiency is linked to autism. [Doctors eye vitamin D link to autism](#)

Another article looked at the amazingly high rate of autism in dark-skinned immigrants in Minnesota. [A mysterious connection: autism and Minneapolis' Somali children](#)

Of course, the vitamin D theory of autism, first published in this newsletter in [May of 2007](#) and subsequently published in [Medical Hypothesis](#) in October of 2007, predicts exactly such a dramatic increase in autism in the children of dark-skinned immigrants.

Furthermore, I continue to get reports from parents with autistic children that adequate doses of vitamin D sometimes has a treatment effect in autistic children, mainly younger children who developed signs of autism around the age of weaning, improving repetitive behavior, sleep disorders, and screaming spells. In rats, pups born to deficient mothers can regain some brain function if they are started on vitamin D at birth. Unfortunately, the recovery in rat pups brain damaged by maternal vitamin D deficiency is never complete.

I have come up with a protocol for diagnosing and treating vitamin D deficiency in autistic children but it can be used in any child. Remember, the worst thing that can happen is that children will have stronger bones:

1. Advise parents to stop giving children all preformed retinol, such as cod liver oil, and all vitamins or supplements containing retinyl palmitate and retinyl acetate. Preformed retinol antagonizes the action of vitamin D, probably at the vitamin D receptor site. Beta carotene does not have this same effect but children only need extra beta carotene if their diet is poor in colorful fruits and vegetables, dairy products, or fortified breakfast cereals.
2. Order a 25-hydroxy-vitamin D [25(OH)D] blood test. Do not order a 1,25-dihydroxy-vitamin D as it is often elevated in vitamin D deficiency and will mislead you.
3. If the 25(OH)D level is less than 70 ng/ml, the mid range of American references labs (30 - 100 ng/ml), give your child vitamin D3 supplements. Generally children require 1,000 IU per 25 pounds of body weight per day. However, great individual variation exists and autistic children need to be retested and the dose adjusted about every month until levels are at least 50 ng/ml in healthy children and at least 70 ng/ml in any child with autism, diabetes, frequent infections, or any chronic illness.
4. Test for 25(OH)D every month and treat with enough vitamin D until 25(OH)D levels are stable. Vitamin D toxicity has never been reported, in adults or children, with 25(OH)D levels below 200 ng/ml.

As far as the cause of idiopathic autism, I'm more convinced my theory is true than ever, so I wrote a poem of sorts.

To an Older God

Long before our current gods, the people worshiped an older god, the Sun God, their first God. They knew life receded when she receded and returned when she returned and called her Amaterasu and Liza and Surya and Ra and Apollo and Helios and Sol and many other names, but dared not look upon her face knowing the Sun God blinds those so arrogant. Pregnant women lay in the sun, held their infants up to the sun, and sent young

children to play under the sun. The Sun God's blessing was calcitriol, which she carefully deposited into the tiniest of developing brains. With it, the children waxed lean and strong and brown with vibrant brains for calcitriol, the Sun God's gift, orchestrated brain growth.

Then, new priests of science and medicine, told the people the Sun God was only a star, one of trillions, nothing special. Great temples called hospitals and research institutes arose, which admitted only filtered sunlight and where the people offered sacrifices to the gods of science and medicine, sacrifices that enriched the new priests. Then, twenty years ago, the new priests of dermatology told the people to shun the Sun God. "Banish her from your lives," they said, "She is evil." The people listened to the new priests and kept their pregnant women out of the Sun God's warmth, and told their children she was wicked. The people stayed inside, their children with them and traveled behind glass in their cars and wore sunblock and sunhats to keep the Sun God away.

The Sun God grew vengeful. She withdrew her gift of calcitriol. Without it, fetal brains grew without a grower, sang the song of development without a conductor. The infants cried and would not look into their mother's eyes and the children rocked for hours and banged their heads and couldn't sleep and threw appalling tantrums. The people brought their brain-damaged children to see the new priests and sacrificed dearly, but all the people's offerings were in vain. The new gods of science and medicine could do nothing.

For the Sun God had sent a plague and her wrath was upon the people. A great wailing arose in the houses and a gnashing of teeth and tears of anguish, as the people tasted the bitterness of autism.

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DISCLAIMER

This information is not intended as medical advice. I encourage everyone to make their own health care decisions, with advice from qualified professionals.

Source: Elaine Hollingsworth, Doctors are Dangerous Newsletter – 29 October 2008
http://www.doctorsaredangerous.com/articles/children_vit_D.htm

Acupuncture Is Just as Effective Without Needles

Acupuncture works, but it appears to work equally well with or without needle penetration. This conclusion was drawn from a treatment study involving cancer patients suffering from nausea during radiotherapy.

In a series of acupuncture studies that involved more than 200 patients who were undergoing radiation treatment, roughly half received traditional acupuncture with needles penetrating the skin in particular points, while the others received simulated acupuncture instead, with a telescopic, blunt placebo needle that merely touched their skin.

Afterwards, 95 percent of the patients in both groups felt that the treatment had helped relieve nausea, and 67 percent had experienced other positive effects such as improved sleep, brighter mood, and less pain. Both groups felt considerably better than a separate control group that received no acupuncture of any kind. The acupuncture was performed by physiotherapists two or three times a week during the five week long period of their radiation treatment.

Sources:

[Science Daily December 1, 2008 - http://www.sciencedaily.com/releases/2008/12/081201082353.htm](http://www.sciencedaily.com/releases/2008/12/081201082353.htm)

[Linköping University Medical Dissertations \(pdf\) December 5, 2008](#)



Acupressure is a form of acupuncture without the use of needles. It is done by applying pressure to the acupuncture points. One form of acupressure that I am aware of is by using acupressure patches which incorporate homeopathy. These patches are not transdermal and therefore nothing passes from the patch through the skin and into the body. It is purely done by stimulating the acupuncture point.

For information on this please go to <http://www.lifewave.com/marilynvine> . I have seen some pretty amazing testimonials by people who have used these patches for a great many complaints. If you are interested in learning more about this, please contact me at healthymoneyvine@gmail.com and say "LifeWave patches" in your subject line.

Cot Death Reduction



Resveratrol



Resveratrol is starting to come into its own and more and more information is being found. Below is one small item on Resveratrol. This is just one of many articles contained in the NaturalNews by Mike Adams.

Resveratrol is a naturally occurring phytoalexin produced by some higher plants in response to injury or fungal infection. Phytoalexins are chemical substances produced by plants as a defense against infection by pathogenic [microorganisms](#), such as fungi. Alexin is from Greek, meaning to ward off or to protect. **Resveratrol** may also have alexin-like activity for humans.

--[PDR for Nutritional Supplements](#) by Sheldon Saul Hendler and David Rorvik

Resveratrol is “Nature’s Medicine” for Cancer, Heart Disease and Much More



To read Mike Adams full article on Resveratrol please go to Appendix A, then to Appendix C, in which Wikipedia has an enormous amount of information on this subject.

APPENDIX A. Vitamin and Food Supplements – Where Are the Bodies?

Andrew Saul Speaks Before the Parliament of Canada

Vitamin Toxicity

TESTIMONY by Andrew W. Saul before the Government of Canada, House of Commons Standing Committee on Health, regarding natural health product safety (Ottawa, May 12, 2005).

VITAMINS AND FOOD SUPPLEMENTS: SAFE AND EFFECTIVE

by Andrew W. Saul

(Andrew W. Saul has taught clinical nutrition for New York Chiropractic College, and taught health science and biology for the State University of New York for nine years. The author of three nutrition books, Saul is also Contributing Editor for the Toronto-based *Journal of Orthomolecular Medicine*.)

OVERVIEW

Natural health products, such as amino acids, herbs, vitamins and other nutritional supplements, have an extraordinarily safe usage history. In the USA, close to half of the population takes herbal or nutritional supplements every day. That is over 145,000,000 individual doses daily, for a total of over 53 billion doses annually.

The most elementary of forensic arguments is, where are the bodies?

To try to answer this question, we may turn to the 2003 Annual Report of the American Association of Poison Control Centers Toxic Exposures Surveillance System, published in the American Journal of Emergency Medicine, Vol. 22, No. 5, September 2004.

<http://www.aapcc.org/Annual%20Reports/03report/Annual%20Report%202003.pdf>

This report states that there have been four deaths attributed to vitamin/mineral supplements in the year 2003. Two of those deaths were due to iron poisoning. That means there have been two deaths allegedly caused by vitamins, out of over 53 billion doses. That is a product safety record without equal.

Pharmaceutical drugs, on the other hand, caused over 2,000 poison control-reported deaths, including

Antibiotics:	13 deaths
Antidepressants:	274 deaths
Antihistamines:	64 deaths
Cardiovascular drugs:	162 deaths

It would be incorrect to state that only prescription drugs kill people. In 2003, there were 59 deaths from aspirin alone. That is a death rate nearly thirty times higher than that of iron supplements. Furthermore, there were still more deaths from aspirin in combination with other products.

Fatalities are by no means limited to drug products. In the USA in the year 2003, there was a death from "Cream/lotion/makeup," a death from "Granular laundry detergent," one death from "Gun bluing," one death from plain soap, one death from baking soda, and one death from table salt.

Other deaths reported by the American Association of Poison Control Centers included:

aerosol air fresheners:	2 deaths
nail polish remover:	2 deaths
perfume/cologne/aftershave:	2 deaths
charcoal:	3 deaths
dishwashing detergent:	3 deaths
(and interestingly, weapons of mass destruction:	0 deaths)

In America in 2003, there were 28 deaths from heroin, and yet acetaminophen ("Tylenol") alone killed 147. Though acetaminophen killed over five times as many, few would say that we should make this generally-regarded-as-safe, over-the-counter pain reliever require prescription. Even caffeine killed two people in 2003, a

number equal to the two fatalities attributed to non-iron vitamin/mineral supplements. Tea, coffee and cola soft drinks are not sold with restriction, prescription, or in childproof bottles, and rather few would maintain that they need to be.

A closer look at allegations of vitamin fatalities

Nutritional supplements are exceptionally safe. In 2003, there were no deaths from multiple vitamins without iron. There were no deaths from amino acids. There were no deaths from B-complex vitamin supplements. There were no deaths from niacin. There were no deaths from vitamin A. There were no deaths from vitamin D. There were no deaths from vitamin E.

There was, supposedly, one alleged death from C and one alleged death from B-6.

The accuracy of such attribution is questionable, as water-soluble vitamins such as B-6 (pyridoxine) and vitamin C (ascorbate) have excellent safety records stretching back for many decades. "Vitamin problem" allegations are routinely overstated and unconfirmed. The latest (2003) Toxic Exposures Surveillance System report indicates that reported deaths are "probably or undoubtedly related to the exposure," a clear admission of uncertainty in the reporting. (p 340)

Even if true, such events are aberrations. For example, In 1998, the American Association of Poison Control Centers' Toxic Exposure Surveillance System reported no fatalities from either vitamin C or from B-6. In fact, that year there were no vitamin fatalities whatsoever. For decades I have asked my readers, colleagues, and students to provide me with any and all scientific evidence of a confirmed death from either of these two vitamins, or from any other vitamin. I have seen none to date.

Even the mistakenly-believed "side effects" of vitamin C have been found to be completely mythical. According to a National Institutes of Health report published in the Journal of the American Medical Association (April 21, 1999), none of the following problems are caused by taking "too much vitamin C":

- Allegations of Hypoglycemia
- Allegations of Rebound scurvy
- Allegations of Infertility
- Allegations of Destruction of vitamin B-12

Rather than focus on infinitesimally minimal supplement risk, it is vitamin deficiency that is the vastly more serious public health issue. For example, B-6 (pyridoxine) supplementation should be actively encouraged, as larger-than-food quantities of this vitamin has been demonstrated to prevent both cardiovascular disease and depression, diseases that are enormous public health problems. Women who use the birth control pill experience vitamin B-6 deficiency, and need to be encouraged to supplement with it. (Wynn, V. Lancet, March 8, 1975.)

Safety of vitamin a and carotene

Vitamin A, as carotene or fish oil, gives you healthy mucus membranes, a strong immune system, and helps prevent cancer.

In one review of 50 years of vitamin research, researchers noted that "approximately 10 to 15 cases of vitamin A toxic reactions are reported per year in the United States, usually at doses greater than 100,000 IU. No adverse effects have been reported for beta-carotene (a vitamin A precursor)." (Meyers DG, Maloley PA, Weeks D. Safety of antioxidant vitamins. Arch Intern Med. 1996 May 13;156(9):925-35.)

After first taking note that this review confirms safety, some explanation is necessary. First, a "toxic reaction" is very different from a "fatality." Had there been any fatalities, the authors would have said as much. Unfortunately, "toxic" may erroneously imply "deadly." That is not the meaning of toxic as it properly applies here: toxic means "makes you sick." American poison control statistics repeatedly fail to show even one single death from vitamin A in a given year.

Pregnancy is a special case where prolonged intake of too much preformed oil-form vitamin A might be harmful to the foetus, even at relatively low levels (under 25,000 IU/day). Interestingly enough, you can get over 100,000 IU of vitamin A from eating only six ounces of beef liver. I have yet to see a pregnancy overdose warning on a package of liver.

It is vitamin A deficiency during pregnancy, and in infancy, that poses the far greater risk. Deficiency of vitamin A in developing babies is known to cause birth defects, poor tooth enamel, a weakened immune system, and over 100,000 cases of blindness annually. Megadoses of vitamin A are considered sufficiently safe to be given to newborns to prevent infant deaths and disease. (Basu S, Sengupta B, Paladhi PK. Single megadose vitamin A supplementation of Indian mothers and morbidity in breastfed young infants. *Postgrad Med J.* 2003 Jul;79(933):397-402. And: Rahmathullah L, Tielsch JM, Thulasiraj RD, Katz J, Coles C, Devi S, John R, Prakash K, Sadanand AV, Edwin N, Kamaraj C. Impact of supplementing newborn infants with vitamin A on early infant mortality: community based randomized trial in southern India. *BMJ.* 2003 Aug 2;327(7409):254.)

Safety of the b-complex vitamins

The safety record of the B-complex vitamins is extraordinarily good. Since their discovery, beginning with thiamin (B-1) in 1911, many thousands of studies have verified an unequalled therapeutic value of these essential substances. Side effects have been rare, and toxicity is nearly nonexistent, even at the highest doses.

B-1, B-2, B-12, Biotin, Folate, Pantothenic Acid

Regulating blood sugar, nourishing your nerves, improving mood, and preventing cardiovascular disease are just a few reasons people take the B-complex vitamins. They are cheap and safe. Both the 1998 and 2003 American Association of Poison Control Centers' Toxic Exposure Surveillance System report shows no deaths whatsoever from Thiamin (B-1), Riboflavin (B-2), Cobalamin (B-12), Biotin, Folate or Pantothenic Acid. Furthermore, there are no toxicity reports published for these vitamins in the Merck Manual, generally regarded as a particularly authoritative medical reference.

Vitamin B-3 (Niacin; Niacinamide, Inositol Hexaniacinate)

For over 50 years, nutritional (orthomolecular) psychiatrists have used niacin (vitamin B-3) in doses as high as tens of thousands of milligrams per day. It is an effective treatment for obsessive compulsive disorder, anxiety, bipolar disorder, depression, psychotic behaviour, and schizophrenia. Niacin has also gained popularity as one of the cheapest and safest ways to lower cholesterol.

The discoverer of niacin therapy for lowering cholesterol, Canadian psychiatrist Abram Hoffer, M.D., says that niacin is very safe. "There have been no deaths from niacin supplements," Dr. Hoffer says. "The LD 50 (the dosage that would kill half of those taking it) for dogs is 5,000-6,000 milligrams per kilogram body weight. That is equivalent to almost a pound of niacin per day for a human. No human takes 375,000 milligrams of niacin a day. They would be nauseous long before reaching a harmful dose. The top niacin dose ever was a 16-year-old schizophrenic girl who took 120 tablets (500 mg each) in one day. All that happened was that the 'voices' she was hearing stopped."

Physicians frequently give patients 2,000–5,000 mg of niacin daily to lower cholesterol. The safety margin is very large. The 2003 American Association of Poison Control Centers' Toxic Exposure Surveillance System report indicates no deaths whatsoever from niacin.

Vitamin B-6

Vitamin B-6 (pyridoxine) improves mood, reduces risk of cardiovascular disease, and has been shown to be clinically effective against carpal tunnel syndrome. It also has been occasionally reported to cause temporary neurological symptoms such as heaviness, tingling, or numbness of the limbs in persons taking very large doses. It is very important to realize that such cases are not common, and when they do occur almost always result from huge doses of pyridoxine taken alone. B-6 by itself in doses of 2,000 to 6,000 mg daily (that is 1,200 to 3,600 times the standard U.S. dietary recommendation) can produce side effects. Very few persons report symptoms on 1,000 mg daily (600 times the US RDA), and only the rarest reports go any lower. When taken with, or as part of, a complete B-complex supplement, B-6 side effects are virtually unknown.

Premenstrual tension symptoms often improve dramatically with only a few hundred mg/day of extra B-6 taken in divided doses throughout the day. At least 50 to 100 mg of supplemental B-6 daily is a virtual necessity for women taking oral contraceptives. The "pill" causes some abnormal physiological changes that create a deficiency of B-6, as well as lower serum levels of thiamine (B-1), riboflavin (B-2), niacin (B-3), folic acid, B-12, and vitamin C.

Vitamin C

The importance of vitamin C cannot be overemphasized. Vitamin C has been shown to be helpful in fighting over thirty major diseases, including pneumonia, herpes zoster (shingles), pancreatitis, hepatitis, arthritis, some forms of cancer, leukemia, atherosclerosis, high cholesterol, diabetes, multiple sclerosis, and chronic fatigue.

(Vitamin C, Infectious Diseases, and Toxins: Curing the Incurable, by Thomas E. Levy, M.D. Philadelphia: Xlibris Corporation, 2002.)

Many well designed studies show that large doses of vitamin C improve both quality and length of life for cancer patients. (Murata, A., Morishige, F. and Yamaguchi, H. Prolongation of survival times of terminal cancer patients by administration of large doses of ascorbate. *International Journal of Vitamin and Nutrition Research Suppl.*, 23, 1982, p. 103-113. And: Null, G., Robins, H., Tanenbaum, M., and Jennings, P. Vitamin C and the treatment of cancer: abstracts and commentary from the scientific literature. *The Townsend Letter for Doctors and Patients*. April/May, 1997. And: Riordan, N. H., et al. Intravenous ascorbate as a tumor cytotoxic chemotherapeutic agent. *Medical Hypotheses*, 44(3). p 207-213, March 1995.)

"Vitamin C," wrote board-certified chest physician Frederick R. Klenner, M.D., "is one of the safest substances you can put in the human body." Vitamin C is remarkably safe even in enormously high doses. Compared to commonly used prescription drugs, side effects are virtually nonexistent. It does not cause kidney stones. In fact, vitamin C increases urine flow, favorably lowers urine pH, and prevents calcium from binding with urinary oxalate. All these features help keep stones from forming. (Gerster H. No contribution of ascorbic acid to renal calcium oxalate stones. *Ann Nutr Metab*. 1997;41(5):269-82. "In the large-scale Harvard Prospective Health Professional Follow-Up Study, those groups in the highest quintile of vitamin C intake (> 1,500 mg/day) had a lower risk of kidney stones than the groups in the lowest quintiles.")

It was Canadian physician William J. McCormick, M.D., who first advocated vitamin C to prevent and cure the formation of kidney stones 50 years ago (McCormick, WJ. Lithogenesis and hypovitaminosis. *Medical Record*. 159:7, July, p 410-413). In 1946 he wrote:

"I have observed that a cloudy urine, heavy with phosphates and epithelium, is generally associated with a low vitamin C status. . . and that as soon as corrective administration of the vitamin effects a normal ascorbic acid (vitamin C) level the crystalline and organic sediment disappears like magic from the urine. I have found that this change can usually be brought about in a matter of hours by large doses of the vitamin, 500 to 2,000 mg, oral or parenteral." (p. 411) [*Journal of Orthomolecular Medicine*, Vol. 18, No. 2, 2003, p 93-96.]

Even a modest quantity of supplemental vitamin C prevents disease and saves lives. Just 500 mg daily results in a 42 percent lower risk of death from heart disease and a 35 percent lower risk of death from any cause. (Enstrom J.E., Kanim L.E., and Klein M.A. Vitamin C intake and mortality among a sample of the United States population. *Epidemiology* 3 (1992):194–202.) Since at least two-thirds of the population is not eating sufficient fruits and vegetables, the only way to close the gap is with vitamin supplements.

VITAMIN D

Canadian researcher Reinhold Vieth, Ph.D., writes, "Published cases of vitamin D toxicity with hypercalcemia, for which the 25(OH)D concentration and vitamin D dose are known, all involve intake of greater than or equal to 1,000 micrograms (40,000 IU)/day. (T)he weight of evidence shows that the currently accepted, no observed adverse effect limit of 50 microg (2,000 IU)/d is too low by at least 5-fold." (Vieth R. Vitamin D supplementation, 25-hydroxyvitamin D concentrations, and safety. *Am J Clin Nutr*. May; 69(5):842-56. 1999.)

The Nutrition Desk Reference, Second Edition states that, for vitamin D, "The threshold for toxicity is 500 to 600 micrograms per kilogram body weight per day." (p 40) The US Environmental Protection Agency's published oral LD50 for female rats of 619 mg/kg (Cholecalciferol (Vitamin D3) Chemical Profile 12/84. US Environmental Protection Agency, Washington, DC. Chemical Fact Sheet Number 42. December 1, 1984.)

500 to 600 mcg is the equivalent of 20,000 to 24,000 IU, per kilogram body weight per day. By comparison, this would mean that for an average (70 kg) adult human, toxicity would occur at an astounding 1,400,000 to 1,680,000 IU/day.

Yet misconceptions and misinformation about vitamins persist. Vitamin-scare articles are unduly popular with the media, sometimes even making it into the pages of the *Wall Street Journal*. On April 30, 1992, David Stipp reported that between 1990 and 1992, "a series of patients with vitamin D overdoses began turning up at Boston hospitals." Due to problems at one large dairy, some of the milk sold in Boston contained over 230,000 units of vitamin D per quart instead of the usual 400 units per quart.

One person subsequently died from drug complications, and the case went to court. (*Tarpey v. Crescent Ridge Dairy, Inc.*, 47 Mass. App. Ct. 380.) "Essentially, this was a product liability action against the producer of dairy

products, specifically milk which contained excessive amounts of Vitamin D. The plaintiff's decedent purportedly suffered from elevated levels of Vitamin D in her bloodstream which required medication which in turn allegedly compromised her immune system, leading to her death."
(http://www.dwpm.com/content/main/litigation00_news.php3)

This is the one and the only vitamin D-related death I could find confirmation of, ever, anywhere. And even this one was not directly due to the vitamin, but rather to side effects of medication.

The incident might well be taken as an unintentional proof of vitamin safety, even in ridiculously high overdosage situations. It is certainly noteworthy that 580 times the normal amount of vitamin D produced, at most, one alleged fatality. This borders on the extraordinary. Events such as this demonstrate that the margin for error with vitamins is very large indeed.

As a former university nutrition instructor, the classroom textbooks I taught with considered vitamin D to be perhaps the most potentially dangerous vitamin to chronically overdose on. If that is true, and there has been not even one confirmed vitamin-D fatality in the USA in over forty years, then all other vitamins are safer still. (Journal of Orthomolecular Medicine, 2003; Vol. 18, Numbers 3 and 4, p. 194-204.)

VITAMIN E

Poison control statistics report no deaths from vitamin E. Vitamin E is a safe and remarkably non-toxic substance. Canadian cardiologists Drs. Wilfrid and Evan Shute observed no evidence of harm with doses as high as 8,000 IU/day. In fact, "toxicity symptoms have not been reported even at intakes of 800 IU per kilogram of body weight daily for 5 months," according to the US Food and Nutrition Board. This demonstrated safe level would work out to be around 60,000 IU daily for an average adult, some 2,700 times the US RDA.

A Columbia University study reported progression of Alzheimer's disease was significantly slowed in patients taking high daily doses (2,000 IU) of vitamin E for two years. The vitamin worked better than the drug selegiline did. The patients in the Alzheimer's study tolerated their vitamin E doses well. Perhaps the real story is that 2,000 IU per day for two years is safe for the elderly.

Overexposure to oxygen has been a major cause of retrolental fibroplasia (retinopathy of prematurity) and subsequent blindness in premature infants. Incubator oxygen retina damage is now prevented by giving preemies 100 mg E per kilogram body weight. That dose is equivalent to an adult dose of about 7,000 IU for an average-weight adult. "There have been no detrimental side effects" from such treatment, said the New England Journal of Medicine. (Hittner HM, Godio LB, Rudolph AJ, Adams JM, Garcia-Prats JA, Friedman Z, Kautz JA, Monaco WA. Retrolental fibroplasia: efficacy of vitamin E in a double-blind clinical study of preterm infants. N Engl J Med. 1981 Dec 3; 305(23):1365-71.)

Regular supplementation with vitamin E is likely to save literally millions of lives. The New England Journal of Medicine published two papers in the May 20, 1993 issue showing that persons taking vitamin E supplements had an approximately 40% reduction in cardiovascular disease. Nearly 40,000 men and 87,000 women took part in the studies. The more vitamin E they took, and the longer they took it, the less cardiovascular disease they experienced.

A 1996 double-blind, placebo-controlled study of 2,002 patients with clogged arteries demonstrated a 77% decreased risk of heart attack in those taking 400 to 800 IU of vitamin E. (Stephens, NG et al. Randomized controlled trial of vitamin E in patients with coronary artery disease: Cambridge Heart Antioxidant Study (CHAOS)," Lancet, March 23, 1996; 347:781-786.)

Such effective quantities of vitamin E positively cannot be obtained from diet alone. 800 IU is 2,667% of the US DRI for vitamin E. (Journal of Orthomolecular Medicine, Volume 17, Number 3, Third Quarter, 2002 (p 179-181) And: Journal of Orthomolecular Medicine, 2003; Vol. 18, Numbers 3 and 4, p. 205-212.)

Herbal supplements

The 2003 Report of the American Association of Poison Control Centers Toxic Exposures Surveillance System (<http://www.aapcc.org/Annual%20Reports/03report/Annual%20Report%202003.pdf>) indicates a total of 13 deaths attributed to herbal preparations. Three of these are from ephedra, two from yohimbe, and two from ma-huang. I have worked extensively in the alternative health field for nearly 30 years, and I have known of virtually no one who has taken ephedra, yohimbe, or ma-huang, and certainly not in the deliberately abusive high quantities that it takes to kill someone. Nevertheless, accepting all seven deaths

attributed to these products, we still find that there were 30 times as many deaths from aspirin and acetaminophen.

Only three deaths are attributable to other "single ingredient botanicals," and oddly enough, their identity remains unnamed in the Toxic Exposures report.

Millions of persons take herbal remedies, and have done so for generations. Indigenous and Westernized peoples alike have found them to be safe and effective, and the 2003 Report of the American Association of Poison Control Centers Toxic Exposures Surveillance System confirms this (p 388-389). There have been no deaths at all from "cultural medicines," including ayurvedic, Asian, Hispanic, and in fact, from all others.

Additionally, we find:

Blue cohosh:	0 deaths
Ginko biloba:	0 deaths
Echinacea:	0 deaths
Ginseng:	0 deaths
Kava kava:	0 deaths
St John's wort:	0 deaths
Valerian:	0 deaths

Furthermore, there have been no deaths from phytoestrogens, glandulars, blue-green algae, or homeopathic remedies.

Mineral supplements

Of the eight deaths in the category, five of them are from non-supplement sources rightly termed "electrolytes": two from sodium and three from potassium (p 389). Two deaths were allegedly due to iron overdose. Since 1986, there has been an average of two deaths per year "associated with" iron supplements. The sole remaining death was from calcium, a mineral that is employed medically for its antidote properties. In fact, in 2003, calcium was used as a lifesaving antidote in 5,228 cases (p 344). There is no evidence that the single listed calcium death was from a supplement, and the odds are overwhelming that it was not.

Amino acid supplements

In 2003, poison control centers reported no deaths whatsoever from amino acids. This is in itself a strong safety statement.

In perspective

Supplementation's harshest critics have traditionally railed against vitamins (especially in large doses) as being outright "dangerous" and at the very least "a waste of money." Yet nutritional supplements are very safe, and for much of the population, very necessary. The Journal of the American Medical Association has recently published the recommendation that every person take a multivitamin daily (Fletcher RH and Fairfield KM. Vitamins for Chronic Disease Prevention in Adults: Clinical Applications JAMA. 2002; 287:3127-3129. And: Fairfield KM and Fletcher RH. Vitamins for Chronic Disease Prevention in Adults: Scientific Review. JAMA. 2002; 287:3116-3126.) saying that "(S)uboptimal intake of some vitamins, above levels causing classic vitamin deficiency, is a risk factor for chronic diseases and common in the general population, especially the elderly." Therefore, JAMA's intent goes beyond routine nutritional insurance for widespread bad-to-borderline diets. The goal is stated in the article's title: "Vitamins for chronic disease prevention in adults." It is a sensible idea whose time should have come generations ago.

To illustrate how extraordinarily important supplements are to persons with a questionable diet, consider this: Children who eat hot dogs once a week double their risk of a brain tumor. Kids eating more than twelve hot dogs a month (that's barely three hot dogs a week) have nearly ten times the risk of leukemia as children who ate none. (Peters JM, Preston-Martin S, London SJ, Bowman JD, Buckley JD, Thomas DC. Processed meats and risk of childhood leukemia. Cancer Causes Control. 1994 Mar; 5(2):195-202.)

However, hot-dog eating children taking supplemental vitamins were shown to have a reduced risk of cancer. (Sarasua S, Savitz DA. Cured and broiled meat consumption in relation to childhood cancer. Cancer Causes Control. 1994 Mar; 5(2):141-8.)

It is curious that, while theorizing many "potential" dangers of vitamins, the media often choose to ignore the very real cancer-prevention benefits of supplementation.

Critics also fail to point out how economical supplements are. For low-income households, taking a two-cent vitamin C tablet and a five-cent multivitamin, readily obtainable from any discount store, is vastly cheaper than getting those vitamins by eating right. The uncomfortable truth is that it is often less expensive to supplement than to buy nutritious food, especially out-of-season fresh produce.

According to David DeRose, M.D., M.P.H., "300,000 Americans die annually from poor nutrition choices." Supplements make any dietary lifestyle, whether good or bad, significantly better. Supplements are an easy, practical entry-level better-nutrition solution for the public. A television-educated populace is more likely to take some tablets than to willingly eat organ meats, wheat germ, bean sprouts and ample vegetables. Media supplement-scare-stories notwithstanding, taking supplements is not the problem; it is a solution. Malnutrition is the problem. (Journal of Orthomolecular Medicine, 2003; Vol. 18, Numbers 3 and 4, p. 213-216.)

Public support for free access to nutritional supplements

A recent (March 26, 2003) and unsuccessful American attempt to restrict free public access to vitamin supplements was U.S. Senate Bill S. 722, the so-called "Dietary Supplement Safety Act of 2003." The proposed law attempted to give the Secretary of the US Food and Drug Administration sole power decide if and when "the continued marketing of the dietary supplement is disapproved" (2-B: ii) based on adverse event reporting so vague that the proposed bill specified that decision was "without regard to whether the event is known to be causally related to the dietary supplement." (SEC. 416 (a)(1))

The intent of S. 722 was to overturn the main provisions of the U.S. Dietary Supplement Health and Education Act of 1994 (DSHEA). The US Congress enacted DSHEA specifically to define vitamins, amino acids, herbs, and other nutritional supplements as foods, not drugs. DSHEA enjoyed tremendous popular support. More citizen letters were sent to Congress in 1992-1994 in favor of DSHEA than over any other issue in American history. Some 2.5 million individual voters' letters were received by US Senators and Representatives. On the other hand, citizen opposition to S. 722 was strong. It gathered only four cosponsors, and failed in committee.

The U.S. Congress has clearly seen that there is overwhelming public support for ensuring free access to dietary supplements. I believe Canadians have the same keen interest, and that an affirmative vote on Canada's proposed legislation, C-420, to rightly consider supplements as foods and not drugs, will be well-received by the citizens of Canada.

Conclusion:

As it has been for thousands of years of human history, so the malnutrition problem remains with us today. Only in the last century have supplements even been available. Their continued use represents a true public health breakthrough on a par with clean drinking water and sanitary sewers, and can be expected to save as many lives.

The number one side effect of vitamins is failure to take enough of them. Vitamins are extraordinarily safe substances. Drugs are not. There are over 106,000 deaths from pharmaceutical drugs each year in the USA, even when prescribed correctly and taken as prescribed. (Lucian Leape, Error in medicine. Journal of the American Medical Association, 1994, 272:23, p 1851. Also: Leape LL. Institute of Medicine medical error figures are not exaggerated. JAMA. 2000 Jul 5;284(1):95-7.)

Public supplementation should be encouraged, not discouraged. Supplements are a cost-effective means of preventing and ameliorating illness. Supplement safety is outstandingly high. Natural health products should be classified as foods, not drugs.

(end of testimony)

Andrew Saul is the author of the books *FIRE YOUR DOCTOR! How to be Independently Healthy* (reader reviews at <http://www.doctoryourself.com/review.html>) and *DOCTOR YOURSELF: Natural Healing that Works*. (reviewed at <http://www.doctoryourself.com/saulbooks.html>)

"A lot of people go through life trying to prove that the things that are good for them are wrong." (Ward Cleaver, on "Leave it to Beaver")

"There is a principle which is a bar against all information, which is proof against all argument, and which cannot fail to keep man in everlasting ignorance. That principle is condemnation without investigation." (Herbert Spencer)

AN IMPORTANT NOTE: This page is not in any way offered as prescription, diagnosis nor treatment for any disease, illness, infirmity or physical condition. Any form of self-treatment or alternative health program necessarily must involve an individual's acceptance of some risk, and no one should assume otherwise. Persons needing medical care should obtain it from a physician. Consult your doctor before making any health decision.

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<http://www.doctoryourself.com/testimony.htm>

APPENDIX B. Resveratrol is "Nature's Medicine" for Cancer, Heart Disease and Much More

by Mike Adams, the Health Ranger, NaturalNews Editor
Originally published April 2 2009.

(NaturalNews) Just how good is resveratrol at preventing cancer and heart disease? It's so good that drug companies are trying to mimic its molecules in order to claim they're "creating" a new drug to prevent heart disease.

But this is Mother Nature's miracle drug -- only it's not a drug. It's a molecule synthesized by plants *for protecting themselves!* And it turns out the same molecule can protect you from cancer, heart disease and a whole lot more.

I wanted you to read about the amazing benefits of [resveratrol](#), so I put together this collection of quotes from top authors in the field. Read it to learn the truth about resveratrol that the [drug companies](#) and the FDA hope you never find out...

Authors' Quotes on Resveratrol

(Feel free to quote these in your own work provided you give proper credit to both the original author quoted here and this [NaturalNews](#) page.)

Resveratrol is a naturally occurring phytoalexin produced by some higher plants in response to injury or fungal infection. Phytoalexins are chemical substances produced by plants as a defense against infection by pathogenic [microorganisms](#), such as fungi. Alexin is from Greek, meaning to ward off or to protect. **Resveratrol** may also have alexin-like activity for humans.

- [PDR for Nutritional Supplements](#) by Sheldon Saul Hendler and David Rorvik - [Available on Amazon.com](#)

Found in many plants as a phytoalexin, **resveratrol** is abundant in the skins of red [grapes](#) (*Vitis vinifera*). It has been suggested that **resveratrol** underlies the phenomenon known as the "French paradox." Wine is the most notable dietary source of this compound; a fluid ounce of [red wine](#) contains an average of 160 pg of **resveratrol**.

- [Medical Herbalism: The Science Principles and Practices Of Herbal Medicine](#) by David Hoffman, FNIMH, AHG - [Available on Amazon.com](#)

Grape juice contains **resveratrol**, as does [cranberry juice](#), but at levels that are ten times less than those in red. **Resveratrol** content in different [food](#) and beverages: (uG 100 G), (OyG/125 ML) Grapes 1,500, Red [wine](#) 625, Peanuts 150, White wine 38, Peanut butter 50, Grape juice 65, Blueberries 3, Cranberry juice 65, Raisins 0.01; **resveratrol** concentration in red wine varies greatly from one grape variety to another and from one region to another, with values ranging from 1 to 13 mg/l.

- [Foods that Fight Cancer](#) by Richard Beliveau, Ph.D. and Denis Gingras, Ph.D. - [Available on Amazon.com](#)

When incubated with hepatoma cells, **resveratrol** induced Phase II detoxifying enzymes that detoxified and inhibited the proliferation of these cells. **Resveratrol** also inhibited the development of preneoplastic lesions when mice were exposed to tumor initiators and promoters. Grape skins, leaves, juice and red wine are all good sources of **resveratrol**.

- [Herbal Medicine, Healing and Cancer: A Comprehensive Program for Prevention and Treatment](#) by Donald R. Yance, Jr., C.N., M.H., A.H.G., with Arlene Valentine - [Available on Amazon.com](#)

A series of laboratory experiments suggests that **resveratrol** inhibits the development of [cancer](#) in animals and prevents the progression of cancer. However, human research is still needed in this area. In another set of animal studies, **resveratrol** was shown to inhibit both the acute and chronic phases of inflammation.

- [The Natural Pharmacy: Complete Home Reference to Natural Medicine](#) by Schuyler W. Lininger, Jr. DC - [Available on Amazon.com](#)

The active ingredient of the grape extracts is a potent flavonoid called **resveratrol**. Italian researchers discovered something even more profound regarding the chemistry of **resveratrol**. They determined that this unique chemical revitalizes nerve cells. In fact, **resveratrol** induced portions of the nerves to regenerate, in other words, the nerves started growing again, a feat formerly deemed impossible. A reasonable conclusion is that **resveratrol** is a major protector of the [genes](#), in other words, it prevents chromosome damage. Yet, grape

extracts offer another mechanism of action.

- [Dr. Cass Ingram's Lifesaving Cures](#) by Dr. Cass Ingram - [Available on Amazon.com](#)

A partial [estrogen](#) receptor agonist itself, **resveratrol** is believed by some researchers to be an estrogen-receptor antagonist in the presence of estrogen, resulting in [breast cancer](#) inhibition. Finally, **resveratrol** has recently shown activity against herpes simplex viruses types 1 and 2 in a dose-dependent manner. It appears to disrupt a critical early event in the viral reproduction cycle.

- [PDR for Nutritional Supplements](#) by Sheldon Saul Hendler and David Rorvik - [Available on Amazon.com](#)

Darakhasava, an ayurvedic herbal remedy, has as its principal ingredient *Vitis vinifera* L, and therefore, contains **resveratrol**. It is mainly used in ayurvedic [medicine](#) as a cardi tonic. **Resveratrol**, which is also known as trihydroxystilbene and stilbenetriol, exists in cis and trans stereoisomeric forms. **Resveratrol** is the parent molecule of a family of polymers called viniferins.

- [PDR for Nutritional Supplements](#) by Sheldon Saul Hendler and David Rorvik - [Available on Amazon.com](#)

An article in Life Sciences described a study of **resveratrol** and infarct size. A middle cerebral artery occlusion was induced in rats 15 minutes after pre-treatment with **resveratrol**. **Resveratrol** significantly reduced the total infarction volume (Huang et al. 2001b). Supplemental grape seed-skin extract is a good source of **resveratrol**.

- [Disease Prevention and Treatment](#) by The Life Extension Editorial Staff - [Available on Amazon.com](#)

Resveratrol is an [antioxidant](#) found in many foods, but most abundant in [peanuts](#) and red grapes. Red wine from cold climates (such as France) is a particularly good source of **resveratrol**. It is less concentrated in red wines from warmer climates such as California, Italy, Spain, or Portugal. Studies from the University of Illinois have shown that the number of early breast lesions and skin [cancers](#) in mice dropped dramatically when they were given high doses of **resveratrol**.

- [Antioxidants Against Cancer: How to activate your body's natural healing powers with today's most protective and immune-boosting supplements and foods](#) by Ralph Moss, PhD - [Available on Amazon.com](#)

Hu zhang (*Polygonum cuspidatum*) is a Chinese herb actually a weed that is the world's richest source of **resveratrol**, the phytochemical also found in red wine that has generated a huge buzz for its disease-preventive actions in the body. A large body of research supports the role of **resveratrol** in resisting cancer, inflammation and [heart disease](#). **Resveratrol** has been found to suppress the activation of inflammatory cytokines and COX-2, and shows special promise in preventing and slowing the progression of breast cancer. **Resveratrol** is also a potent antioxidant.

- [Antioxidants Against Cancer: How to activate your body's natural healing powers with today's most protective and immune-boosting supplements and foods](#) by Ralph Moss, PhD - [Available on Amazon.com](#)

Virtually every pathway for tumor growth and propagation is blocked by **resveratrol**. Researchers appear to have developed a consensus that low concentrations of **resveratrol** cannot only counteract tumor initiation but can inhibit tumor cell survival. **Resveratrol** targets the very machinery inside cells that promote tumor cell survival. It appears to be able to concentrate its action on [tumor cells](#) rather than healthy cells. **Resveratrol** has also has the ability to induce cancer cells, but not normal cells, to die off.

- [You Don't Have to be Afraid of Cancer Anymore](#) by Bill Sardi - [Available on Amazon.com](#)

Another of the key components of grapes is **resveratrol**. **Resveratrol** belongs to a group of compounds called phytoalexins that plants produce in self-defense against environmental stressors, such as adverse weather or attack by [insects](#) or microorganisms. **Resveratrol** has been identified in more than seventy species of plants, including mulberries and peanuts, but the flesh of grapes is an especially good source. **Resveratrol** acts as an antioxidant and has also been shown to reduce the buildup of plaque in arteries.

- [The Encyclopedia of Healing Foods](#) by Michael Murray, N.D. and Joseph Pizzorno, N.D. - [Available on Amazon.com](#)

Grapes are a whole [pharmacy](#) of healthful nutrients, many of which are potentially life extending. Take **resveratrol**. **Resveratrol** is a compound found in red wine (and usually given the credit for red wine's health-promoting properties), and in the skins of grapes. Technically, if you want to know, **resveratrol** belongs to a class of compounds called phytoalexins, which are chemical substances produced by plants as a defense against attack by pathogenic microorganisms.

- [The 150 Healthiest Foods on Earth: The Surprising, Unbiased Truth About What You Should Eat and Why](#) by Jonny Bowden, Ph.D., C.N.S. - [Available on Amazon.com](#)

This prolonged contact during fermentation produces significant levels of **resveratrol** in the finished red wine. (White wine also contains **resveratrol**, but the [seeds](#) and skins are removed early in the white wine-making process, reducing the amount of **resveratrol** in the final product.) Antioxidants like **resveratrol** are beneficial in preventing harmful elements in the body from attacking healthy cells.

- [The 150 Healthiest Foods on Earth: The Surprising, Unbiased Truth About What You Should Eat and Why](#) by Jonny Bowden, Ph.D., C.N.S. - [Available on Amazon.com](#)

An 8-ounce glass of red wine provides approximately 640 mcg of **resveratrol**, while a handful of peanuts provides about 73 mcg of **resveratrol**. **Resveratrol** supplements (often found in combination with grape extracts or other [antioxidants](#)) are generally taken in the amount of 200-600 mcg per day. This is far less than the amount used in animal studies to prevent cancer : equivalent to more than 500 mg (500,000 meg) per day for an average-sized human.

- [The Natural Pharmacy: Complete A-Z Reference to Natural Treatments for Common Health Conditions](#) by Alan R. Gaby, M.D., Jonathan V. Wright, M.D., Forrest Batz, Pharm.D., Rick Chester, RPh., N.D., DipLAc. George Constantine, R.Ph., Ph.D. Linnea D. Thompson, Pharm.D., N.D. - [Available on Amazon.com](#)

In test tube and animal studies, **resveratrol** decreased the "stickiness" of [blood](#) platelets and helped blood vessels remain open and flexible. A series of laboratory experiments suggested that **resveratrol** inhibits the development of cancer in animals and prevents the progression of cancer. In other animal studies, **resveratrol** was shown to be an effective anti-inflammatory agent. However, human research is still needed in all of these areas.

- [The Natural Pharmacy: Complete A-Z Reference to Natural Treatments for Common Health Conditions](#) by Alan R. Gaby, M.D., Jonathan V. Wright, M.D., Forrest Batz, Pharm.D., Rick Chester, RPh., N.D., DipLAc. George Constantine, R.Ph., Ph.D., Linnea D. Thompson, Pharm.D., N.D. - [Available on Amazon.com](#)

Red grapes produce a phytochemical called **resveratrol**, which protects them from ultraviolet radiation, fungus [infections](#), and other stressors. **Resveratrol** activates [anti-aging](#) genes that stimulate the production of proteins that circulate in your body, throwing overboard cells that aren't pulling their weight and rejuvenating cells damaged by Advanced Glycation End-products (AGEs). But don't rush out to the [health](#) food store to buy **resveratrol** capsules, which are generally worthless because **resveratrol** is inactivated by exposure to oxygen.

- [Dr. Gundry's Diet Evolution: Turn Off the Genes That Are Killing You - And Your Waistline - And Drop the Weight for Good](#) by Dr. Steven R. Gundry - [Available on Amazon.com](#)

Research highlights a number of **resveratrol** effects relevant to the cardiovascular system: Antioxidant, Inhibits peroxidation of low-density lipoprotein (LDL), Reduces [platelet](#) aggregation. **Resveratrol** has also been shown to function as a cancer chemopreventive agent. Such agents reduce the incidence of tumorigenesis by intervening at one or more of the stages of carcinogenesis. In research, **resveratrol** demonstrated chemopreventive activity in assays representing three major stages of carcinogenesis: initiation, promotion, and progression.

- [Medical Herbalism: The Science Principles and Practices Of Herbal Medicine](#) by David Hoffman, FNIMH, AHG - [Available on Amazon.com](#)

Several plants, including grapevine, produce the stilbene-type phytoalexin **resveratrol** when attacked by pathogens. This compound appears to be one of the health-promoting factors of grapevine, which are associated with reduced risk of heart diseases (popularly known as "the French paradox") and long recognized by folk medicine. Clinical studies have demonstrated the beneficial effects of **resveratrol**, isolated from red wine, on cardiovascular [disease](#) and confirmed the involvement of **resveratrol** in fighting arteriosclerosis and vascular tissue diseases.

- [Handbook of Medicinal Plants](#) by Amarjit S. Basra - [Available on Amazon.com](#)

Anderson Cancer Center reviewed dozens of studies on **resveratrol** and concluded that it exhibited anticancer properties against a wide range of tumor cells, including lymphoid and myeloid cancers, multiple myeloma, cancers of the breast, prostate, stomach, colon, pancreas, and thyroid, melanoma, head and neck squamous cell carcinoma, ovarian, carcinoma, and cervical carcinoma. The researchers concluded that "**resveratrol** appears to exhibit therapeutic effects against cancer." **Resveratrol** may be one of the best antiaging substances around.

- [The 150 Healthiest Foods on Earth: The Surprising, Unbiased Truth About What You Should Eat and Why](#) by Jonny Bowden, Ph.D., C.N.S. - [Available on Amazon.com](#)

Resveratrol is a compound produced by grapes in self-defense against environmental stressors, such as attack by insects or fungal infection. Organically grown grapes have been found to produce much higher amounts of

resveratrol than conventionally grown grapes, which are already protected by treatment with man-made fungicides.

[The Encyclopedia of Healing Foods](#) by Michael Murray, N.D. and Joseph Pizzorno, N.D.

- [Available on Amazon.com](#)

Harvard University Medical School, says the life span of all life forms tested so far east cells, fruit flies, worms, and mice have been dramatically lengthened by minute amounts of **resveratrol**. That's one of the reasons **resveratrol** is touted (by me among others) as one of the best anti-aging supplements you can take. But you don't have to take a supplement to get your daily dosage of this antiaging compound. Just make grapes a part of your diet! The skins of the dark (red, purple) grapes are the best source. The benefits of grapes don't stop with **resveratrol**.

- [The 150 Healthiest Foods on Earth: The Surprising, Unbiased Truth About What You Should Eat and Why](#) by Jonny Bowden, Ph.D., C.N.S. - [Available on Amazon.com](#)

This may also be why **resveratrol** has such powerful research showing it not only prevents cancer, but may actually be considered as a treatment. **Resveratrol** stops cancer in a variety of ways, from blocking estrogens and androgens to modulating genes. It has even shown a 30-71 percent ability to block bone metastasis. **resveratrol** appears to moderate the body's detrimental inflammatory response to injury of the brain and spinal cord. It has also been shown to protect on many levels, including the antioxidant level, against heart and blood vessel disease.

- [Spiritual Nutrition: Six Foundations for Spiritual Life and the Awakening of Kundalini](#) by Gabriel Cousens, M.D. - [Available on Amazon.com](#)

At the time that book was written, Japanese researchers had just discovered an antifungal compound in grapes called **resveratrol**, which lowered cholesterol levels in rats and showed promise of doing the same in humans. Since then, researchers at the University of Illinois, under the direction of Dr. John Pezzuto, have uncovered new and exciting information about **resveratrol**. Studies have shown that **resveratrol** may prevent heart disease in two important ways. First, it inhibits the formation of [blood clots](#), which can trigger both heart attack and stroke.

- [Earl Mindell's Supplement Bible: A Comprehensive Guide to Hundreds of NEW Natural Products that Will Help You Live Longer, Look Better, Stay Healthier, ... and Much More!](#) by Earl Mindell, R.Ph., Ph.D.

- [Available on Amazon.com](#)

Red wine catechins are extracted from the skin of red wine grapes. The most active red wine catechin is **resveratrol**, a compound the grape plant manufactures in the skin of the fruit to deter gray mold. Although red wine catechins are found in purple [grape juice](#) and red wine, **resveratrol** is most abundant in immature grapes (which are more susceptible to mold) and in grapes grown in damp climates, especially on Long Island in New York.

- [Prescription for Herbal Healing: An Easy-to-Use A-Z Reference to Hundreds of Common Disorders and Their Herbal Remedies](#) by Phyllis A. Balch, CNC - [Available on Amazon.com](#)

Pezzuto and colleagues were able to show that **resveratrol** was effective during all three phases of the cancer process: initiation, promotion, and progression. For example, **resveratrol** displayed antimutagenic and antioxidant activity, providing greater protection against DNA damage than [vitamins C, E, or beta-carotene](#). UIC researchers showed that **resveratrol** restored glutathione levels, considered by some the most essential of antioxidants (Jang et al. 1999).

- [Disease Prevention and Treatment](#) by The Life Extension Editorial Staff - [Available on Amazon.com](#)

The second has been the discovery of a substance named **resveratrol**, a natural phytoalexin found in grapes, which may play a role in preventing heart attacks. **Resveratrol** appears also to inhibit cellular processes that are associated with tumor initiation, promotion, and progression. Most of the known vitamins and trace minerals are present in grapes. **Resveratrol** (which is related to another compound found in health food stores, [quercetin](#)) is found in wine at twice the level of grape juice.

- [Herbs Against Cancer: History and Controversy](#) by Ralph W. Moss PhD - [Available on Amazon.com](#)

Other studies, in animals and in vitro, have shown that **resveratrol** can inhibit the oxidation of LDL-cholesterol and, more recently, that it can reduce smooth muscle cell proliferation, believed to be one of the requisites of atherogenesis, by 70-90%, in a dose-dependent pattern. Red wine extract and **resveratrol** have shown equally significant cardioprotective effects in animal models of myocardial ischemic reperfusion injury. Additional evidence suggests that **resveratrol** also has estrogenic effects that may also provide cardiovascular protection.

[PDR for Nutritional Supplements](#) by Sheldon Saul Hendler and David Rorvik - [Available on Amazon.com](#)

Other researchers are impressed with the range of activity that **resveratrol** appears to have against cancer, and some believe that there may be even more powerful agents to be found in fruits and vegetables. Thomas W. Kensler of the Johns Hopkins University School of Public Health said that the **resveratrol** discovery "provides the scientific underpinnings" for studies that have found [health benefits](#) from grapes and wine. Grape seed extract is a commercial grape formulation that does not contain **resveratrol**.

- [The Natural Pharmacist: Your Complete Guide to Reducing Cancer Risk](#) by Richard Harkness
- [Available on Amazon.com](#)

The large amount of **resveratrol** present in red wine is explained not only by the prolonged fermentation period of the grape (the grape juice that still contains the fruit's skins and seeds), during which the molecules are extracted from the skins and seeds, but also by the fact that the absence of [oxygen](#) in the bottle prevents the **resveratrol** from oxidizing. This is why [raisins](#), also very rich in [polyphenols](#), do not contain any **resveratrol**, which in their case is degraded by exposure to air and sunlight.

[Foods that Fight Cancer](#) by Richard Beliveau, Ph.D. and Denis Gingras, Ph.D. - [Available on Amazon.com](#)

Although the anti-cancer potential of red wine remains to be more clearly established, there is no doubt that this anti-cancer activity is in large part due to the presence of **resveratrol**. In fact, of all naturally occurring molecules possessing anti-cancer activity that have recently been studied, **resveratrol** commands a great deal of enthusiasm.

- [Foods that Fight Cancer](#) by Richard Beliveau, Ph.D. and Denis Gingras, Ph.D. - [Available on Amazon.com](#)

Even more interesting from a nutritional point of view are recent results indicating that certain molecules of dietary origin, including quercetin and especially **resveratrol**, are very powerful sirtuin activators; it is this activation that may increase cell [longevity](#). For example, the addition of **resveratrol** to a growth culture of single-celled organisms such as yeast increases cell lifespan by 80%. Generally, yeasts live for nineteen generations; adding **resveratrol** boosted life expectancy to a maximum of thirty-eight generations!

- [Foods that Fight Cancer](#) by Richard Beliveau, Ph.D. and Denis Gingras, Ph.D. - [Available on Amazon.com](#)

To further make the point of the main theoretical principle of the Tree of Life 21-Day + Program, Life Extension 2004 reports that a phytonutrient, **resveratrol**, has been found by Harvard Medical School researchers to activate a longevity gene in yeast that extends life by 70 percent.

- [There Is a Cure for Diabetes: The Tree of Life 21-Day+ Program](#) by Gabriel Cousens
- [Available on Amazon.com](#)

Grapes, as well as many [berries](#) and some nuts, contain a phytoalexin component called **resveratrol** that has shown cancer chemopreventive activity. **Resveratrol** has been found to act as an antioxidant, antimutagen, and anti-inflammatory. It has also been shown to inhibit the development of breast cancer and induce antiproliferation activity in human myelocytic leukemia. The highest levels of **resveratrol** (up to one hundred times more than grapes) are found in grape leaves.

- [Herbal Medicine, Healing and Cancer: A Comprehensive Program for Prevention and Treatment](#) by Donald R. Yance, Jr., C.N., M.H., A.H.G., with Arlene Valentine - [Available on Amazon.com](#)

It is now believed that the blood thinning **resveratrol**, as well as the so called [flavonoids](#) in red wine, are partial antidotes and help maintain a healthy heart. **Resveratrol** is a natural fungicide produced by grapes and is primarily found in their skins. Because **resveratrol** is produced in much higher quantities in grapes that are organically grown, organic red grapes may be a good option if you don't want to drink wine. Wine grapes are crushed with the seeds and cluster stems as part of the wine.

- [Eat To Beat Cancer: A Research Scientist Explains How You and Your Family Can Avoid Up to 90% of All Cancers](#) by J. Robert Hatherill - [Available on Amazon.com](#)

In 1997, a team led by pharmacy professor John Pezzuto announced that a substance in red wine, which was later named **resveratrol**, inhibited the onset and progression of cancer in mice. UIC reported that **resveratrol** is one of a group of compounds called phytoalexins that are produced in plants during times of environmental stress, such as adverse weather or insect, animal, or pathogenic attack. **Resveratrol** has been identified in more than 70 species of plants, including mulberries and peanuts, but the skins of red grapes are a particularly rich source (Jang et al. 1999).

- [Disease Prevention and Treatment](#) by The Life Extension Editorial Staff - [Available on Amazon.com](#)

Preliminary studies have found that people who drink red wine, which contains **resveratrol**, are at lower risk of death from heart disease. Because of its antioxidant activity and its effect on platelets, some researchers believe that **resveratrol** is the protective agent in red wine. Resveratrol research remains very preliminary,

however, and as yet there is no evidence that the amounts found in supplements help prevent atherosclerosis in humans.

- [The Natural Pharmacy: Complete A-Z Reference to Natural Treatments for Common Health Conditions](#) by Alan R. Gaby, M.D., Jonathan V. Wright, M.D., Forrest Batz, Pharm.D., Rick Chester, RPh., N.D., DipLAc. George Constantine, R.Ph., Ph.D., Linnea D. Thompson, Pharm.D., N.D. - [Available on Amazon.com](#)

Resveratrol is a phytochemical found in grapes that has proven to be effective against cancer in cell and animal studies. It inhibits cancer initiation, promotion, and progression: the three major stages of cancer development. Saponins are phytochemicals found in legumes, most notably soybeans. They have the ability to combine oil and water, which helps them bind to cholesterol and increase its excretion from the body. They also appear to have anticancer properties, as they interfere with the process by which DNA reproduces.

- [Foods That Fight Disease: A Simple Guide to Using and Understanding Phytonutrients to Protect and Enhance Your Health](#) by Laurie Deutsch Mozian, M.S., R.D. - [Available on Amazon.com](#)

Creasy's analysis of 30 types of wine found the most **resveratrol** in a red French Bordeaux and the least in a white Bordeaux. Dr. Creasy also found the anticoagulant in purple (but not white) grape juice. It takes about three times as much grape juice as red Bordeaux wine to get equal amounts of the compound, he figures. Table grapes, found in supermarkets, probably contain little of the substance because they are carefully cultivated to prevent fungal infections and blemishes. A pound of home-grown grapes, however, can have as much **resveratrol** as two cups of red wine, says Dr. Creasy.

- [Food Your Miracle Medicine](#) by Jean Carper - [Available on Amazon.com](#)

The Japanese have concentrated this grape compound, called **resveratrol**, into a drug and, in tests, have found it hinders blood platelet clumping that leads to blood clots and reduces fatty deposits in animal livers. If you drink red grape juice or red wine you may get some **resveratrol**, which is concentrated in grape skins, says Leroy Creasy, Ph.D., a professor at Cornell University's College of Agriculture. Dr. Creasy detected high concentrations of the anticlotting substance in red wine, but not in white wine.

- [Food Your Miracle Medicine](#) by Jean Carper - [Available on Amazon.com](#)

There are a few leaders in the antioxidant army selenium, [vitamin E](#), and **resveratrol**. In a recent study from Sweden, low [selenium](#) levels appeared to increase a person's risk for getting a certain kind of RA. Some experts think raising your selenium intake might even help to reduce your swelling and pain. Low vitamin E levels, on the other hand, raised the risk for all types of RA. Boost your selenium levels with seafood, mushrooms, dairy, and whole wheat. Rich sources of vitamin E include fortified cereals, vegetable oils, peanuts, and fish.

Resveratrol mainly comes from grapes.

- [Eat and Heal \(Foods That Can Prevent or Cure Many Common Ailments\)](#) by the Editors of FC&A Medical Publishing - [Available on Amazon.com](#)

Resveratrol, the plant estrogen that works like an antioxidant to combat heart disease, the Peanut Institute says to look no further than a handful of peanuts. One ounce, they say, contains about as much **resveratrol** as 2 pounds of grapes. Helps shed unwanted pounds. But what about your [waistline](#)? Peanuts are still high in fat, even if it is heart-healthy fat. Experts say, however, you don't have to give up these crunchy tidbits. They are full of protein and fiber and give a lot of energy bang for the buck.

- [Eat and Heal \(Foods That Can Prevent or Cure Many Common Ailments\)](#) by the Editors of FC&A Medical Publishing - [Available on Amazon.com](#)

Since **resveratrol** was only recently identified, no definitive human studies have been done. However, the cancer-preventive effects it shows in the lab and in animals is sure to lead to more research. **Resveratrol** was recently discovered by John Pezzuto and his team from the University of Illinois. A study published in the January 10, 1997, issue of Science detailed their attempts to track down anticancer substances in readily available [foods](#). After hundreds of tests, the grape came out with the highest marks, inhibiting three different stages of cancer development.

- [The Natural Pharmacist: Your Complete Guide to Reducing Cancer Risk](#) by Richard Harkness

- [Available on Amazon.com](#)

The compound of most interest is **resveratrol**, a hydroxystilbene first isolated from the roots of the white hellebore (*Veratrum album* var. *grandiflorum*). Hydroxystilbenes are found in a variety of plants, many unrelated. They are a prominent component of many species of the Polygonaceae family (*Rheum*, *Polygonum* spp.) but the richest source is found in grape skins and red wine. **Resveratrol** is an antioxidant, anti-inflammatory, antiplatelet and anti-allergy agent with demonstrated cancer-preventative activity (Cheong et al).

- [The Constituents of Medicinal Plants: An Introduction to the Chemistry and Therapeutics of Herbal Medicine](#) by Andrew Pengelly - [Available on Amazon.com](#)

Nearly 100 scientific studies have attributed other cancer-fighting effects to **resveratrol**. Scientists at the Chungang University in Seoul, Korea, found that it deactivates some forms of the liver enzyme. This enzyme is necessary to transform many [chemicals](#) into a carcinogenic form. Their research was confirmed by the U.S. National Cancer Institute and the Samuel Lunenfeld Research Institute in Toronto, which further learned that **resveratrol** stops the liver from processing chemicals such as deadly dioxin into a carcinogenic form.

- [Prescription for Herbal Healing: An Easy-to-Use A-Z Reference to Hundreds of Common Disorders and Their Herbal Remedies](#) by Phyllis A. Balch, CNC - [Available on Amazon.com](#)

Grape skins contain **resveratrol**, a type of plant estrogen, also called a phytoestrogen. In your body **resveratrol** fights [inflammation](#) and prevents blood clots. Grape skins also contain the powerful flavonoid quercetin. It works as an antioxidant to prevent the low-density lipoprotein (LDL or "bad") cholesterol from building up in your artery walls and blocking blood flow to your heart and brain. It also stops your blood from turning sticky and clumping together. Blood moves through your arteries more easily, taking some of the pressure off your heart and reducing your risk of stroke.

- [Eat and Heal \(Foods That Can Prevent or Cure Many Common Ailments\)](#) by the Editors of FC&A Medical Publishing - [Available on Amazon.com](#)

Resveratrol is a compound found in red wine that has potent antioxidant activity. Preliminary research has demonstrated cardiovascular benefit and possible anticancer properties.

- [Prescription for Natural Cures: A Self-Care Guide for Treating Health Problems with Natural Remedies Including Diet and Nutrition, Nutritional Supplements, Bodywork, and More](#) by James F. Balch, M.D. and Mark Stengler, N.D. - [Available on Amazon.com](#)

Red wine also has a number of phenolics, the most important being **resveratrol** and quercetin, which alter [gene expression](#) and enhance phenotypic expression to protect against blood clot formation as in heart disease.

Resveratrol also has certain anti-aging qualities that are recently being touted to mimic the calorie restriction effect. However, red wine also has the downside of being [alcohol](#). Alcohol does many things to disregulate and undermine healthy gene expression, particularly in the neurotransmitter systems, as well as other systems in the body.

- [Spiritual Nutrition: Six Foundations for Spiritual Life and the Awakening of Kundalini](#) by Gabriel Cousens, M.D. - [Available on Amazon.com](#)

Trials to determine the effects of **resveratrol** on the three stages of cancer were completed without toxicity to blood-forming cells. The following studies illustrate the many pathways resveratrol employs to inhibit cancer: Italian researchers recently determined that **resveratrol** exhibited a protective role against colon carcinogenesis, with the defense attributed to changes occurring in Bax protein, which encourages apoptosis, and expression (Tessitore et al. 2000).

- [Disease Prevention and Treatment](#) by The Life Extension Editorial Staff - [Available on Amazon.com](#)

The skin of red grapes contains a compound called **resveratrol**, which has recently come into vogue. Several studies have shown that this polyphenic compound increases levels of an enzyme oxygenase that has antioxidant and anti-inflammatory properties and may protect against neuronal cell dysfunction. Red wines are fermented with grape skins, allowing the wine to absorb greater amounts of **resveratrol** than white wines, which are fermented without grape skins. Thus, some nutritionists are recommending a little red for the head.

- [The Myth of Alzheimer's: What You Aren't Being Told About Today's Most Dreaded Diagnosis](#) by Peter J. Whitehouse and Daniel George - [Available on Amazon.com](#)

Of late, considerable attention has been devoted by scientists to the antioxidant properties of red wine's phenolic constituent, **resveratrol**, as an important contributor. White wine contains much less of this antioxidant, and therefore it has fewer health benefits. **resveratrol**, unfortunately is not in [green tea](#). However, green tea may offer even greater potential for health protection, since it not only includes the flavonoids active in red wine but also includes even more powerfully protective flavonoids that are unique to it.

- [The Green Tea Book](#) by Lester A. Mitscher and Victoria Toews - [Available on Amazon.com](#)

Resveratrol, a known antioxidant, but one that has also been found to be much less potent than antioxidants containing [proanthocyanidins](#) or monomeric catechins. In 1992, M. E. Cuvelier and H. Richard in Biosci. and Biotech Biochem 1992 reviewed several papers that described the chemical mechanism of the antioxidant effect of proanthocyanidins and their building blocks, the catechins.

- [The Super Anti-Oxidants: Why They Will Change the Face of Healthcare in the 21st Century](#) by James F. Balch, M.D. - [Available on Amazon.com](#)

One of the ways to activate sirtuin is through **resveratrol**, found in red wine. You get the health benefits of wine-lower LDL, more antioxidants the skin of the grape touches the seeds for at least three weeks. But in many of today's wines, that time is less than a week. Another factor: The smaller the grape and the more seeds it has, and the cooler the climate it grows in, the better. Knotweed (a Japanese plant) has forty times more **resveratrol** per pound than grapes do, and it grows everywhere (and makes a great apple pie).

- [You: Staying Young: The Owner's Manual for Extending Your Warranty](#) by Mehmet C. Oz., M.D. and Michael F. Roizen, M.D. - [Available on Amazon.com](#)

Peanuts also contain surprise components such as the flavonoid **resveratrol** and myoinositol. The myoinositol helps combat [nerve damage](#) and is anti-diabetic. **Resveratrol** is perhaps the most powerful naturally occurring anti-cancer substance known. The value of these unique naturally occurring substances in peanuts is notable. Researchers at the University of Alabama found that diabetics with nerve damage improved significantly simply by incorporating peanuts and other myoinositol-rich foods into the diet.

- [Dr. Cass Ingram's Lifesaving Cures](#) by Dr. Cass Ingram - [Available on Amazon.com](#)

Scientists have proven that **resveratrol** works by reducing NF kappaB, thereby stopping the breast-cancer activity. There is plenty of science to show that **resveratrol** is a potent anti-breast cancer and highly protective nutrient. The bioflavonoid quercetin, found in fresh vine ripened fruit and available as a [nutritional supplement](#), induces death in breast cancer cells. Quercetin demonstrated the ability to prevent environmental chemicals from promoting estrogen driven breast cancer.

- [Mastering Leptin: The Leptin Diet, Solving Obesity and Preventing Disease, Second Edition](#) by Byron J. Richards, CCN - [Available on Amazon.com](#)

Grape skins and red wine contain **resveratrol**, a phenolic compound, and phytoalexin, a compound produced by plants in response to environmental stressors. **Resveratrol** apparently inhibits platelet aggregation and eicosanoid syntheses and blocks cellular events linked to tumor initiation, promotion and progression. These effects seem to be independent of its antioxidant properties. Tea is a rich source of polyphenols that are highly substituted with hydroxyl groups.

- [Textbook of Natural Medicine 2nd Edition Volume 1](#) by Michael T. Murray, ND - [Available on Amazon.com](#)

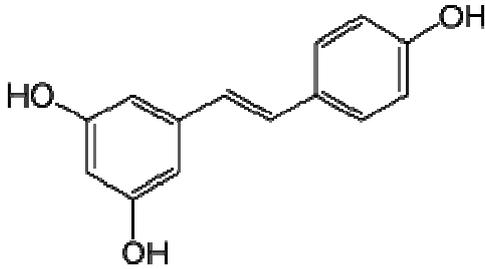
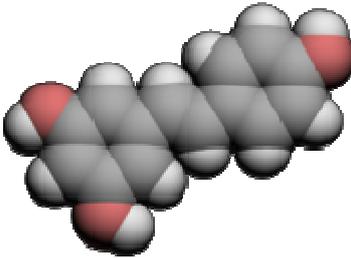
Suppressing the growth cycle allows for a critical phase in cellular development referred to as differentiation, that is, an atypical cell becomes more typical. **Resveratrol** appears a promising anticancer agent for both hormone-dependent and hormone-independent breast cancers. At high concentrations, **resveratrol** caused suppression of cell growth in three breast cancer cell lines: ER-positive KPL-1 and MCF-7 and ER-negative MKL-F. Growth inhibition was credited in part to upregulation of Bax protein and activation of caspase-3 (a key mediator of apoptosis in mammalian cells).

- [Disease Prevention and Treatment](#) by The Life Extension Editorial Staff - [Available on Amazon.com](#)

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[NaturalNews.com](http://www.naturalnews.com) <http://www.naturalnews.com/index.html> Originally published April 2 2009

APPENDIX C. Resveratrol as Outlined in Wikipedia

Resveratrol	
	
	
Other names	<i>trans</i> -3,5,4'-Trihydroxystilbene; 3,4',5-Stilbenetriol; <i>trans</i> -Resveratrol; (<i>E</i>)-5-(<i>p</i> -Hydroxystyryl)resorcinol (<i>E</i>)-5-(4-hydroxystyryl)benzene-1,3-diol
Properties	
Molecular formula	C ₁₄ H ₁₂ O ₃
Molar mass	228.25
Appearance	white powder with slight yellow cast
Solubility in water	0.03 g/L
Solubility in DMSO	16 g/L
Solubility in ethanol	50 g/L
Except where noted otherwise, data are given for materials in their standard state (at 25 °C, 100 kPa) Infobox references	

Resveratrol (*trans*-resveratrol) is a [phytoalexin](#) produced naturally by several plants when under attack by [pathogens](#) such as [bacteria](#) or [fungi](#). Resveratrol has also been produced by chemical synthesis^[1] and is sold as a [nutritional supplement](#) derived primarily from [Japanese knotweed](#). In mouse and rat experiments, anti-cancer, [anti-inflammatory](#), blood-sugar-lowering and other beneficial cardiovascular effects of resveratrol have been reported. Most of these results have yet to be replicated in humans. In the only positive human trial, extremely high doses (3–5 g) of resveratrol in a proprietary formulation have been necessary to significantly lower blood sugar.^[2] Resveratrol is found in the skin of red grapes and is a constituent of red wine, but apparently not in sufficient amounts to explain the [French paradox](#). Experiments have shown that resveratrol treatment extended the life of fruit flies, nematode worms and short living fish but it did not increase the life span of mice.

Life extension

The groups of Howitz and Sinclair reported in 2003 in the journal [Nature](#) that resveratrol significantly extends the lifespan of the [yeast *Saccharomyces cerevisiae*](#).^[3] Later studies conducted by Sinclair showed that resveratrol also prolongs the lifespan of the worm [Caenorhabditis elegans](#) and the fruit fly [Drosophila melanogaster](#).^[4] In 2007, a different group of researchers was able to reproduce Sinclair's results with *C. elegans*,^[5] but a third group could not achieve consistent increases in lifespan of *D. melanogaster* or *C. elegans*.^[6]

In 2006, Italian scientists obtained the first positive result of resveratrol supplementation in a [vertebrate](#). Using a short-lived fish, [Nothobranchius furzeri](#), with a median life span of nine weeks, they found that a maximal dose of resveratrol increased the median lifespan by 56%. Compared with <http://en.wikipedia.org/wiki/Resveratrol> the control fish at nine weeks, that is by the end of the latter's life, the fish supplemented with resveratrol showed significantly higher general swimming activity and better learning to avoid an unpleasant stimulus. The authors noted a slight increase of mortality in young fish caused by resveratrol and hypothesized that it is its weak toxic action that stimulated the defense mechanisms and resulted in the life span extension.^[7]

Later the same year, Sinclair reported that resveratrol counteracted the detrimental effects of a high-fat diet in mice. The high fat diet was compounded by adding hydrogenated [coconut oil](#) to the standard diet; it provided 60% of energy from fat, and the mice on it consumed about 30% more calories than the mice on standard diet. Both the mice fed the standard diet and the high-fat diet plus 22 mg/kg resveratrol had a 30% lower risk of death than the mice on the high-fat diet. [Gene expression](#) analysis indicated the addition of resveratrol opposed the alteration of 144 out of 155 gene pathways changed by the high-fat diet. [Insulin](#) and [glucose](#) levels in mice on the high-fat+resveratrol diet were closer to the mice on standard diet than to the mice on the high-fat diet. However, addition of resveratrol to the high-fat diet did not change the levels of free fatty acids and cholesterol, which were much higher than in the mice on standard diet.^[8] A further study by a group of scientists, which included Sinclair, indicated that resveratrol treatment had a range of beneficial effects in elderly mice but did not increase the longevity of [ad libitum](#)-fed mice when started midlife.^[9]

Cancer Prevention

In 1997, Jang reported that topical resveratrol applications prevented the skin cancer development in mice treated with a [carcinogen](#).^[10] There have since been dozens of studies of the anti-cancer activity of resveratrol in animal models.^[11] No results of human clinical trials for cancer have been reported.^[12] However, clinical trials to investigate the effects on colon cancer and [melanoma](#) (skin cancer) are currently recruiting patients.^[13]

[In vitro](#) resveratrol interacts with multiple molecular targets (see [the mechanisms of action](#)), and has positive effects on the cells of breast, skin, gastric, colon, esophageal, prostate, and pancreatic cancer, and leukemia.^[11] However, the study of pharmacokinetics of resveratrol in humans concluded that even high doses of resveratrol might be insufficient to achieve resveratrol concentrations required for the systemic prevention of cancer.^[14] This is consistent with the results from the animal cancer models, which indicate that the [in vivo](#) effectiveness of resveratrol is limited by its poor systemic bioavailability.^{[12][15][16]} The strongest evidence of anti-cancer action of resveratrol exists for tumors it can come into direct contact with, such as skin and [gastrointestinal tract](#) tumors. For other cancers, the evidence is equivocal, even if massive doses of resveratrol are used.^[12]

Thus, topical application of resveratrol in mice, both before and after the UVB exposure, inhibited the skin damage and decreased skin cancer incidence. However, oral resveratrol was ineffective in treating mice [inoculated](#) with melanoma cells. Resveratrol given orally also had no effect on leukemia and lung cancer;^{[12][17]} however, injected intraperitoneally, 2.5 or 10 mg/kg of resveratrol slowed the growth of metastatic Lewis lung

carcinomas in mice.^{[12][18]} Resveratrol (1 mg/kg orally) reduced the number and size of the esophageal tumors in rats treated with a carcinogen.^[19] In several studies, small doses (0.02–8 mg/kg) of resveratrol, given prophylactically, reduced or prevented the development of intestinal and colon tumors in rats given different carcinogens.^[12]

Resveratrol treatment appeared to prevent the development of mammary tumors in animal models; however, it had no effect on the growth of existing tumors. Paradoxically, treatment of pre-pubertal mice with high doses of resveratrol enhanced formation of tumors. Injected in high doses into mice, resveratrol slowed the growth of [neuroblastomas](#).^[12]

Athletic performance

Johan Auwerx (at the Institute of Genetics and Molecular and Cell Biology in Illkirch, France) and coauthors published an online article in the journal [Cell](#) in November, 2006. Mice fed resveratrol for fifteen weeks had better treadmill endurance than controls. The study supported Sinclair's hypothesis that the effects of resveratrol are indeed due to the activation of the [Sirtuin 1](#) gene.

Nicholas Wade's interview-article with Dr. Auwerx^[20] states that the dose was 400 mg/kg of body weight (much higher than the 22 mg/kg of the Sinclair study). For an 80 kg (176 lb) person, the 400 mg/kg of body weight amount used in Auwerx's mouse study would come to 32,000 mg/day. Compensating for the fact that humans have slower metabolic rates than mice would change the equivalent human dose to roughly 4571 mg/day. Again, there is no published evidence anywhere in the scientific literature of any clinical trial for efficacy in humans. There is limited human safety data (see above). Long-term safety has not been evaluated in humans.

In a study of 123 Finnish adults, those born with certain increased variations of the SIRT1 gene had faster metabolisms, helping them to burn energy more efficiently—indicating that the same pathway shown in the lab mice works in humans.^[21]

Neurodegenerative disease

In November 2008, researchers at the Weill Medical College of Cornell University reported that dietary supplementation with resveratrol significantly reduced plaque formation in animal brains, a component of [Alzheimer](#) and other Neurodegenerative diseases.^[22] In mice, oral resveratrol produced large reductions in brain plaque in the hypothalamus (-90%), striatum (-89%), and medial cortex (-48%) sections of the brain. In humans it is theorized that oral doses of resveratrol may reduce beta amyloid plaque associated with aging changes in the brain. Researchers theorize that one mechanism for plaque eradication is the ability of resveratrol to chelate (remove) copper.

Radiation protection

In September 2008, a study by the University of Pittsburgh School of Medicine found that resveratrol may offer protection against radiation exposure.^[23]

Pharmacokinetics

The most efficient way of administering resveratrol in humans appears to be [buccal](#) delivery, that is without swallowing, by direct absorption through the inside of the mouth. When one mg of resveratrol in 50 mL solution was retained in the mouth for one min before swallowing, 37 ng/ml of free resveratrol were measured in plasma two minutes later. This level of unchanged resveratrol in blood can only be achieved with 250 mg of resveratrol taken in a pill form.^[24]

About 70% of the resveratrol dose given orally as a pill is absorbed; nevertheless, oral [bioavailability](#) of resveratrol is low because it is rapidly metabolized in intestines and liver into [conjugated](#) forms: [glucuronate](#) and [sulfonate](#).^[25] Only trace amounts (below 5 ng/mL) of unchanged resveratrol could be detected in the blood after 25 mg oral dose.^[25] Even when a very large dose of resveratrol (2.5 and 5 g) was given as an uncoated pill, the concentration of resveratrol in blood failed to reach the level necessary for the systemic cancer prevention.^[26] However, resveratrol given in a proprietary formulation SRT-501 (3 or 5 g), developed by Sirtris Pharmaceuticals, reached 5-8 times higher blood levels. These levels did approach the concentration necessary to exert the effects shown in animal models and in vitro experiments.^[2]

In humans^{[25][26]} and rats,^{[27][28][29]} less than 5% of the oral dose is being observed as free resveratrol in blood plasma. The most abundant resveratrol metabolites in humans, rats, and mice are trans-resveratrol-3-O-glucuronide and trans-resveratrol-3-sulfate.^[30] Walle suggests sulfate conjugates are the primary source of activity^[25], Wang et al. suggests the glucuronides,^[31] and Boocock et al. also emphasized the need for further study of the effects of the [metabolites](#), including the possibility of deconjugation to free resveratrol inside cells. Goldberd, who studied the [pharmacokinetics](#) of resveratrol, [catechin](#) and [quercetin](#) in humans, concluded "it seems that the potential health benefits of these compounds based upon the in vitro activities of the unconjugated compounds are unrealistic and have been greatly exaggerated. Indeed, the profusion of papers describing such activities can legitimately be described as irrelevant and misleading. Henceforth, investigations of this nature should focus upon the potential health benefits of their [glucuronide](#) and [sulfate](#) conjugates."^[32]

The hypothesis that resveratrol from wine could have higher [bioavailability](#) than resveratrol from a pill,^{[11][33]} has been disproved by experimental data.^{[32][34]} For example, after five men took 600 mL of red wine with the resveratrol content of 3.2 mg/L (total dose about 2 mg) before breakfast, unchanged resveratrol was detected in the blood of only two of them, and only in trace amounts (below 2.5 ng/mL). Resveratrol levels appeared to be slightly higher if red wine (600 mL of red wine containing 0.6 mg/mL resveratrol; total dose about 0.5 mg) was taken with meal: trace amounts (1–6 ng/mL) were found in four out of ten subjects.^[34] In another study, the pharmacokinetics of resveratrol (25 mg) did not change whether it was taken with vegetable juice, white wine or white grape juice. The highest level of unchanged resveratrol in the [serum](#) (7-9 ng/mL) was achieved after thirty minutes, and it completely disappeared from blood after four hours.^[32] The authors of both studies concluded that the trace amounts of resveratrol reached in the blood are insufficient to explain the French paradox. It appears that the beneficial effects of wine could be explained by the effects of alcohol^[32] or the whole complex of substances wine contains^[34], for example, the cardiovascular benefits of wine appear to correlate with the content of [procyanidins](#).^[35]

Adverse effects and unknowns

While the health benefits of resveratrol seem promising, one study has theorized that it may stimulate the growth of human [breast cancer](#) cells, possibly because of resveratrol's chemical structure, which is similar to a [phytoestrogen](#).^{[36][37]} However, other studies have found that resveratrol actually fights breast cancer.^{[38][39]} Some studies suggest that resveratrol slows the development of blood vessels, which suppresses tumors, but also slows healing.^[40] Citing the evidence that resveratrol is [estrogenic](#), some retailers of resveratrol advise that the compound may interfere with oral contraceptives and that women who are pregnant or intending to become pregnant should not use the product, while others advise that resveratrol should not be taken by children or young adults under eighteen, as no studies have shown how it affects their natural development.^[41] A small study found that a single dose of up to 5 g of *trans*-resveratrol caused no serious adverse effects in healthy volunteers.^[14]

Mechanisms of action

The mechanisms of resveratrol's apparent effects on [life extension](#) are not fully understood, but they appear to mimic several of the [biochemical](#) effects of [calorie restriction](#). A new report indicates that resveratrol activates [Sirtuin 1](#) (SIRT1) and PGC-1 α and improve functioning of the [mitochondria](#).^[42] Other research calls into question the theory connecting resveratrol, SIRT1, and calorie restriction.^{[43][44]}

For the debate about Resveratrol effects on longevity, see [Calorie restriction#Sir2.2FSIRT1 and resveratrol](#).

A paper by Robb *et al.* discusses resveratrol action in cells. It reports a fourteen-fold increase in the action of MnSOD ([SOD2](#)).^[45] MnSOD reduces superoxide to [hydrogen peroxide](#) (H₂O₂), but H₂O₂ is not increased due to other cellular activity. Superoxide O₂⁻ is a byproduct of respiration in complex 1 and 3 of the [electron transport chain](#). It is "not highly toxic, [but] can extract an electron from biological membrane and other cell components, causing free radical chain reactions. Therefore it is essential for the cell to keep superoxide anions in check."^[46] MnSOD reduces superoxide and thereby confers resistance to [mitochondrial dysfunction](#), permeability transition, and [apoptotic](#) death in various diseases.^[47] It has been implicated in lifespan extension, inhibits cancer, (e.g. pancreatic cancer^{[48][49]}) and provides resistance to reperfusion injury and irradiation damage^{[50][51][52]}. These effects have also been observed with resveratrol. Robb et al. propose MnSOD is increased by the pathway RESV → SIRT1 / NAD⁺ → FOXO3a → MnSOD. Resveratrol has been shown to cause SIRT1 to cause migration of FOXO transcription factors to the nucleus^[53] which stimulates FOXO3a transcriptional activity^[54] and it has been shown to enhance the sirtuin-catalyzed deacetylation (activity) of [FOXO3a](#). MnSOD is known to be a target of FOXO3a, and MnSOD expression is strongly induced in cells overexpressing FOXO3a^[55].

Resveratrol interferes with all three stages of [carcinogenesis](#) — initiation, promotion and progression. Experiments in [cell cultures](#) of varied types and isolated subcellular systems [in vitro](#) imply many mechanisms in the [pharmacological](#) activity of resveratrol. These mechanisms include modulation of the [transcription factor NF-κB](#),^[56] inhibition of the [cytochrome P450](#) isoenzyme [CYP1A1](#)^[57] (although this may not be relevant to the CYP1A1-mediated bioactivation of the procarcinogen [benzo\(a\)pyrene](#)^[58]), alterations in [androgenic](#)^[59] actions and expression and activity of [cyclooxygenase](#) (COX) enzymes. In vitro, resveratrol "inhibited the proliferation of human pancreatic cancer cell lines." In some lineages of cancer [cell culture](#), resveratrol has been shown to induce [apoptosis](#), which means it kills cells and may kill cancer cells.^{[59][60][61][62][63][64]} Resveratrol has been shown to induce Fas/Fas [ligand](#) mediated [apoptosis](#), [p53](#) and [cyclins](#) A, B1 and [cyclin-dependent kinases](#) cdk 1 and 2. Resveratrol also possesses [antioxidant](#) and anti-[angiogenic](#) properties.^{[65][66]}

Resveratrol was reported effective against [neuronal](#) cell dysfunction and cell death, and in theory could help against diseases such as [Huntington's disease](#) and [Alzheimer's disease](#).^{[67][68]} Again, this has not yet been tested in humans for any disease.

Research at the [Northeastern Ohio Universities College of Medicine](#) and [Ohio State University](#) indicates that resveratrol has direct inhibitory action on cardiac fibroblasts, and may inhibit the progression of [cardiac fibrosis](#).^[69]

According to [Patrick Arnold](#), it also [significantly](#) increases natural [testosterone](#) production from being both a [selective estrogen receptor modulator](#)^{[70][71]} and an [aromatase inhibitor](#).^{[72][73]}

In December 2007, work from Irfan Rahman's laboratory at the [University of Rochester](#) demonstrated that resveratrol increased intracellular glutathione levels via Nrf2-dependent upregulation of [gamma-glutamylcysteine](#) ligase in lung epithelial cells, which protected them against cigarette smoke extract induced oxidative stress.^[74]

Chemical and physical properties

Resveratrol (3,5,4'-trihydroxystilbene) is a [polyphenolic phytoalexin](#). It is a [stilbenoid](#), a derivate of [stilbene](#), and is produced in plants with the help of the enzyme stilbene synthase.

It exists as two [geometric isomers](#): *cis*- (*Z*) and *trans*- (*E*), with the *trans*-isomer shown in the top image. The *trans*- form can undergo isomerisation to the *cis*- form when exposed to [ultraviolet](#) irradiation.^[75] *Trans*-resveratrol in the powder form was found to be stable under "accelerated stability" conditions of 75% humidity and 40 degrees C in the presence of air.^[76] Resveratrol content also stayed stable in the skins of grapes and [pomace](#) taken after fermentation and stored for a long period.^[77]

Plants and foods

Resveratrol was originally isolated by Takaoka from the roots of [white hellebore](#) in 1940, and later, in 1963, from the roots of [Japanese knotweed](#). However, it attracted wider attention only in 1992, when its presence in wine was suggested as the explanation for cardioprotective effects of wine.^[11]

In grapes, resveratrol is found primarily in the skin,^[78] and — in muscadine grapes — also in the seeds.^[79] The amount found in grape skins also varies with the grape cultivar, its geographic origin, and exposure to fungal infection. The amount of fermentation time a wine spends in contact with grape skins is an important determinant of its resveratrol content.^[78]

The levels of resveratrol found in food varies greatly. Red wine contains between 0.2 and 5.8 mg/L,^[80] depending on the grape variety, while white wine has much less — the reason being that red wine is [fermented](#) with the skins, allowing the wine to absorb the resveratrol, whereas [white wine](#) is fermented after the skin has been removed.^[78] A number of reports have indicated that [muscadine](#) grapes may contain high concentrations of resveratrol and that wines produced from these grapes, both red and white, may contain more than 40 mg/L.^{[79][81]} However, subsequent studies have found little or no resveratrol in different varieties of muscadine grapes.^{[82][83]} The fruit of the [mulberry](#) (esp. the skin^[84]) is a source, and sold as a nutritional supplement.

Content in wines and grape juice

Beverage	Total resveratrol (mg/L) ^{[78][79]}	Total resveratrol in 150 mL wine (mg) ^{[78][79]}
Red Wines (Global)	1.98 - 7.13	0.30 - 1.07
Red Wines (Spanish)	1.92 - 12.59	0.29 - 1.89
Red grape juice (Spanish)	1.14 - 8.69	0.17 - 1.30
Rose Wines (Spanish)	0.43 - 3.52	0.06 - 0.53
Pinot Noir	0.40 - 2.0	0.06 - 0.30
White Wines (Spanish)	0.05 - 1.80	0.01 - 0.27

The *trans*-resveratrol concentration in forty Tuscan wines ranged from 0.3 to 2.1 mg/L in the 32 red wines tested and had a maximum of 0.1 mg/L in the 8 white wines in the test. Both the *cis*- and *trans*-isomers of resveratrol were detected in all tested samples. *cis*-Resveratrol levels were comparable to those of the *trans*-isomer. They ranged from 0.5 mg/L to 1.9 mg/L in red wines and had a maximum of 0.2 mg/L in white wines.^[85]

In a review of published resveratrol concentrations, the average resveratrol concentration in red wines is 1.9 ± 1.7 mg *trans*-resveratrol/l (8.2 ± 7.5 μ M), ranging from non-detectable levels to 14.3 mg/l (62.7 μ M) *trans*-resveratrol. Levels of *cis*-resveratrol follow the same trend as *trans*-resveratrol.^[86]

Reports suggest that some aspect of the wine making process converts [piceid](#) to resveratrol in wine, as wine seems to have twice the average resveratrol concentration of the equivalent commercial juices.^[79]

In general, wines made from grapes of the Pinot Noir and St. Laurent varieties showed the highest level of *trans*-resveratrol, though no wine or region can yet be said to produce wines with significantly higher resveratrol concentrations than any other wine or region.^[86]

Content in selected foods

Food	Serving	Total resveratrol (mg) ^[87]
Peanuts (raw)	1 c (146 g)	0.01 - 0.26
Peanuts (boiled)	1 c (180 g)	0.32 - 1.28
Peanut butter	1 c (258 g)	0.04 - 0.13
Red grapes	1 c (160 g)	0.24 - 1.25

Ounce for ounce, peanuts have about half the amount of resveratrol as that found in red wine. The average amount of resveratrol in one ounce of peanuts in the marketplace (about 15 whole) is 79.4 μ g/ounce.

In comparison, some red wines contain approximately 160 μ g/fluid ounce.^[88] Resveratrol was detected in grape, cranberry, and wine samples. Concentrations ranged from 1.56 to 1042 nmol/g in Concord grape products, and from 8.63 to 24.84 micromol/L in Italian red wine. The concentrations of resveratrol were similar in cranberry and grape juice at 1.07 and 1.56 nmol/g, respectively.^[89]

[Blueberries](#) have about twice as much resveratrol as [bilberries](#), but there is great regional variation. These fruits have less than ten percent of the resveratrol of grapes. Cooking or heat processing of these berries will contribute to the degradation of resveratrol, reducing it by up to half.^[90]

Supplementation

Resveratrol [nutritional supplements](#), first sourced from ground dried grape skins and seeds, are now primarily derived from the less expensive, more concentrated [Japanese knotweed](#), which contains up to 187 mg/kg in the dried root and can be concentrated in an extract up to 50%.^[91]

As a result of extensive news coverage,^{[92][93]} sales of supplements greatly increased in 2006,^{[94][95]} despite cautions that benefits to humans are unproven.^{[95][96][97]}

See also



[Pharmacy and Pharmacology portal](#)

Other articles

- [Codex Alimentarius](#)
- [Japanese knotweed](#)
- [List of grape varieties](#)
- [Mulberry](#)
- [Muscadine](#)
- [Piceatannol](#), an active [metabolite](#) of resveratrol.
- [Proanthocyanidin](#)
- [Polyphenol antioxidant](#)

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Further reading

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