Doctors have been targeting cholesterol since the 1950s, when researchers discovered links between diet, cholesterol, and heart disease. Early treatment focused on dietary interventions, followed by a handful of medications such as niacin and fibrates. Then in 1987, Mevacor (lovastatin), the first cholesterol-lowering statin drug, was approved. It was a game changer. Statins are now a cornerstone of cardiology, with dozens of brand name and generic drugs and worldwide sales of $20 billion a year.

As more powerful statins were developed—some of them able to slash low-density lipoprotein (LDL) levels in half—cholesterol recommendations shifted downward. The National Cholesterol Education Program's first guidelines, released in 1988, had an LDL goal of less than 130 ng/dL. This was later lowered to 100, then to 70. The most recent guidelines give no specific level but dramatically expand the pool of people recommended to reduce their cholesterol with drugs.

Now there's a new class of cholesterol-lowering medications: PCSK9 inhibitors (Repatha and Praluent), and they give a whole new meaning to low. Injected once or twice a month and used alone or with a statin, these drugs reduce cholesterol by 50–70 percent. Average LDLs in the clinical trials were 25–30 ng/dL—and some patients' levels went as low as 10–15! This begs the question: how low is too low?

Downside of Very Low LDL

Cholesterol is an essential building block of cellular membranes, providing structural support for the flexible, semi-permeable outer layer of all cells. It is required for the production of vitamin D, hormones such as testosterone and estrogen, and bile acids that break down fats. It is also a major constituent of the brain—20 percent of the body's cholesterol is found in this three-pound organ.

You don't have to be a rocket scientist to figure out that depleting the body of such a vital compound could be harmful. The eyes use cholesterol to maintain structure and clarity of the lenses, and very low levels are associated with increased risk of cataracts. Low LDL is also linked with memory problems, depression, and suicidal thoughts. The FDA requires package inserts for all statin drugs to warn of “cognitive impairment (e.g., memory loss, forgetfulness, amnesia, memory impairment, confusion) associated with statin use.” And a recent study found that people aged 85–94 whose cholesterol levels had increased since middle age were more likely to remain cognitively intact.

Older people with higher LDL cholesterol also live longer, according to some studies, perhaps because low LDL appears to increase susceptibility to diseases such as cancer. As for cholesterol-lowering drugs, a 2017 clinical trial revealed that statins provided no cardiovascular or survival benefits for people over age 65—and in the 75-and-up age group, they were associated with increased risk of death!

Some of the problems related to low cholesterol are drug side effects. For example, muscle pain, weakness, and fatigue (statins' most common adverse effects) are due to the drugs' suppression of coenzyme Q10. Likewise, increased risk of diabetes is probably caused by statin drugs rather than by low cholesterol.

Can Cholesterol Go Too Low?

continued on page 3
Dear Reader,

I am concerned about America’s children. One in five school-age kids is obese, which puts them at risk of type 2 diabetes, sleep apnea, early puberty, low self-esteem, and depression—not to mention lifelong health problems related to obesity. Nearly a third of our teens have one or more chronic health conditions, the most common being asthma.

One in seven younger kids are labeled with a mental, behavioral, or developmental disorder, and 11 percent of 4- to 17-year-olds have been diagnosed with ADHD. Over 3 million teenagers suffered at least one episode of major depression in 2016, and suicide is the second-leading cause of death in adolescents. Furthermore, the most recent international assessments of 71 countries rank our 15-year-olds 38th in math and 24th in science.

I do not claim to have all the answers, but I want to call attention to three lifestyle factors that influence all of these disturbing trends.

**Exercise:** Kids need to be physically active. In addition to the obvious benefits of fitness and weight control, physical activity is linked with increases in gray matter in regions of the brain associated with learning. Students who participate in exercise programs have improvements in mood, attention, and classroom behavior, as well as better math, reading, and language scores. Few kids get enough exercise time during the school day, so physical activity must be encouraged at home.

**Sleep:** Children and teens need more sleep. Inadequate or fragmented sleep negatively affects weight, attention, behavior, academics, mood, and physical and mental health. Kids require at least nine hours of sleep, and far too many aren’t getting enough. A 2017 study found that using smartphones or computers before bedtime shortened sleep duration by an average of one hour, and watching TV or playing video games reduced it by 30 minutes. At the very least, these devices should be banned from bedrooms during the night.

**Nutrition:** The Centers for Disease Control and Prevention reports that most American kids fail to eat enough fruit and vegetables but get far too many empty calories from sodas, desserts, and junk food. A simple but giant step in the right direction is family meals. Canadian researchers found that children who regularly ate meals with their families had healthier diets and better long-term physical and mental health, general fitness, and social skills.

To your—and your children’s and grandchildren’s—health,
Nevertheless, the message is clear: Just because we can drive cholesterol down to unrealistically low levels doesn’t mean we should.

Drugs’ Benefits Are Exaggerated

Proponents of cholesterol-lowering drugs contend that if extremely low LDL levels were harmful, problems would have shown up in the PCSK9 clinical trials. Nonsense. These studies followed carefully selected patients for a couple of years; cholesterol-lowering medications are prescribed for a lifetime. It is not unusual for serious drug side effects to go unrecognized for years.

Baycol, the most potent statin of its time, was on the market for four years before it was pulled after causing more than 50 deaths from rhabdomyolysis (severe muscle breakdown). And it took 25 years before the FDA required label warnings that statins increase risk of diabetes.

Doctors may consider all these side effects a reasonable tradeoff, but patients do not. Nearly half of statin takers discontinue them within a year, primarily because the drugs make them feel lousy—but also because of increasing awareness that these meds are neither as safe nor as effective as they’re cracked up to be.

Research suggests that statins may help prevent a second heart attack or stroke (secondary prevention). However, most of the 73 million Americans recommended to take them have never had a heart attack or stroke. Instead, they are told that because they have high cholesterol, diabetes, hypertension, or other risk factors, statins will prevent cardiovascular events and even save lives (primary prevention).

The truth is few will benefit. For every 100 people who take a statin for five years for primary prevention, one or two heart attacks may be avoided, and no lives will be saved.

As for the newer PCSK9 inhibitors, which have only been in use since 2015, an independent review concluded that they reduced cardiovascular risk by less than 1 percent, led to little or no difference in mortality, and increased risk of adverse events—at a cost of $14,000 per year.

Drug-Free Options

There’s another therapy that lowers LDL and improves chest pain, exercise tolerance, other symptoms of cardiovascular disease, and overall health. It costs next to nothing, is 100 percent safe, and the only side effects are weight loss, lower blood sugar and blood pressure, and better quality of life.

I’m talking about intensive lifestyle changes. Dean Ornish, MD, treated patients who had moderate to severe heart disease with regular exercise, stress management, a diet low in unhealthy fats and refined carbohydrates and high in plant foods, plus fish oil supplements. This protocol reduced LDL by an average of 40 percent and actually reversed coronary artery blockages. I know this approach works because a similar program has helped hundreds of Whitaker Wellness patients improve symptoms, discontinue drugs, and avoid angioplasty and bypass surgery.

Bottom line, LDL cholesterol is by no means the only culprit in cardiovascular disease—or even the most important one. But because it is easy to test and can be lowered by pharmaceuticals, it gets far more attention than it deserves. The benefits of reducing cholesterol are overstated, and the harms of extreme lowering are minimized. Do not be pressured into taking a cholesterol-lowering drug for primary prevention. Granted, making lifestyle changes and sticking with them is harder than popping pills, but the payoff is a lifetime of better health.

References


Dear Dr. Whitaker

Q I understand that drugs should not be taken with citrus juices. Your website says to take mealtime supplements with a glass of water. Does that mean I should not drink orange juice when taking my Forward multi with breakfast? — R.S., via email

A The most problematic citrus is grapefruit, which along with Seville oranges (used in marmalade), pomelos, and limes contains natural compounds that inhibit CYP3A4, an enzyme involved in the metabolism and clearance of many medications. Suppressing this enzyme alters blood levels of scores of drugs, either decreasing their absorption and effectiveness or increasing their concentration to toxic levels. (Ask your doctor if grapefruit affects any of your meds.) The only known grapefruit-supplement interactions are with St. John's wort and red yeast rice. So although water is preferable, you can take Forward with orange juice. Be aware that orange juice increases iron absorption, and many multivitamins contain iron. (Forward does not.) This could be a plus if you are iron deficient; otherwise, you shouldn’t be taking supplemental iron.

Q The only thing my grandchildren eat for breakfast is sugary cold cereal. Since I was at your clinic five years ago, my favorite cereal has been steel cut oats, but the grandkids do not like the texture. They will eat instant oatmeal, but I have heard it is no better than cold cereal. I am interested in your opinion on this. — N.D., via email

A Steel-cut oats have a lower glycemic index (42) than rolled oats (55) and instant oatmeal (66), meaning it is digested more slowly, has a less dramatic effect on blood sugar, and totes you over longer. Nevertheless, instant oatmeal is still a nutrient-rich whole grain with a reasonable amount of fiber and protein. Read labels carefully, because sugars and flavorings are often added. Compared to most of the cold cereals marketed to kids, however, instant oatmeal is pretty good.

Q I have been using whey protein, but I now see pea, rice, egg, casein, and even hemp. I am overwhelmed by all the protein choices now available. Are any of them better than whey? — B. Allen, California

A I have always recommended whey and use it myself, and I see no reason for you to switch. However, these other sources are also excellent complete proteins, meaning they contain all the essential amino acids that cannot be made by the body. It really boils down to personal preference. Plant proteins are obviously better for vegans, and dairy, soy, or eggs are out for people who are sensitive to these foods. Protein powders are a great way to ensure adequate protein, and when used in conjunction with a resistance exercise program, they increase muscle mass. This combo has also been shown to prevent and reverse sarcopenia (age-related loss of muscle). However, just taking protein powder without exercising will not build muscle.

New Online: Drugs That Deplete Vitamin B12

Are you taking Prilosec or Prevacid for heartburn? How about metformin for diabetes? Then you’d better pay attention to your vitamin B12 levels. B12 is an essential nutrient required for red blood cell production, DNA synthesis, and nerve function. Deficiencies are quite common, especially in older people, vegans, and those who are taking acid-reducing proton pump inhibitors (PPIs) or metformin, which deplete B12.

PPIs are meant for occasional use—up to two weeks for heartburn. Yet many people pop these pills for years on end, which dramatically increases risk of B12 deficiency. Metformin, which is also taken over the long term, has been found to lower B12 levels after as little as six to 12 weeks of use. The American Diabetes Association recommends testing B12 levels in patients taking metformin, but many doctors don’t comply. If your physician doesn’t order a B12 test, ask for it. Even if you don’t take these drugs, be aware of deficiency symptoms such as fatigue, depression, memory loss, neuropathy, anemia, and cardiovascular disease. Have your level tested—and protect yourself by taking at least 500 mcg of vitamin B12 per day.
Arrhythmia About three years ago, I went to my doctor because I had been having an erratic heartbeat off and on for two days, and it sometimes felt like my heart was jumping out of my chest. He did an EKG, which showed that my heart rate was irregular but not too fast. He reassured me that this is not uncommon, I was not about to have a stroke or heart attack, and anxiety and stress were often the problem. (I am sure this was the case for me.) Then I remembered reading about magnesium and coenzyme Q10 in Health & Healing. I already took a multivitamin and fish oil but added more magnesium (Magna-Calm) and CoQ10 200 mg. Within hours my heart settled down. Thanks to these supplements and my doctor’s reassurance, now I know what to do when I get palpitations and arrhythmias. I have used this combo several times and it works every time. — R.A., Oklahoma

Diabetes I ran into an “old friend” today. As we stared eye to eye in the mirror, I noticed he was looking pretty good for his age. He told me of the changes he was making and how much his outlook had improved. Now that my “old friend” has put aside his haphazard ways, my scale this morning informed me I was 284 pounds. That’s down 30 pounds from my beginning weight of 314 (my all-time highest and climbing). My blood sugar was 164, about 20–30 clicks down after waving bye-bye to my meds. I am not having trouble eating healthy and my new energy is being put to good use. I am amazed and grateful for my progress.
— George H., via email

Eye Health I just got home from my annual check-up at the optometrist. She was shocked by how clear and healthy my eyes were. In fact, she couldn’t believe I’ve lived in California my whole life. She mentioned most people from sunny states have a lot of damage by the time they are my age. I told her my steadfast use of nutritional supplements over the past 15 years is surely the reason my eyes are in such good shape. Thank you for instilling the value of vitamins in me years and years ago, Dr. Whitaker! — R. Smith, California

Do you have a Health Tip to share? We’d love to hear it! Send it to worksforme@drwhitaker.com.

Health Hack: “Does Your Chewing Gum Lose Its Flavor…”

Chewing gum gets a bad rap. Many consider it rude and unprofessional—but it does have its benefits. In addition to improving oral health by increasing saliva flow and helping prevent tooth decay, chewing gum increases focus and alertness and reduces stress and anxiety. It decreases cravings for cigarettes, alcohol, and food and even burns a few calories. It is also recommended after surgery to reduce nausea and improve digestion. Go for gum sweetened with xylitol, which curbs cavity-causing bacteria, and don’t overdo it. Excessive chewing may cause headaches and TMJ.

Monthly Health Quiz:
To Sleep, Perchance to Dream: True or False
A) We spend an average of 28 years of our lives asleep.
B) Sleep is disrupted during a full moon.
C) Everybody dreams.
D) Side sleeping is the best sleeping position.

Answer: A, B, C

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Notable Quote
“It is easier to build strong children than to repair broken men.”
— Frederick Douglas, Abolitionist and social reformer, 1818–1895

No computer? Mail your question or health tip to Health & Healing, 6710-A Rockledge Dr., Ste. 500, Bethesda, MD 20817.
Valerie Hobbs was in the ICU of a Norfolk, Virginia, hospital, gravely ill with sepsis. Her blood pressure was critically low, she was unable to breathe on her own, and her kidneys and other organs were failing. The outlook was grim, and ICU chief Paul Marik, MD, told her daughter to prepare for the worst.

Because the prognosis was all but hopeless—medications such as antibiotics and vasopressors to increase her blood pressure were not helping—Dr. Marik decided to try corticosteroids to reduce inflammation along with a safe, inexpensive natural therapy he had been reading about: intravenous vitamin C. By the next day, Valerie's kidney function had improved, she was breathing on her own, and the vasopressors were discontinued. She left the ICU three days later.

Dr. Marik had similar results with other patients. Before long, the Norfolk hospital adopted the vitamin C protocol for sepsis and has now treated more than 700 patients. Hundreds of doctors in ICUs in the US and abroad have also begun using it. Others, however, are skeptical. Physicians are notoriously close-minded about unconventional therapies, and to think that an inexpensive vitamin could work where pharmaceuticals have failed—inconceivable! Dr. Marik takes the criticism in stride, however, as he feels it is his duty to spread the word about this life-saving therapy.

What Is Sepsis?

Sepsis is a life-threatening condition that kills 6 million people worldwide every year. It claims 700 lives in the US every single day, more than prostate cancer, breast cancer, and AIDS combined. Yet a 2016 Harris poll found that only 55 percent of adults surveyed had ever heard of it.

It begins with an infection in the lungs, urinary tract, intestines, or elsewhere, which like all infections prompts an immune response. With sepsis, however, the immune system goes haywire, releasing massive amounts of reactive oxygen species (ROS) and inflammatory chemicals that damage blood vessels, organs, and tissues throughout the body. It isn't the infection that kills; it's the hyper-aggressive immune response that overwhelms the body with inflammation and oxidative stress.

Sepsis is our third leading cause of death and has a mortality rate of 30–40 percent. More than 100 clinical trials testing different drug treatments for sepsis have been published, but nothing has panned out—which is why the vitamin C protocol is so exciting.

A Lifesaving Treatment

Dr. Marik and his colleagues collected data on the first 47 patients they treated with the new protocol and compared their outcomes with a control group who received the usual treatments. Forty percent (19 patients) in the control group died compared to eight percent (four patients) in the vitamin C group—and those four left the ICU alive but later died from co-existing conditions. Patients in the vitamin C group also had less organ failure and were able to discontinue vasopressors three times faster than the control group.

The treatment protocol consists of three inexpensive, readily available compounds: IV vitamin C, hydrocortisone, and thiamine (vitamin B1). Hydrocortisone is an obvious choice because it is a powerful anti-inflammatory, and sepsis is an inflammatory syndrome. Thiamine was added because it reduces risk of kidney failure, and some studies suggest it decreases sepsis death rates. Vitamin C is an essential antioxidant that quenches ROS and regenerates other antioxidants. In addition, it is required for multiple processes that facilitate recovery from serious illness—but are severely depressed in patients with sepsis.

Although the three compounds work synergistically, vitamin C deserves top billing.

All-Star Nutrient

Vitamin C has been used to treat infections since 1949, when Fred Klenner, MD, got excellent results injecting polio patients with 1–2 g of vitamin C every few hours. He also reported good outcomes treating flu, chicken pox, measles, and other infections. Here’s how it works.

Normal vitamin C blood levels in healthy people are 40–60 micromoles, but levels plummet when we are ill. Dr. Malik found that the average level in patients with sepsis was 14—and undetectable in some! That’s because the rampant oxidative stress that characterizes sepsis rapidly depletes vitamin C stores, and the body has no way of restoring them.

Every mammal on earth with the exception of primates (including humans) and guinea pigs produces vitamin C. People therefore must get this
essential vitamin from outside sources. The intestinal tract can only absorb 500 mg of oral vitamin C at a time; the rest is excreted from the body. This limitation can be overcome, however, by administering it intravenously.

Restoring vitamin C levels reactivates multiple biochemical pathways that are critical for recovery. In addition to taming oxidative stress, this vitamin enhances collagen production and endothelial function, which improves blood vessel integrity and circulation. It also stimulates immune cell activity and increases production of adrenal hormones that stabilize blood pressure. All told, IV vitamin C provides near-miraculous benefits for patients with sepsis.

Save Lives Now!

As I read Dr. Marik’s papers and listened to his lectures, I was reminded of Barry Marshall and Robin Warren, Australian doctors who in 1982 discovered the bacteria that cause stomach ulcers. They were ridiculed at the time, and it took years for antibiotics to become mainstream treatment for ulcers, but the two men were awarded the 2005 Nobel Prize in Medicine.

I also flashed on Ignaz Semmelweis, a Hungarian physician in the mid-1800s who figured out that “childbed fever,” which killed 25–30 percent of women who delivered in hospitals, was transmitted by doctors who went from the autopsy room to the maternity ward without washing their hands. Although he proved that hand washing dramatically reduced death rates, his research was rejected and scorned, and he died in an insane asylum at age 47.

Let’s hope history doesn’t repeat itself. Several clinical trials evaluating the IV vitamin C protocol for sepsis are now underway at prestigious US and international medical centers. Results aren’t expected until next year, but why wait? Plenty of supporting data already exists. This therapy is exceedingly safe, has zero side effects, and costs next to nothing. There is nothing to lose by trying it—and many lives to be saved.

References


My Recommendations

- Be aware of the symptoms of sepsis: Shivering, fever, or chills; Extreme pain; Pale or discolored skin; Sleepy, difficult to rouse, confused; “I feel like I might die”; Shortness of breath. If you suspect sepsis in yourself or a loved one, seek prompt diagnosis and treatment—and insist on the vitamin C protocol: vitamin C 1.5 g IV every 6 hours and thiamine (vitamin B1) 200 mg IV every 12 hours for 4 days or until discharge; and hydrocortisone 50 mg IV every 6 hours for 7 days then tapering down.

IV Vitamin C for Pancreatic Cancer

Pancreatic cancer has a dismal prognosis. Although conventional treatments provide only modest benefits, there is a natural therapy that may be our best hope for this deadly disease.

Jeanne Drisko, MD, and colleagues recently published a case study involving a 68-year-old man with stage IV metastatic pancreatic cancer who had been given an expected survival time of four to six months. He declined chemotherapy (against his oncologist’s advice) and opted for IV vitamin C, 75–125 g two or three times a week. Within four months, he started regaining the weight he had lost, his liver lesions regressed and disappeared after a year, and his primary tumor decreased in size. At his last exam, he felt well and his weight and disease status were stable. He died four years after his diagnosis—not from pancreatic cancer but from complications of a surgical procedure.

IV vitamin C has great potential as a cancer therapy. When given in very high doses, it generates hydrogen peroxide, which kills cancer cells but does not harm normal cells. Studies show that it also works synergistically with chemo drugs, reduces adverse effects of conventional treatments, and improves quality of life.

This is an important paper. Trials of IV vitamin C for cancer are few and far between for one reason only: Unlike chemo drugs, there is no money to be made on this natural compound. Profits aside, any promising therapy for a disease as deadly as pancreatic cancer—which has a five-year survival rate of less than six percent—merits further research. As Dr. Drisko concludes, “Indeed, patients deserve no less.”

To learn more and find a doctor who uses IV vitamin C, visit ACAM.org.
Innovations in Wellness Medicine

Vitamins & Minerals for Obesity-Related Deficiencies

The obesity rate in America is now approaching 40 percent for adults and nearly 19 percent for children. Obesity increases the risk of a broad range of health challenges, but there is one risk factor that is routinely ignored: vitamin and mineral deficiencies. Vitamin B1, B12, and folic acid deficiencies are more common in people who are obese and especially those who also have diabetes. Iron stores tend to be lower in heavy women, and vitamin C, zinc, and selenium levels are often suboptimal in both sexes. The most prevalent deficiency, however, is vitamin D. Studies reveal that 71 percent or more of obese people are vitamin D deficient. Even if you are not obese, carrying a lot of belly fat is linked with lower vitamin D status.

As you can see, “overfed and undernourished” is not an oxymoron. Taking a potent daily multivitamin plus extra vitamin D may not help you lose weight, but it will restore levels of key vitamins and minerals, provide some protection against obesity-related diseases, and enhance overall health.

Baking Soda for Inflammation

You probably have a box of baking soda (sodium bicarbonate) in your kitchen for baking and perhaps another one in your refrigerator to reduce odors. You may also want to keep a box in your medicine cabinet. This dirt-cheap staple has a number of medicinal uses, ranging from easing the sting and itching of insect bites and poison oak/ivy to relieving heartburn and indigestion to slowing the progression of chronic kidney disease.

Recent research suggests that sodium bicarb also reduces inflammation. Participants in a pilot study who drank baking soda in water every day for two weeks had higher levels of macrophages that dampen inflammation, and lower levels of inflammation-promoting immune cells. The researchers believe that baking soda signals mesothelial cells on the spleen, an organ that is part of the immune system, to curb inflammation. They propose that baking soda may therefore be a safe, inexpensive treatment for rheumatoid arthritis and other autoimmune diseases marked by out-of-control inflammation. This research is preliminary, and follow-up studies are needed. But a baking soda cocktail (¼–½ teaspoon in water) once or twice a day may be worth a try for anyone suffering with an autoimmune disease.

Did You Know?

- Walking speed is a marker of health—a brisk pace is linked with a 20–24 percent lower risk of death.
- Resistance exercise reduces symptoms of depression.
- MD Anderson researchers found that neurofeedback reduces chemotherapy-induced neuropathic pain.
- Student loan debt in the US now exceeds $1.5 trillion.
- Light exposure at night increases markers of insulin resistance.
- Mosquitoes kill more people in a day than sharks have over the past century.
- A family of four averages 400 gallons of water per day; over a quarter of water used indoors is flushed.
- A healthy Mediterranean diet lessens the harmful effects of airborne pollutants.
- The latest guidelines suggest that 36 percent of US adults should be on blood pressure drugs.
- A quarter of babies born in the US are never breastfed.
- If the sound of chewing or eating makes you crazy, you may have misophonia (extreme sensitivity to such sounds).
- Stressful work is associated with higher risk of atrial fibrillation.

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