Alternatives®

FOR THE HEALTH-CONSCIOUS INDIVIDUAL

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It's a Family Affair

My dad, currently in his mid-80s, was recently admitted to the hospital for several aspects of deteriorating health, primarily cardiovascular problems. Considering that cardiovascular disease is still the number-one killer in this country, it should be no surprise that the majority of others in his hospital wing were there for similar problems. As I watched the family members of other patients come and go, it was so obvious that cardiovascular problems are not going to go away anytime soon in our society.

"Like father, like son," described most of what I saw. The sons (and grandsons, and daughters, and spouses) of the patients were obviously following the same pathway as the patients. Most were overweight and carrying a "spare tire," a telltale sign of metabolic syndrome. This is the grouping of cardiac risk factors resulting from insulin resistance: obesity (abdominal obesity and waist size over 40 inches), high blood pressure, blood clotting abnormalities, high cholesterol, et cetera.

If our healthcare system were truly based on prevention instead of pharmaceutical sales, the family of each hospitalized patient would be screened for similar problems when they visit. If there's any time the seriousness of the situation should hit home, that would be it. Unfortunately, no one else seems to think that way.

Family members seemed oblivious to the idea that their diet and habits put them in the same risk category for a heart attack, stroke, or other cardiovascular problem as the person they were visiting. I guess you could say the visitors were suffering from the "it won't happen to me" syndrome. But it will happen, because of genes and environment. It's not just coincidental that when you apply for an insurance policy, or check into a hospital or a doctor's office, the first question happens to be, "Is your father living?" If the answer is "No," the follow-up question is, "What did he die of and at what age?"

Over the holidays maybe you had the chance to visit your immediate family and observe their health status and the effects of their lifestyle. Don't develop the "it won't happen to me" syndrome. You may have a genetic predisposition or weakness that can lead to certain problems. The following report on preventing Alzheimer's is a perfect example. You also have the ability to stop the cycle and prevent those problems by improving your lifestyle and health habits before it's too late.

My dad, by the way, is back home and doing better for the time being…and me, I've become even more mindful of my diet and exercise program than ever before.

The $30 Cure for Alzheimer's

What should have been the biggest news of the year didn't make the mainstream news at all. Researchers have discovered that nicotinamide can restore the memory loss of Alzheimer's disease. (Nicotinamide is another term for niacinamide, a form of vitamin B3.)

In This Issue

You will observe with concern how long a useful truth may be known, and exist, before it is generally received and practiced on. —Benjamin Franklin

Dr. Kim Green, at the University of California at Irvine, gave the human dose equivalent of 2,000 to 3,000 mg of niacinamide to mice with Alzheimer's disease. After treating the mice for only four months, he discovered what should have been front-page news in every city in the world. "Cognitively, they were cured," said Dr. Green. "They performed as if they'd never developed the disease." (*J Neurosci 08;28:11500–11510*)

Alzheimer's is a scary disease. It seems to come without warning, and, worst of all, until now there's been no cure. Currently the best one can hope for is to slow its progression with various medications, supplements, and changes in diet and lifestyle. Over 5 million Americans now have Alzheimer's, and that number is expected to grow to over 14 million by 2050. In addition, the number of Alzheimer's cases worldwide is expected to quadruple by 2050, from the current 26.6 million to over 100 million. *If the current trend continues, one out of every eight baby boomers in this country will develop Alzheimer's*. Being a baby boomer myself, those odds are pretty frightening.

The researchers in the above study were obviously both surprised and excited about what they discovered. Rarely do you hear researchers using the word "cured," but that's exactly what happened. At the end of the study, the diseased mice that were treated with niacinamide performed just as well in memory tests as healthy mice. The niacinamide not only protected their brains from further memory loss, it also restored lost memory function. Dr. Green said, "The vitamin completely prevented cognitive decline associated with the disease, bringing them back to the level they'd be at if they didn't have the pathology." If this wasn't exciting enough, niacinamide also improved memory and behavior in the mice without Alzheimer's.

I probably shouldn't have been that surprised, but the reaction from the medical community and mainstream press actually shocked me.

The Alzheimer's organizations have practically ignored this study and continue to follow the party line that high doses of vitamins can be toxic and shouldn't be taken except under the supervision of a doctor. And practically every article I saw reporting on the research offers the same warning. This is total bull.

Millions of Alzheimer's sufferers could benefit from high doses of niacinamide right now, and millions more could possibly prevent the disease by taking it. And 2,000 to 3,000 mg a day is totally harmless. There has never been a death reported from niacinamide supplementation. That's probably because, as animal studies have shown, a toxic dose in humans would be somewhere around 375,000 mg a day—nearly a pound.

Compare this to the over 250,000 deaths each year caused by *prescribed* drugs.

I do want to repeat that the above study was performed on animals, not humans, and it's possible that the effects wouldn't be as profound on humans. The results of the study, however, were so impressive that the same research group immediately moved forward with a six-month clinical trial with Alzheimer's patients. It will be a controlled trial where half the patients receive 1,500 mg of niacinamide twice a day and half receive a placebo.

If I had a friend or family member with the disease, or if I were predisposed to Alzheimer's (meaning I had the genetic mutation for Alzheimer's or had a family member that has or has had the disease), I would immediately start taking higher doses of niacinamide. And remember, the research also strongly suggests that it could improve memory in healthy individuals as well.

When there's no accepted cure for Alzheimer's disease, and the best that can be hoped for with other current therapies is to slow the disease's progression, I can't understand why there would be any hesitation in beginning niacinamide therapy. It's absolutely safe, and inexpensive as well. The authors of the above study reportedly purchased a year's supply of the vitamin for $30.

The Best $30 You'll Ever Spend

Niacinamide has been one of my absolute favorite health supplements for years. A little over ten years ago I wrote about the work that Dr. William Kaufman

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performed in the mid- to late-1930s. I spoke with Dr. Kaufman on numerous occasions and kept in contact with both him and his research assistant, Charlotte (his wife), for years until he passed away at the age of 88 in 2000. He was a true pioneer in the treatment of problems associated with deficiencies of niacinamide. He discovered that many of the physical and mental problems associated with "normal" aging are actually the result of inadequate amounts of niacinamide in the diet.

I utilized his findings to successfully treat and resolve a long list of "normal" aging problems outlined by Dr. Kaufman. The positive effects of niacinamide treatment were well documented by Dr. Kaufman, particularly in the areas of fatigue; muscle strength and working capacity; loss of balance; depression; and joint mobility and osteoarthritis.

With the help of his wife, Dr. Kaufman was meticulous at documenting the results he obtained using niacinamide. I've covered those in more detail in the November 1997 issue of *Alternatives*. (For those of you who don't have that issue handy, I've placed an electronic copy of it in the Subscriber Center of the *Alternatives* Web site, *www.drdavidwilliams.com*.) If he were still with us, Dr. Kaufman would surely be pleased to learn that his program could also be effective in the treatment of Alzheimer's.

While the above clinical trials plan on utilizing 1,500 mg of niacinamide twice daily, I wish the researchers would study Dr. Kaufman's work and his findings on dosing amounts. Dr. Kaufman had experience with over a thousand patient-years of niacinamide use and was well-versed in how to obtain its greatest benefits.

In my conversations with Dr. Kaufman, he said that niacinamide, being a water-soluble vitamin, was absorbed quickly into the bloodstream and central nervous system. Body levels began to rise within 15 minutes of ingestion, and peaked after about 90 minutes; after three hours most of the vitamin had cleared the body. This is why he felt that for maximum effectiveness it was crucial to give numerous doses through the day (and the night for extremely severe arthritic conditions).

He also determined that 250 mg was about the most the body could absorb at one time. Multiple doses of 250 mg is the best way to maintain effective levels. He adjusted the daily dosage to the severity of the condition being treated, generally from 1,500 to 4,000 mg a day.

(When I spoke with Dr. Kaufman and his wife they had both been taking 250 mg every three waking hours [six doses] for a total of 1,500 mg a day for over 55 years. He felt this is the ideal maintenance dosage, which needs to be taken for life. Considering the ever-increasing rate of Alzheimer's, arthritis, cancer, and various neurological diseases, I believe he was right.)

Based on his observations and studies, it would appear that Alzheimer's patients would achieve the best results if they took 250 mg every 1½ hours (a total of 12 doses).

I highly recommend this niacinamide program for either preventing or treating Alzheimer's. And if you suffer from arthritis, regardless of how severe, it's definitely one treatment you don't want to underestimate or overlook. It's one of the best alternatives for NSAIDs and other medications that cause stomach bleeding and a long list of other side effects.

Getting the Most for Your Money

There are a couple of other points you need to keep in mind about niacinamide.

First, it isn't a cure-all. Niacinamide can work miracles, but it doesn't happen overnight. Although Dr. Kaufman's patients often began to experience subtle improvements in the first few hours or days, the more serious cases could take a year or even longer to resolve. He also felt a proper diet and exercise were in order. He also added other supplements when needed, like a good multi-vitamin/mineral that contained a broad balance of the other B vitamins along with vitamins A and D.

Second, I utilized Dr. Kaufman's protocols for several years and saw some amazing improvements, however I saw even better responses after switching to a product without preservatives. Dr. Kaufman found that many niacinamide products contain preservatives, a fact I hadn't been aware of. I'm sure there are other sources, but Freeda Vitamins is an excellent source of 250 mg preservative-free niacinamide tablets. The company can be contacted at *www.freedavitamins.com* or 47-25 34th Street, 3rd Floor, Long Island City, New York 11101 and toll-free at 800-777-3737.

At this point I can't say for certain that niacinamide in high doses will completely reverse memory loss in humans the way it did in mice. But considering its safety, availability, and cost, niacinamide is certainly worth a try—particularly since no other viable options are currently available. In the above study with mice, it didn't just improve the problem, it proved to be a cure. The worst-case scenario would be that someone wastes $20 or $30 while improving their sense of balance, any existing arthritis, mobility problems, fatigue, and muscle weakness and lowering their risk of cancer. Wouldn't it be nice if all "failed" treatment programs had such "side effects."

Get the Right Fish

Question: After reading many of your articles about our dietary imbalance between omega-3 and omega-6 fatty acids, I've started to include more fish in my diet. I don't like the real "fishy" tasting fish like salmon or sardines, although I realize they may be your favorites. I personally prefer milder fish like tilapia. My question is, "What are the better ways of preparing fish?"

—J.B.
Huntertown, Indiana

Answer: To preserve as many of the benefits of the fish as possible I would suggest steaming, broiling, grilling or *very* lightly pan-frying fish. Deep-frying the fish is lowest on the list, and will probably negate most, if not all, of the health benefits of eating fish.

You probably don't want to hear this, but the "fishy" taste you refer to is the taste of the beneficial omega-3 fatty acids.

It's important to keep in mind that, much like ourselves, fish are what they eat. The diet of most fish in the wild is other fish. What sets tilapia and catfish apart from salmon, trout, and sardines is that they can live on a diet of corn and vegetable oil. And, that's exactly what farmed tilapia and catfish are fed. (Tilapia, a type of tropical fish, have become the ideal fish to farm—not only because they reproduce rapidly, but also because they'll eat just about anything. Fish farmers I've spoken with often refer to them as "fresh-water hogs.") On the other hand, farmed salmon and trout require a diet of actual fish, fish meal, or fish oils.

Don't get me wrong; farmed tilapia and catfish are certainly not bad foods, but they aren't that effective at raising your omega-3 fatty acid levels. In reality, their omega-3 levels are much more like that of chicken rather than fish. This is another prime example of the dramatic changes that are being made in our food supply. For thousands of years, fish had always been a rich source of omega-3s, but farming practices to supply the growing demand for tilapia have changed that. Tilapia is one of the most highly consumed fish products. You'll find it not only in restaurants but also in fish sandwiches, fish sticks, and imitation crab (surimi).

If your motivation for eating tilapia is to reduce inflammation and protect your cardiovascular system, you're probably wasting your time and money. As I said, when it comes to its anti-inflammatory omega-3 content it's more like a chicken than a fish. And, worse, since the fish has been on a corn- and vegetable-oil diet, it has even higher levels of inflammatory omega-6 fatty acids than 80-percent-lean hamburger, donuts, or even bacon. *(J Am Diet Assoc 08;108:1178–1185)*

Since you've read my articles on the dangers of the imbalance between omega-3 and omega-6 fatty acids, it's important that you not count on tilapia to improve that ratio. Cardiologists are now telling all their patients to eat more fish. What they aren't saying (they probably don't even know) is that eating tilapia will make the patient's cardiovascular problems worse by increasing arterial inflammation.

In short, to prevent cardiovascular disease, arthritis, and dozens of other problems associated with too many inflammatory omega-6 fatty acids in the diet, you need to increase your omega-3 fatty acids. Eating farmed tilapia and catfish won't do it. It will make things worse. Either take a high-quality fish oil supplement or switch to the "fishier" tasting fish like salmon, trout, sardines, and mackerel.

Don't forget the "fishless" omega-3 source, chia, that I wrote about a few months ago. It may be one of the most economical sources of all. You can get chia from quite a few sources on the Internet and in retail stores, or from Mountain Home Nutritionals at 800-888-1415. [*Editor's note: There's more information about the benefits of chia in the Subscriber Center of the* Alternatives *Web site,* www.drdavidwilliams.com.]

Migraines and Hormones

Question: I suffer from migraine headaches and recently read that fact alone lowers my risk of developing breast cancer. Why is that? If I'm able to stop my migraines then does my risk of cancer go back up?

—Heather R.
Colonial Heights, Virginia

Answer: Women typically suffer from migraines more than do men. One of the triggers for migraines is the sudden drop in their estrogen level that causes a corresponding drop in serotonin levels. Breast tumors are very often what are referred to as estrogen receptor–positive. In other words, the tumor growth is stimulated by estrogen. Women migraine sufferers tend to have lower estrogen levels, providing less of a stimulus for the cancer to grow.

Stopping your migraines in itself won't increase your risk of developing breast cancer.

Estrogen levels naturally drop in the latter part of the menstrual cycle. Not only is this often the time when migraines happen, but the corresponding drop in serotonin levels is responsible for the dramatic change in mood that can occur. The chemical serotonin is the "feel-good" neurotransmitter. Lower levels lead to feelings of sadness and depression.

Earlier studies have shown that women taking oral contraceptives suffer more migraines during their hormone-free week. And pregnant women, who are naturally in an elevated estrogen state, have significant decreases in

migraine episodes. In fact, studies have shown that by the third trimester, 80 percent of migraine sufferers no longer have any headaches.

In the past, I've mentioned numerous ways to help get rid of migraines, including chiropractic adjustments, balancing hormone levels, correcting constipation to eliminate excess toxins, and a variety of supplements such as CoQ10 and magnesium. Keep in mind that the supplements may not work instantly, and oftentimes it may take a few months of continuous use to see the optimal results. [*Editor's note: There's more information about the treatments for migraines in the Subscriber Center of the* Alternatives *Web site,* www.drdavidwilliams.com.]

Although it may not be the main cause, low serotonin levels are associated with migraines. The amino acid tryptophan is a precursor of serotonin. Either taking tryptophan (or tryptophan-rich foods such as turkey, spinach, and shrimp, but also dairy, chocolate, and grains—which females will often crave a day or so prior to the migraine) or the newer supplement 5-HTP (5-hydroxytryptophan) at 150 mg/day, will help to raise serotonin levels and can help prevent the headache.

Testing for Vitamin D

Question: After reading your last article on vitamin D, I'm not sure if I need to be taking more. Is there a test that I can have done to check my vitamin D level?

—Gina Z.
Houston, Texas

Answer: Lately I've devoted a considerable amount of space to discussing the widespread vitamin D deficiency in our society. Several readers have asked about how to check their levels. There is now an accurate home test kit available for $65 (unless you live in New York). It requires doing either a finger or heel stick and placing a few drops of blood on a blotter and sending it to the testing lab. The results will be sent directly back to you in about a week. The 25-hydroxyvitamin D test should show levels of 50 to 80 ng/mL year-round.

Your doctor can also order the test, which typically runs between $100 and $200. It may or may not be covered by insurance. He/she should order the test to check the 25-hydroxyvitamin D level. (Make sure your doctor orders this test, and not the one for 1,25-dihydroxyvitamin D. This latter is a metabolite of 25-hydroxyvitamin D, and testing for it doesn't give a reliable assessment of your vitamin D status.)

If you decide to be tested, I would recommend taking adequate amounts of vitamin D for two months before doing the test. Vitamin D is fat-soluble and it takes a while for the body to replenish its reserves. A general safe starting point would be:

- 1,000 IU per day for healthy children under 2 years old
- 2,000 IU per day for those over 2 years old
- 3,000 IU per day for individuals weighing 80–130 pounds
- 4,000 IU per day for those 130–170 pounds
- 5,000 IU per day for anyone over 170 pounds.

To order the at-home self test, visit the Vitamin D Council's Web site at *www.vitamindcouncil.org*. Clicking on "Vitamin D Test Kit" will take you to the order page. You can also order by phone by contacting the lab directly at *www.zrtlab.com* or 866-600-1636.

Get Your Morning Coffee

Question: You've written a quite a bit about detoxification in the past, and even about coffee enemas. You gave the directions for mixing the coffee, but do I need to use a special kind or brand of coffee?

—Claire S.
Denver, Colorado

Answer: Personally, I'm not that sure that it makes much of a difference, but Dr. William Kelley and the Gerson Research Organization felt that using a particular organic coffee gave the best results. It has higher levels of caffeine and palmitic acid, which might be responsible for its effectiveness. The coffee is from S.A. Wilsons Inc. Their Web site is *www.sawilsons.com* and their number is 866-266-4066 if you want more information.

Revisit Your Resolutions

The number-one resolution people make at the New Year is to lose weight. This doesn't surprise me one bit, given the problem we have with obesity in this country. The CDC reports that, in 2007, in every state except Colorado more than 20 percent of the residents were obese—not just overweight, but obese. For the US as a whole, the obesity rate is above 25 percent—and climbing fast. As recently as 1985, the highest reported obesity rate of any state was under 10 percent. In less than 25 years, as a society we've just plain gotten fat.

It's certainly not news to you that excess weight is unhealthy—and the more weight, the more unhealthy it is. Even a few excess pounds increases your risk of disease. The long list of conditions made worse by excess weight includes arthritis; diabetes; gall bladder disease; heart disease and stroke; breathing difficulties, including asthma and sleep apnea; and a variety of cancers, including those of the endometrium, breast, and colon.

It's also not news to you that the most effective components of a weight-loss program are diet and exercise.

(*Resolutions continued on page 159*)

NEWS TO USE FROM AROUND THE WORLD

Catching Autism Early

NEW HAVEN, CONNECTICUT—Some individuals are still disputing the idea, but if you speak to anyone who has been a pediatrician, teacher, or school administrator over the last couple of decades, it's pretty obvious we're in the midst of an autism epidemic. Some want to dismiss the idea, saying the increase is a result of increased surveillance or a broadening of the definition of autism. After reviewing the evidence, I don't think this is the case at all. There are obviously one or more environmental causes, with vaccines being one.

It's important to pick up on any signs of autism as early as possible. Early indications are that a child has a better chance of recovery if toxicity from environmental causes like vaccines can be addressed quickly. Every child's situation is different, so general recommendations for detoxifying aren't appropriate.

Oftentimes, the problem is in recognizing autism in its early stages. Researchers at Yale University School of Medicine have reported that autistic children's lack of eye contact is an early tell-tale sign of the disease.

Visual fixation patterns were monitored in groups of 2-year-old autistic children and nonautistic developmentally delayed children while exposed to 10 different videos of actresses playing the role of caregiver. Autistic children focused on the mouths and lips while the other children focused on the eyes of the actresses.

Looking into the eyes of others is a recognized trait in early childhood development as well as in social adaptation throughout one's life. Aberrant eye contact is a lifelong hallmark of the autism disability. This study strongly suggests that young children who won't look you in the eye, but, instead, focus on the lips and mouth are probably exhibiting one of the markers for autism. *(Arch Gen Psychiatry 08;65:946–954)*

Broccoli for Smokers

BUFFALO, NEW YORK—I don't in any way want to encourage smoking or give the impression that there's any simple way to protect against all its dangers. Researchers, however, have completed a comprehensive study showing that smokers who consume cruciferous vegetables can dramatically reduce their risk of developing lung cancer. (*7th Annual AACR Conference on Frontiers in Cancer Prevention Research, Nov 16–19, 2008*)

I've always been a very big proponent of consuming the sulfur-containing cruciferous vegetables. This study gives additional support to their powers by showing that an increased intake can reduce the risk of developing lung cancer by anywhere from 20 percent to 55 percent. Obviously, the more a smoker ate of these vegetables the lesser the risk. The ability to cut one's risk in half is definitely no small feat.

If someone you know won't or simply can't quit smoking, then at least let them know that eating generous portions of broccoli, cabbage, kale, and Brussels sprouts can cut their chances of dying from the habit.

Cord Blood Revisited

GAINESVILLE, FLORIDA—Several years ago I wrote about the benefits of saving a newborn's umbilical cord blood. At the time less than 1 percent of Americans banked cord blood. That has now grown to 4 percent. Hopefully, for the sake of future children, it will become even more commonplace.

Stem cell research is accelerating at a very rapid pace, and will turn out to be one of the true miracles of our time. Having one's own supply of stem cell–rich cord blood will be the gift that keeps on giving.

Just recently researchers transfused cord blood into children with type 1 diabetes. It slowed the immune system's destruction of pancreatic insulin-producing cells, improved blood sugar control, and greatly lessened the need for insulin. *(Exp Hematol 08;36:710–715)*

Every year we learn the value of banking cord blood. Please inform parents-to-be of this valuable service and, if you have the opportunity, don't let this one-time opportunity be lost with your children or grandchildren. We banked our last child's cord blood with ViaCord.

For more details and information contact ViaCord at *www.viacord.com* or 866-668-4895.

Bacteria for Kidney Health

BOSTON, MASSACHUSETTS—Researchers have linked the formation of kidney stones to a lack of bacteria in the lower bowel.

About 80 percent of kidney stones are composed of calcium oxalate. A beneficial bacteria called *Oxalobacter formigenes* normally resides in the intestinal tract and breaks down oxalate to increase its absorption. A decreased amount of this bacteria increases the development of stones.

Researchers tested for the prevalence of this bacteria in 247 patients with recurring calcium oxalate stones, and compared the levels to those of 259 control patients. They discovered the presence of this beneficial bacteria reduced the risk of recurring calcium oxalate stones by 70 percent. *(J Am Soc Nephrol 08;19:1197–1203)*

Unfortunately, very little attention is still being paid to the importance of maintaining the beneficial bacteria in the lower bowel. For many people, kidney stones are a lifelong problem that not only results in severe pain and disability but can also destroy kidney function. Calcium oxalate from the diet builds up in the kidneys as small, rock-hard, jagged stones. This friendly strain of bacteria

NEWS TO USE *(CONTINUED)*

prevents stones by breaking down calcium oxalate in the intestinal tract before it can move to the kidneys.

Maintaining excellent bacterial flora by regularly consuming foods like sauerkraut, yogurt, kefir, et cetera will provide benefits far greater than just preventing kidney stones. And, as added protection, I highly recommend the regular use of a high-quality probiotic supplement. The bacteria in the lower bowel are truly our second immune system, one that works silently (maybe that's not the best choice of words) behind the scenes to keep us healthy. Note that while a probiotic supplement probably won't contain *Oxalobacter,* it will help establish an environment where all sorts of good bacteria can flourish.

This study also makes one wonder about the influence of our widespread antibiotic use and its indirect effect on the formation of kidney stones. I have no doubt that in the future we'll discover that the indiscriminate use of prescription antibiotics, as well as those used in our food supply, will be linked to all types of health problems. Just in the last few months, we've learned their use increases the risk of developing cancer, as I wrote last month (January 2009).

(Resolutions continued from page 157)

There's no mystery in the equation: If you take in fewer calories than you burn, you *will* lose weight.

The real mystery is, why is it so hard for individuals to lose weight and keep it off? Millions of individuals make the same resolution year after year, intending to lose that weight that seems to literally hang around forever, or perhaps wanting to relose the weight that disappeared over the spring and summer but came right back between September and December.

I believe the answer is that real, lasting weight loss requires a commitment, and for people who have a substantial amount of weight to lose it can require making substantial changes in their lives. For some individuals, it means changing everything about themselves: their diet and activity habits, of course, but also their sleep habits, perhaps even the people they associate with.

"Crash" diets and steam cabinets can often produce a short-term weight loss, but invariably the weight comes right back—because the change is one that no person can live with. A "grapefruit diet" is high in fiber and low in calories, but who can eat grapefruit every day forever?

Food cravings are usually a very strong signal that something is out of balance nutrition-wise. That's why they accompany most weight-loss diets that restrict certain food groups. Low-fat dieters will crave things like pizza or ice cream. Low-carb dieters will crave the candy and sweets. This explains why most diet plans allow for a weekly "cheat" day, where you are allowed to eat anything you want. This may be a short-term answer, but the long-term solution is to correct the underlying problem.

Licking Food Cravings

I'm always harping on the idea of "listening" to your body. The more attuned you are to what your body is doing, the quicker you can modify your diet and lifestyle to prevent future problems.

Dozens of factors can lead to food cravings. Hormone imbalances, a lack of digestive enzymes, poor sense of taste or smell, and medications that increase appetite are just a few of the causes.

Regularly taking a good **multi-vitamin/mineral complex** can help tremendously. Most people don't associate vitamin intake with reduced food cravings, but when the body is deficient in a certain vitamin or mineral, cravings for food that might correct the imbalance can be intense.

For years, I've recommended that individuals consume a **protein shake** for breakfast. Curbing cravings is just one more benefit of this practice. So many people are deficient in various amino acids that the body uses as neurotransmitters. Deficiencies of neurotransmitters like serotonin or dopamine cause a breakdown in cellular communication, resulting in both mood changes and food cravings. The pharmaceutical companies are well aware of this situation, and are developing appetite suppression medications that mimic the effects of naturally occurring amino acids like L-tryptophan, tyrosine, and others. With a simple homemade protein shake, you can achieve the same effects without the dangerous side effects or expense. [*Editor's note: Dr. Williams' protein shake recipe is in the Subscriber Center of the* Alternatives *Web site,* www.drdavidwilliams.com.]

The latest research has linked a **lack of sleep** (more precisely, the lack of melatonin) with insulin resistance, an increased risk for type 2 diabetes, and specific food cravings. (*Nutr Res Rev 07;20:195–212*)

Researchers have discovered that the insulin-producing cells in the pancreas have melatonin receptors. When melatonin is released from the brain during sleep it helps shut down insulin production. Individuals who sleep little or poorly become more resistant to insulin, and their insulin sensitivity resembles the insulin resistance of diabetic people. To make matters worse, sleep-

deprived individuals crave starchy, sweet foods—starting a vicious cycle that can lead to diabetes.

From 1985 to 2006, the percentage of US adults reporting six or fewer hours of sleep rose for all age groups. Diabetes and the overall consumption of sweets also rose dramatically during this same period.

I'll add one interesting side note before leaving the subject of food cravings. Maintaining optimal levels of **vitamin D** is a vital part of being able to effectively lose excess weight and keep it off. A low level of vitamin D increases insulin resistance, which tends to increase fat storage. It also depresses mood and subsequently leads to food cravings. It just so happens that most of the good food sources of vitamin D are higher in fat. As such, individuals who stick to low-fat diets increase their chance of developing a vitamin D deficiency—which, in itself, can wreck a diet.

Getting Some Help

For those people who continue to struggle with their weight, and perhaps need some help keeping this year's resolution, green tea looks like it might be a solution.

A number of studies over the years have shown that adding green tea to the diet can improve the results of nearly any weight-loss program. There's some question about the mechanism at work; some trials show that green tea increases energy use (a process called thermogenesis), while others show that tea reduces calories absorbed from the diet. Regardless, the evidence is consistent that green tea works. (*Am J Clin Nutr 05;81:122–129*) (*Int J Obes (Lond) 05;29:615–623*)

Perhaps the best news is that green tea is effective at reducing the amount of visceral fat. As I've written several times before, it's the visceral fat accumulated around the abdominal organs that's so dangerous, rather than the subcutaneous fat under the skin. (*Obesity (Silver Spring) 07;15:1473–1483*)

At first those who were working with green tea thought that its effect on weight was due to the caffeine in tea. Further research, however, showed that the benefit is also partly due to a compound called EGCG (epigallocatechin gallate). This is the most abundant of a group of compounds called catechins that make up 30 percent of the dry weight of green tea leaves. (*Am J Clin Nutr 99;70:1040–1045*)

EGCG is water-soluble, which means that it enters your bloodstream quickly. Unfortunately, that also means that it leaves your body quickly, just as with the niacinamide I wrote about in the previous article; blood levels of EGCG peak at about two hours after drinking the tea. To keep your levels up you'd need to drink five or six cups a day, which happens to be the amount used in some of the studies I mentioned earlier—and also happens to be the amount consumed by many people in Asian cultures.

At that many cups per day, drinking green tea could begin to seem more like a chore than a healthy habit. To get around this limitation, some companies have developed extracts of green tea that concentrate the EGCG and other catechins. A few have also been working on ways to keep the EGCG in the bloodstream longer. I've been keeping up on research in this area, and expect to have more information for you in the coming months.

As a side benefit, green tea contains several powerful antioxidants. Drinking green tea increases the antioxidant capacity of blood plasma in humans, and a recent study performed on mice showed that drinking green tea also improves antioxidant capacity in the major organs, including the brain, heart, and liver. (*Eur J Clin Nutr 02;56:1186–1193*) (*Nutrition 08:Dec 10. [E-pub ahead of print]*)

Regardless of how you decide to use green tea, I strongly suggest that you include it in any weight-loss program. (And, by the way, it does have to be green tea rather than black. The fermentation process that creates black tea also breaks down the EGCG.) Green tea is cheap, widely available, easy to prepare, and effective. You can't ask for much more than that.

Take care,

If you have questions or comments for Dr. Williams, please send them to the mail or e-mail addresses listed to the right. Of course, practical and ethical constraints prevent him from answering personal medical questions by mail or e-mail, but he'll answer as many as he can in the Mailbox section of *Alternatives*. For our part, we'll do our best to direct you to his issues, reports, and products related to the subject of your interest.

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