

ANTI-AGE

These simple adjustments to your lifestyle can really add up. **By Liz Krieger**

YOUR BODY

LIKE DEATH AND TAXES, aging is something we all go through eventually—nips, tucks, Spinning classes, and green juices notwithstanding. And yet you can keep the effects of aging at arm's length, enjoying many more vibrant, healthy years looking fabulous than generations before. The question is not, How will I age? but, How much can I slow it down? From exercise and diet to supplements and brain training, here are the most effective ways to hold back the hands of time.

First, let's ID the enemy. Scientists are continuing to isolate the main causes of aging (beyond the mere passage of time), and keeping each one in mind as you make daily choices will make a world of difference.

WHAT CAUSES AGING?

TO START, THERE'S OXIDATION, which occurs when too many free radicals (a normal by-product of metabolism) go unchecked, leading to stressed tissues and weakened organs. Think of oxidation as a bit like rust on a bike. Without proper intervention—like antioxidants—free radicals can make your system rather worn-out and creaky.

NEXT, INFLAMMATION, particularly the whole-body, low-level inflammation that is associated with heart disease, mental decline, and arthritis. Excess weight, stress, and poor diet can all cause inflammation.

THIRD, GLYCATION, a process wherein sugar molecules attach to protein molecules, resulting in damaged, more inflexible tissue. This can not only lead to wrinkles but also hamper the working of internal organs.

FINALLY, LOOK TO YOUR DNA. Specifically, to the very tips of each strand, called telomeres. Emerging science (which garnered the Nobel Prize in 2009) has found a link between short telomere length and increased signs of aging. (Each time a cell divides, the telomeres erode

further.) Many factors can hasten the shortening process, but a few habits can help keep strands long and strong.

DIET SECRETS

Certainly you've heard about the benefits of a balanced diet high in fruits, vegetables, whole grains, and lean proteins. So we're not going to retread that territory. Instead, here's some of the newest research on what to eat.

GO EASY ON THE GRILLING. While it's often thought of as a dieter's delight (simple, easy, flavorful), grilling is a key factor in glycation, says Janis Jibrin, lead nutritionist for The-BestLife.com, because high heat creates something called an advanced glycation end product (AGE). The more aptly named AGEs in your body, the more potential for cellular damage. Rather, choose lower-heat cooking methods, such as steaming, poaching, or using a slow cooker, says Jibrin. She also notes that marinating meats can cut down on AGEs, particularly if you use a marinade with lemon or vinegar to increase the acidity.

VEGGIES NEED BACKUP. Yes, you know to eat those antioxidant-rich fruits and vegetables, but when in doubt, add a range of items to your plate, says Jibrin, since each one helps the other in the free-radical cleanup effort. "Orange, grape, and blueberry together have a more powerful antioxidant effect than if you added up the effect of each," she says.

ANOTHER PERK TO COFFEE. It's constantly in the news for something (good, bad, or indifferent), but a recent Finnish study found that people who drank three to five cups of coffee a day had a 65 percent lower risk of Alzheimer's and dementia. Tea has impressive anti-aging benefits too, says Bob Greene, health expert and author of *20 Years Younger*. It's linked to lower risk of stroke, heart disease, Alzheimer's, Parkinson's, and some cancers.



A SWEET SIGHT. Dark chocolate makes its own headlines for its heart-healthy antioxidants, but recent studies add improved vision and athletic endurance to the benefits. Look for 50 percent cacao and avoid "Dutch processed" or "alkalized" bars, says Jibrin, because these processes can strip antioxidants.

EXERCISE THAT WORKS

The usual suspects—cardio, strength training, and stretching—should be old news by now. By lowering your body weight, achieving a more ideal body mass index (BMI), and increasing your muscle mass, you'll beat back age-related muscle loss, heart disease, diabetes, insulin resistance, and pretty much every other chronic condition you can think of, says Greene. Exercise is so powerful it can actually lengthen those ever-shortening telomeres that are such an accurate marker of aging.



WORK OUT HARDER, NOT LONGER. While it may be tempting to scrap a workout if you don't have a full 30 to 60 minutes to spare, a raft of studies have found that the benefits of brief blasts are substantial. You don't have to sprint until you pass out, but if you're on the elliptical and reading a magazine, you'd better be dripping sweat on every page, says health psychologist Eli Puterman, who studies the link between exercise and aging at the University of California, San Francisco. "To get the most benefits, the truth is that exercise should be hard," says Greene.

SWEAT FOR YOUR SANITY. Exercise also helps squelch depression, reduce stress, boost brain volume, and bolster your memory, says Puterman. In one recent study, researchers saw actual growth in the brain's memory area among older adults who began an exercise regimen, says exercise physiologist Geralyn

Coopersmith, national director of the Equinox Fitness Training Institute.

SHAKE IT. Those hulking Power Plate machines at most gyms just may be the best reason to keep paying your dues, says Coopersmith. Research has shown that "whole-body vibration" sessions can help grow muscle tissue and balance levels of cortisol and other hormones.

THE BEST SUPPLEMENTS

No health expert worth his or her salt would deny that the best way to get most youth-enhancing nutrients is the old-fashioned method: through diet. But in some cases, a bit of a helping hand may be warranted. Take a multivitamin and consider the following:

GET EXTRA OMEGA-3S. Unless you're eating several servings of fatty fish per week, chances are you're not reaping the benefits of their potent fatty acids. Omega-3 fish oils have been shown to reduce heart disease risk and help fortify the brain, says Jeffrey Blumberg, director of the Antioxidants Research Laboratory at the Human Nutrition Research Center on Aging at Tufts University in Boston. Aim for 1,000 to 2,000 milligrams per day.

DO D: Unless you live year-round near the equator, eat tons of beef liver, mushrooms, or certain types of fish, or entirely skip sunscreen, you're probably not getting enough vitamin D, says Blumberg. Adds Greene, "A dearth of D has been linked to age accelerants, including depression, osteoporosis, weak immunity, and heart disease." Blumberg advises 1,000 to 2,000 IUs a day.

Beware the hormone hype. Some aggressive "antiaging clinics" have begun singing the praises of human growth hormone (hGH) and dehydroepiandrosterone (DHEA) supplements—two substances that our bodies produce in diminishing levels as we age. The theory is, if these hormones define the very essence of our younger years, why not add them back in as time marches on? In fact, there have been some reports of gains in stamina and muscle, and lower body fat, from taking hGH, says endocrinologist John J. Merendino Jr., assistant clinical professor at George Washington University School of Medicine and Health Sciences in Washington, D.C. "But treated individuals have also had an increase in certain problems, including arthritis and diabetes," says Merendino. For DHEA, "most studies have not shown any real

improvement in muscle or bone mass or stamina or overall perceived well-being," he says. In short, it's risky.

CAN YOU REPAIR YOUR DNA? Ever since it was discovered that undersize DNA telomeres were implicated in aging, the search has been on for something to help stretch out those strands, namely, to find something to mimic declining levels of the enzyme telomerase. Enter TA-65, the name brand of a molecule extracted from Chinese astragalus root, which seems to lengthen dwindling tips, at least in animal studies. Bottom line: Stick to working out. Coopersmith points to a German study that found vigorous exercisers had the telomeres of people up to 10 years younger.

MIND MATTERS

Cutting stress is easier said than done—and it's often overlooked as a prime source of aging. But pressures of work, caregiving, and any emotional upheaval can prompt a near-constant flow of the stress hormone cortisol, which, when unneeded, can disrupt sleep, prompt hunger and belly-fat storage, and a host of other toxic effects, Coopersmith says. Her advice to new moms and caregivers for aging parents: Get help. A 2007 study found that people in caregiving roles had accelerated telomere shortening, literally aging faster than those not under pressure.

SLEEP IT OFF. Adequate shut-eye is as important as anything in staying youthful. Sleep is when the body repairs, says Coopersmith, and getting enough keeps stress at bay, your mind sharp, pounds off, and blood sugar stable.

LIGHTEN UP. New research has found a strong link between depression, anxiety, anger, and shorter telomeres, says physician Hilary Tindle, who does research at the Pittsburgh Mind-Body Center. "We've seen that increased optimism and forgiveness can lower blood pressure and heart rate, and reduce depression, which helps tamp down overall inflammation," adds Tindle.

SEE THE FOREST—AND THE TREES. Find something that injects short bursts of joy and relaxation into your day, says Tindle. Treat yourself to fresh flowers weekly. Or even just align your desk to get a more verdant view. Research shows that people who have a view of nature have lower stress levels than those who don't. So that beach vacation you're thinking of taking? Tell your accountant it's an investment in your health. ■