Let's say it's your birthday, anniversary, or another celebration and you're dining in a nice restaurant. What do you order? Surveys suggest that the most popular choices are filet mignon, rib eye, T-bone, or another steak, served sizzling hot right off the grill.

Meals like this are fine every once in awhile, but there's a reason they should be reserved for special occasions. Grilled steak, fried chicken, barbecued ribs, French fries, bacon, and other foods that are rich in protein and fat and prepared over high heat contain AGEs, toxic byproducts that, when eaten in excess, can wreak havoc on your health.

What Are AGEs?

AGEs, or advanced glycation end products, are formed by the Maillard reaction, a chemical reaction between sugars and amino acids that crosslinks proteins and alters their structure and function. These compounds also bind to receptors called RAGEs, which compromise cellular signaling and lead to inflammation and oxidative stress.

Steak and fries are by no means the only sources of AGEs. They are also naturally generated in our blood and tissues as we process sugars. AGEs are systematically detoxified and removed via the kidneys, but problems arise when excessive levels overwhelm the body's ability to eliminate them.

As you might suspect, AGEs are particularly problematic in diabetes, as high levels of blood sugar dramatically increase their production. Hemoglobin A1C, a blood test commonly used to diagnose and monitor diabetes, measures the concentration of AGEs in hemoglobin, a protein in red blood cells. A high A1C level is a sign of not only raised blood sugar but also elevated AGEs, inflammation, and oxidative stress throughout the body.

Modifiable Health Risk

Scientists have long known that AGEs play an important role in diabetic complications such as cardiovascular disease and nerve, kidney, and eye damage. Research now reveals that in addition to being a consequence of high blood sugar, AGEs are also a cause, as these toxic compounds injure insulin-producing cells in the pancreas, increase insulin resistance, and raise risk of metabolic syndrome and diabetes.

Diabetics aren't the only people at risk. Excessive AGEs in the blood and tissues ramp up chronic inflammation and free-radical damage and are associated with a wide range of health problems.

Accumulation in the joints, bones, and skin increases collagen stiffness and fragility and is linked with arthritis, bone brittleness, and wrinkling. AGEs are an underlying cause of cataracts and macular degeneration. They damage the blood vessels and are a factor in cardiovascular and kidney disease. RAGE
Dear Reader,

On March 17, you might be wearing green, drinking Guinness, and feasting on corned beef and cabbage. Medical school seniors, however, will be awaiting news that will determine their career paths and where they will be living and working for the next few years.

Match Day, which falls on St. Patrick’s Day this year, is the long-anticipated moment when budding physicians—more than 21,000 medical and osteopathic school seniors plus 12,000 students of foreign medical schools, all vying for 28,000 first-year spots—find out where they will be doing their residencies.

Their transition to practicing physicians, which takes a minimum of three years, can’t come too soon. Tens of millions of previously uninsured people are now seeking medical care. Every day, 10,000 Baby Boomers enroll in Medicare, and in 20 years, one in five Americans will be over age 64. To top it off, more than half of the 800,000 doctors in the US are in their mid-50s or older. By 2025, experts predict a shortfall of up to 90,000 physicians.

Patients are already feeling the fallout with shorter doctor visits, longer wait times, and greater difficulties getting appointments and referrals. A recent graduate of a family practice internship at a large HMO reported, “Patients are scheduled every 15 minutes and often see the physician for fewer than five minutes. It is not unusual for doctors to see 50 patients in a single day and sometimes up to 100. As a result, many revert to ‘cookbook medicine’ and simply write prescriptions.”

So what can you do? First, don’t dismiss the idea of nurse practitioners and physician assistants. These licensed professionals, who have advanced training and can diagnose, prescribe, treat, and counsel patients, are often more accessible than doctors. Second, look into team-based and technology-centered approaches, such as group counseling for chronic conditions and teledicine (telephone/video consults). Third, consider paying a little extra for a PPO. I understand insurance costs are skyrocketing, but the flexibility and options of a PPO may be worth it.

Most important, stick with a good diet, exercise regimen, sleep schedule, stress reduction, and supplement program, and whenever possible, nip health problems in the bud with safe, natural therapies. By managing your own health care, you may well be able to steer clear of our disease-care system.

To your health,
receptors transport beta-amyloid proteins across the blood-brain barrier and contribute to neurodegeneration and Alzheimer's disease. And because AGEs build up over time, they also speed up aging.

You can protect yourself by keeping your blood sugar under control with weight loss, a low-glycemic diet, exercise, and supplements such as berberine. Antioxidants, especially vitamins C and E, selenium, carotenoids, and alpha lipoic acid, counter the oxidative stress unleashed by AGEs. Benfotiamine, a vitamin B1 derivative, and L-carnosine, an amino acid combo, have specific anti-glycation properties. Several nutraceuticals are also protective, including spirulina, curcumin, EGCG (from green tea), quercetin, and grape seed extract.

There is another thing you can do to tame AGEs and RAGEs, and it starts in your kitchen.

The Kitchen Connection

The chemical reaction that produces AGEs is responsible for the savory taste and browned surface of seared, roasted, and grilled meats, crispy fried foods, crusty lasagna, and other dishes cooked at high temperatures. Most people find these preparations tastier than boiled or steamed foods, which is why AGEs are so abundant in the average American diet.

For years, the diet connection was ignored because scientists believed that ingested AGEs were poorly absorbed by the body. We now know that eating lots of AGE-rich foods does raise blood and tissue levels and increases oxidative stress, inflammation, insulin resistance, and risk of chronic disease. Recent research also demonstrates that a diet low in AGEs reduces these risk factors—and, in animal studies, actually lengthens lifespan.

Pioneering AGEs researchers Helen Vlassara, MD, and Jamie Uribarri, MD, spearheaded a 2016 study examining the effects of dietary AGEs on obese patients with metabolic syndrome. One group was told to eat their regular high-AGEs diet, while the low-AGEs group was instructed to avoid frying, grilling, and baking in favor of steaming, poaching, and stewing. After a year on these diets, the low-AGEs group had modestly decreased weight and significant reductions in AGEs, inflammation, oxidative stress, and insulin resistance. All these markers increased in the high-AGEs group.

Practical Guidelines

To recap, AGEs are most abundant in foods high in protein and fat, particularly those of animal origin, cooked over dry, high heat. Beef contains the highest levels, followed by poultry, pork, fish, and eggs, while vegetables, fruits, legumes, grains, and dairy are naturally low. However, processing and high-heat cooking dramatically increase AGEs content in most any food. For example, milk and yogurt are low but cheese and butter are high. McDonald’s French fries and a breaded fried chicken breast contain 10 times as many AGEs as a boiled potato and poached chicken.

Switching cooking methods makes a huge difference. In Drs. Vlassara and Uribarri’s study, the low-AGEs group ate boiled eggs rather than fried, poached versus grilled chicken, and beef stew as opposed to grilled steak—changes that cut their daily AGEs intake by two-thirds. Researchers have also found that using acidic marinades containing lemon or vinegar prior to cooking reduces AGEs formation in grilled and broiled meat by as much as 50 percent.

I’m not suggesting you give up barbecues and roasts—just don’t make them part of your daily diet. Poaching is an excellent way to prepare fish, and steamed foods can be jazzed up with herbs and spices. Microwaving and slow cooking over very low, moist heat also produce relatively few AGEs. My wife makes a mean beef stew and great soups and chicken dishes in her Crock-Pot.

You can’t eliminate AGEs, but significantly reducing them is a step on the road to better health, lower disease risk, and a longer “healthspan.”

My Recommendations

- To reduce dietary AGEs, eat whole, natural foods; avoid most processed items; go easy on grilling, roasting, and broiling and marinate meat before cooking; and opt for steaming, poaching, stewing, and slow cooking.
- Keep your blood sugar under control and counter AGEs, oxidative stress, and inflammation with benfotiamine 300 mg, L-carnosine 1,000–1,500 mg, and an antioxidant-rich daily multivitamin. Alpha lipoic acid, spirulina, curcumin, EGCG, quercetin, and grape seed extract are also beneficial; use as directed.

References


My Recommendations (continued from page 1)

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Dear Dr. Whitaker

Q  Do you think LDN would help my thyroid problem? — B.S., Richardson, TX

A  I would have to know more about your thyroid problem, but low-dose naltrexone (LDN) may well help. It has a wonderful track record for treating a wide range of autoimmune disorders, and thyroid issues are often autoimmune related. For instance, Hashimoto's thyroiditis is a common cause of low thyroid function, and Grave's disease triggers hyperthyroidism, so LDN is certainly worth a shot. It works by binding to opioid receptors and increasing endorphin levels, particularly an endorphin called opioid growth factor (OGF) that helps regulate the immune system. Be advised that LDN requires a prescription and is only available through compounding pharmacies. The suggested dose is 3–4.5 mg per day, taken at bedtime. I suggest starting with a dose of 1.5 mg and building up slowly over several weeks. For more information on the many uses of LDN, including multiple sclerosis, Crohn's, fibromyalgia, and cancer, visit ldnresearchtrust.org.

Q  I am 5’2” and 125 pounds and getting ready to start your mini-fast with exercise weight loss program. I need to lose 15 pounds and would also like to build muscle strength. I am 69 years old, in good health so far, and I’d like to keep it that way. One question: What snacks, if any, do you recommend during the mini-fast? — Idella D., via email

A  To be clear, snacking between lunch and dinner is fine and may prevent overeating, but there’s no snacking during the fasting period (bedtime to lunch the next day). Even a little food, especially carbohydrates, turns off fat burning. As for snacks, make sure they contain some protein. It’s the most satiating macronutrient and will help tide you over until your next meal. Good options include apples with nut butter, plain Greek yogurt with berries and a little stevia or xylitol for sweetness, hard-boiled eggs, almonds or other nuts/seeds, and veggies with hummus. Good luck with the mini-fast. Let me know how you do.

Q  As a former patient at the clinic, I would like to know if Whitaker Wellness offers the coronary calcium screening test and whether this has the same X-ray exposure risk as other CT scans, as you have written about in Health & Healing. — G.N., via email

A  According to the FDA, coronary artery calcification CTs deliver an average of 3 mSv (millisieverts, a common measure) of radiation. For comparison, a chest X-ray delivers .02 mSv and a coronary CT angiogram 16 mSv; levels higher than 10 mSv may increase cancer risk. I do not recommend these scans. They provide little information that can't be gleaned from blood tests, echocardiograms, and treadmill stress tests—which have zero radiation. Furthermore, calcium scans often lead to additional testing and unnecessary interventions. To learn more about Whitaker Wellness’ safe, noninvasive approach to treating and preventing heart disease, call 800-488-1500 or visit whitakerwellness.com.

From My Blog

Vitamin D Boosts Testosterone, Erectile Function

I’m a strong proponent of vitamin D and recommend 2,000–5,000 IU for most of my patients, especially during winter when blood levels tend to plummet. You are probably aware of many of the adverse effects of vitamin D deficiency. But did you know they include low testosterone and increased risk of erectile dysfunction—and that supplemental vitamin D improves both conditions? In a study published earlier this year, researchers enrolled 102 middle-aged men, treated them for vitamin D deficiency, and followed them for 12 months. As vitamin D levels climbed during that time, the men had significant increases in testosterone levels and erectile function scores, as well as decreases in estradiol, BMI, and insulin resistance. If you need a reason to take vitamin D, guys, this may be it. Visit my blog to learn more about the benefits of vitamin D.

Get the rest of the story—and share your opinion—by visiting my blog at “Connect with Dr. Whitaker” on drwhitaker.com.
Works for Me...

**Hydration** I used to drink only about 16 ounces of water a day—a bad habit; I never felt thirsty. Then my daughter gifted me a Fitbit and I now drink 60 ounces a day. This little tool works well! — Dar Gotfrey, via Facebook

Fitbit and similar devices can also track your exercise, heart rate, sleep, food, and weight—and motivate you to achieve your health goals.

**Kidney Stones** I read your Facebook post about roller coasters helping pass kidney stones. I was a nurse in Germany in the 1960s, and we had our patients drink a lot of fluid and then jump down stairs with heels hitting first. The stones passed—not as much fun as roller coasters though! — Karin Gonzalez, via Facebook

**Protein** Being vegetarian, I’m always searching for a good protein powder. I’ve tried pea protein, but it is thinner in texture and I wanted more substance before my morning workouts. After switching to whey protein, I immediately noticed I wasn’t ravenous after I worked out. In fact, I feel full until lunchtime. It’s hard for me to get enough protein every day to feel full, maintain a healthy diet, and reduce snacking. I finally found something that works with my dietary restrictions and active lifestyle! — E.N., Dallas, TX

Whey is my top protein recommendation. Easily digestible, bioavailable, and satiating, it provides all the essential amino acids, including muscle-building leucine, as well as lactoferrin and cysteine for immune enhancement. In addition to vegetarians, older people often fail to get adequate protein. Consider supplementing with whey protein.

**Tinnitus** A patient with a history of tinnitus recently told me about a product called Lipo-Flavonoid Plus. She used it as directed and the ringing in her ears went away! Now she just does the maintenance dose. I am a nurse practitioner, and I’ve told a few patients about this product. They too have reported good results. — K.M., Newport Beach, CA

Great suggestion for this very stubborn and annoying condition. Lipo-Flavonoid Plus is a blend of citrus bioflavonoids and vitamins with a 50-year track record of success. Look for it in drugstores or visit lipoflavonoid.com. Let me know how it works for you.

Have a Health Tip to share? Send it to worksforme@drwhitaker.com. Read more tips at drwhitaker.com/works-for-me.

**Healing Tip**

School-aged kids who are physically active before, during, and after school perform better scholastically and are better behaved than those who are inactive, according to a recent study. Exercise boosts not only physical fitness but mental health and cognition as well. Get your children and grandchildren moving!

Like my Facebook page at facebook.com/WhitakerMD to receive daily healing tips and join the conversation.

**Monthly Health Quiz**

Which of the following increase heart disease risk?

A) Snoring  
B) Staying up late  
C) Smoking  
D) Loud noises  
E) Ibuprofen  
F) Prolonged sitting

**Answer:**

Excessive noise and prolonged use and prolonged sitting are also associated with higher risk for heart disease. Snoring is often a sign of sleep apnea, which is a known risk factor for heart disease. Prolonged sitting, lack of exercise, and exposure to loud noises are also associated with increased risk.

**Now Available at drwhitaker.com**

- Natural Treatments for Dry Eyes
- The Link Between Anticholinergic Drugs and Dementia
- EDTA Chelation Therapy

Visit today for these articles and more in-depth wellness advice to help you achieve optimal health.

**Notable Quote**

“I have been impressed with the urgency of doing. Knowing is not enough; we must apply. Being willing is not enough; we must do.”

— Leonardo da Vinci, 1452–1519

No computer? Mail your question or health tip to Health & Healing, 6710-A Rockledge Dr., Ste. 500, Bethesda, MD 20817.
An Aspirin a Day...

Ancient Sumerian clay tablets dating back 6,000 years mention the medicinal properties of willow bark, and Hippocrates recommended it for aches and pains. Willow bark’s active ingredient salicin was identified in the early 1800s, but it wasn’t until 1899, after Bayer chemists figured out how to synthesize acetyl salicylic acid, that aspirin came on the market.

Today, nearly 60,000 scientific papers have been published on aspirin, and an estimated 100 billion tablets are taken annually. Aspirin reduces pain, swelling, inflammation, and fever, and is a popular therapy for arthritis, sprains and strains, headaches, and flu. Taking aspirin during high-risk pregnancies helps prevent premature labor, and chewing a full-strength tablet at the first signs of a heart attack saves lives. This drug even helps stave off metastasis and improves survival time in some types of cancer.

Aspirin is also used to prevent disease—and here’s where the controversy lies. There is no question that daily low-dose aspirin reduces risk of heart attacks and strokes in people with cardiovascular disease. The drug’s well-known adverse effects, most notably increased bleeding risk and gastrointestinal (GI) irritation, are an acceptable tradeoff.

However, millions of healthy people also take it. How do their risks and benefits stack up? Does aspirin do more harm than good? Who should be using daily aspirin for disease prevention?

How Aspirin Works

First, let’s look at how aspirin works. Its primary activity is knocking out cyclooxygenase (COX) enzymes, which are released in response to inflammation.

One of these enzymes, COX-2, stimulates the production of prostaglandins that trigger pain messages and ramp up inflammation, swelling, and fever. Blocking COX-2 reduces the pain/inflammation cascade and provides aspirin’s analgesic properties. Suppressing inflammation also has positive effects on the blood vessels and protects against cardiovascular disease. In addition, it explains, at least in part, aspirin’s ability to curb cancer.

Aspirin disables COX-1 as well. This enzyme revs up the production of thromboxane A2, which promotes the aggregation of platelets in the blood and increases their tendency to form clots. By discouraging platelets from sticking together, aspirin reduces blood clots and thus risk of heart attacks and strokes.

COX-1 inhibition is also responsible for aspirin’s most serious adverse effect, excessive bleeding. And because COX-1 stimulates the production of protective mucosal cells in the GI tract, aspirin makes the stomach and intestines more vulnerable to irritation, erosion, and bleeding.

Controversial & Confusing

The recommendations on daily aspirin for primary prevention (reducing risk in healthy people) have flip-flopped so much it’s hard to keep up.

Until recently, the US Preventive Services Task Force recommended preventive aspirin use for men ages 45–79 and women ages 55–79 without cardiovascular disease if the benefits of reducing heart attacks and strokes outweighed the risk of bleeding.

Last year, they narrowed the age range for primary prevention to 50–59 for both men and women who have a 10 percent or greater risk of cardiovascular disease within the next 10 years (based on blood pressure, cholesterol, family history, etc.), no increased risk of bleeding, and a willingness to take aspirin for at least 10 years.

Noting that bleeding risk increases with age, the Task Force stated the decision for people in their 60s was an “individual one” and made no recommendations for those under age 50 and over age 69 due to “insufficient evidence.”

So one day you should be taking aspirin and the next day you shouldn’t? It’s confusing! But not everybody agrees with these conservative new recommendations.
Many Are Missing Out on Benefits

Aspirin’s role in reducing colorectal cancer risk is mentioned in the 2016 update, but many researchers feel cancer prevention isn’t given enough credence. There is good research supporting aspirin’s ability to protect against other cancers, including esophageal, stomach, breast, and prostate. A landmark *Lancet* study found that participants in the earlier aspirin-cardiovascular studies who had taken daily aspirin for at least five years were 20–30 percent less likely to have died from cancer 20 years later.

Others, including an international group of respected scientists, maintain that benefits far outweigh potential harms. Their analysis of the pros and cons of prophylactic aspirin use in the general population reveals a favorable benefit-risk profile, with greater benefits noted with longer use. They estimate that taking aspirin for 10 years would reduce risk of cancer, heart attacks, and stroke over a 15-year period by 9 percent for men and 7 percent for women.

Even among people with diagnosed disease, aspirin is seriously underutilized. In 2016, University of Southern California researchers reported that 40 percent of American men and 10 percent of women ages 50–79 with high cardiovascular risk are not on aspirin. After taking into account potentially serious adverse effects, they concluded that boosting compliance could prevent nearly a million premature deaths and reduce healthcare costs by $692 billion over the next 20 years.

To Take or Not to Take?

Aspirin isn’t for everyone, but a lot more people could be benefitting. I urge you to discuss this with your physician. Small daily doses are protective against heart disease and cancer, our two leading causes of death, and early research suggests it may also help stave off Alzheimer’s. Low-dose aspirin, which costs pennies a day, may be one of the smartest things you can do to protect your health.

References


Whitaker Wellness Success Story

Be a Person Who Makes Things Happen

“I was diagnosed with type 2 diabetes in 2006, and after starting on insulin, I gained 60 pounds. I had been to Whitaker Wellness in 2004 with my mother and was treated for wrist pain, which permanently resolved. So I decided to enroll in the Back to Health Program in 2009.

“My doctor took me off insulin, and although my blood sugar went up a little at first, it dropped by day three. I also had IVs, hyperbaric oxygen, and laser for my ankle pain, which immediately improved. Within six months, I lost all that weight I had gained on insulin and continued to lose more slowly—100 pounds, give or take, partially due to lap-band surgery.

“In 2013 I came back with my wife, who is a registered nurse. I now try to return every year for a tune-up. My diabetes hasn’t resolved but is very much controlled. I feel so much better, and my confidence in the Whitaker philosophy is greater than ever. Although my insurance has forced me into an HMO with extremely high deductibles and very little care, I have informed my HMO physicians of my resolve to avoid ‘drug pushing.’ We have some good doctors in the Dallas area, but Whitaker Wellness is the only place with so many powerful treatments.

“As for the cost (travelling and time off work), I think about the days when I taught safe boating and students cringed at purchasing expensive lifejackets (SOSPenders), which are more likely to be worn than the bulky orange vests. You just have to ask yourself how much is your life worth. It has been worth every penny to be as healthy as I now am. I honestly believe that I might not be alive today if it weren’t for Dr. Whitaker.

“You can be a person who lets life happen or one who makes things happen. If you’re the latter, you spend the time to learn about what’s going on in your body, you look for answers besides getting hooked up on drugs, you establish a goal or plan, and you stick to it. You take control of your health. It’s the only way to go!”

— Bradley Chilcote, Texas

To make an appointment at the Whitaker Wellness Institute, call 800-488-1500 or visit whitakerwellness.com.

March 2017

For more health advice and solutions, visit drwhitaker.com
Innovations in Wellness Medicine

Fermented Wheat Germ Extract for Cancer

It’s been a while since I’ve been as excited about a supplement for treating cancer as I am about Metatrol, a new concentrated form of fermented wheat germ extract. Safe, nontoxic, and backed by solid research and clinical success, this extract gets to the heart of cancer: unbridled cell growth. It contains compounds that interfere with cancer cells’ ability to generate and utilize energy. As a result, they are no longer able to keep on replicating and, like normal cells, eventually die.

More than 40 peer-reviewed studies have been published on fermented wheat germ extract as a standalone or adjunct therapy for many cancer types, including melanoma, ovarian, colorectal, oral, prostate, and breast cancer. Furthermore, patients rave about it, reporting reduced pain and fatigue, better appetite and weight, and improved tolerance of conventional treatments. To learn more about Metatrol, which is almost 100 times more potent than its predecessor AveUltra, visit metatrol.com. To order, call 800-422-5518 or visit theharmonycompany.com. Health & Healing readers will get a 25 percent discount on first orders by mentioning code H&HMETA.

Aged Garlic Extract for Hypertension

Garlic has been used as a remedy for cardiovascular ills since ancient times, and modern research shows that it improves mildly elevated blood pressure. But if you’re looking for a natural treatment for more serious hypertension, I suggest giving aged garlic extract a try. In a 2016 placebo-controlled clinical trial, patients with uncontrolled hypertension were assigned to take either 1.2 g of aged garlic extract (standardized for 1.2 mg of S-allyl-cysteine) or a placebo daily for 12 weeks. At the study’s conclusion, the group taking aged garlic had modest improvements compared to the placebo group: an average drop of 5 mmHg in systolic blood pressure. However, when results were further teased out, the responders—about half of those taking garlic—had average reductions of 11/6 mmHg, which is comparable to drug therapy.

In addition to lowering blood pressure, aged garlic extract has other benefits for the cardiovascular and immune systems. The extract used in this and many other garlic studies is Kyolic, sold online and in health food stores. Fermented and black garlic supplements also appear to have similar benefits.

Did You Know?

- Asthma symptoms are most common at night and early in the morning.
- Chronic headaches are linked with vitamin D deficiency in men.
- Postmenopausal women who ate yogurt daily were found to have higher bone density and lower BMI.
- A review of studies dating back 30 years confirms that sugar-free drinks do not prevent weight gain.
- Shorter index fingers relative to ring fingers suggest high prenatal exposure to testosterone.
- The more sunlight teenagers and young adults are exposed to, the less likely they are to develop age-related nearsightedness.
- Longtime use of acetaminophen and NSAIDs (not aspirin) is associated with hearing loss in older women.
- The greatest healthcare expenses for children in the US are newborn care ($27.9 billion) and ADHD treatment ($20.6 billion).
- Finnish researchers report frequent saunas reduce risk of dementia by 66 percent.
- Every year, your hair and nails grow about 6 and 1.5 inches, respectively.

Erratum

Thanks to longtime subscriber Virginia Walker for pointing out an error on page 6 of the January newsletter. A study showing the benefits of folic acid for kidney disease used 800 mcg, not 800 mg, of folic acid. We apologize for any confusion this may have caused.