



Harvard Heart Letter

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Sex hormones and your heart

Here's the latest thinking about how estrogen or testosterone therapy may affect cardiovascular risk.

The two main sex hormones—estrogen and testosterone—have wide-ranging effects in the body. Produced primarily by the ovaries (estrogen) and testes (testosterone), these hormones affect not just your sexual function but also your bones, brain, and blood vessels, for example.

As people age, the natural decline in sex hormone levels sometimes causes undesirable symptoms, such as hot flashes or a flagging sex drive. Doctors can prescribe pills, patches, gels, and creams containing estrogen or testosterone to ease those symptoms. But are these products safe for your heart?

Hormone therapy has a long, controversial history, especially with regard to estrogen. For women, advice about estrogen therapy has shifted dramatically over the decades in response to research findings. But for men, recommendations regarding testosterone aren't as robust because of a dearth of long-term studies of men taking this hormone. Following is a summary of what we know—and don't know—about the cardiovascular effects of hormone therapy.

Estrogen therapy

For decades, many women took estrogen (often combined with progesterone, another sex hormone) starting around menopause, when hormone levels start dropping. Some

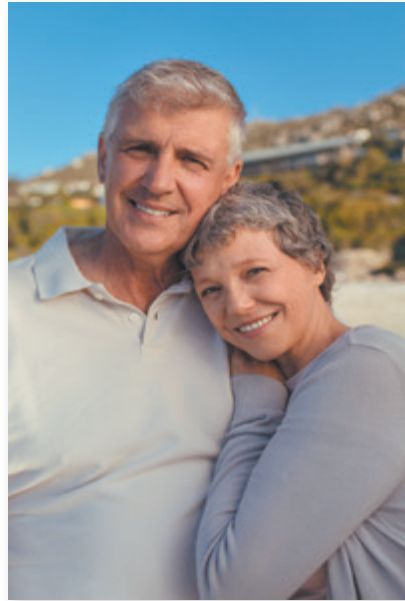
sought relief from hot flashes, vaginal dryness, and other menopause-related symptoms. But some doctors routinely prescribed hormone therapy to most of their female patients—regardless of their symptoms—

based on observational data that it would help prevent heart disease and osteoporosis. “At the time, pharmaceutical companies touted the benefits of hormones, and there was a ‘medicalization’ of menopause,” says Dr. Kathryn M. Rexrode, associate professor of medicine at Harvard Medical School and chief of the Division of Women's Health at Brigham and Women's Hospital.

But in 2002, the landmark Women's Health Initiative found that the most commonly pre-

scribed form of hormone therapy actually increased a woman's risk of cardiovascular disease, such as heart attack and stroke. (Of note, the participants' average age was 63, more than a decade after menopause usually begins.) The FDA added a warning label about the potential health risks from estrogen products, and prescriptions for hormone therapy dropped sharply soon afterward.

Although most women aren't terribly bothered by menopausal symptoms, a small percentage have uncomfortable, frequent hot flashes that disrupt their sleep and daily



Advice about estrogen and testosterone therapy has shifted in recent decades.

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1 Check your blood pressure in both of your arms. The higher reading is what matters. (page 2)

2 Add more heart-healthy fiber to your diet. Check out this Mediterranean menu for inspiration. (page 3)

3 Find out if you qualify for cardiac rehab. It helps not only after a heart attack, but also if you have chest pain from narrowed heart arteries (stable angina). (page 4)

4 Learn where to look for medication recall information. Bookmark this FDA website. (page 5)

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ASK THE DOCTOR

by DEEPAK L. BHATT, M.D., M.P.H., *Editor in Chief*

Why is the blood pressure in my right arm different from that of my left?

Q Why are the blood pressure readings in my right and left arm different even when they're taken within a minute or two of each other?

A The answer depends on how big of a difference you're talking about. A difference of just a few points (that is, a few millimeters of mercury, or mm Hg) is nothing to worry about. It's actually quite normal, even when both arms are checked almost simultaneously.

But a large difference in pressure—about 10 points or more—suggests the presence of artery-clogging plaque in the vessel that supplies blood to the arm with lower blood pressure. If the difference is 20 points or more, then the likelihood of a blockage somewhere in the arm circulation is much higher. Such plaque is a signal of peripheral artery disease (PAD), which refers to cholesterol-clogged arteries anywhere in the body other than the heart. When PAD is present, there's a good chance the arteries serving the heart and the brain are also clogged, boosting the odds of having a heart attack or stroke.

Checking for this potential problem is the reason cardiologists usually measure a person's blood pressure in both arms—if not every time, then at least during an initial consultation. If you don't have a cardiologist, you should ask your primary care physician to check your blood pressure in both arms. If the pressure in one arm is higher, that arm should be the one upon which to base any treatments and to check your blood pressure in the future.

If the difference is 10 points or more, your doctor can use a special cuff to measure the blood pressure in your ankle to calculate your ankle-brachial index, or ABI (the brachial artery in the upper arm is where blood pressure is normally measured). The ABI is simply the ratio between the blood pressures in your ankle and your arm. Normally, blood pressure in the legs is the same or a little higher than in the arm, which means the ratio is 1 or higher. A lower ratio (0.90 or less) means blood is not moving well in the lower half of your body, which is a classic sign of PAD.



Measuring blood pressure at the arms (center) and in both ankles (right) can diagnose peripheral artery disease or PAD, in which arteries outside of the heart are narrowed by plaque.

About one in seven people over age 60 has PAD. But doctors don't routinely screen for this condition, despite the fact that the ABI test is easy, painless, and inexpensive. If you notice a difference of 10 points or more between your left and right arm blood pressure readings at home, ask your doctor about getting evaluated for PAD. ♥

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Because of the volume of correspondence we receive, we can't answer every question, nor can we provide personal medical advice.

Fiber: The carb you can count on for heart health

Make sure you're getting enough of this healthy carbohydrate in your diet.

When we think about following a healthy diet, we often fixate on what we shouldn't be eating, such as sugary desserts and fatty fried foods. A better strategy may be to focus on what we should be eating—especially more foods naturally rich in fiber.

Even though fiber passes through our bodies without being digested, it provides many health benefits, particularly for the heart. Fiber-rich diets may reduce the risk of heart disease and stroke by as much as 30%, according to a review article in the February 2 issue of *The Lancet*.

The findings, gleaned from four decades' worth of research, emphasize the importance of eating lots of whole grains, vegetables, and fruits, says Dr. Walter Willett, professor of nutrition and epidemiology at the Harvard T.H. Chan School of Public Health. But the clearest and most consistent evidence for fiber's cardiovascular benefits relates to eating whole grains such as whole wheat and oats, according to earlier research by Dr. Willett and colleagues.

Fiber: Varieties and sources

Fiber, which is considered a carbohydrate, comes in two forms: insoluble (which helps you feel full and encourages regular bowel movements) and soluble (which helps lower cholesterol and blood sugar). Fiber-containing foods usually feature a mix of the two, but whole grains, wheat cereals, and vegetables such as carrots, celery, and tomatoes contain mainly insoluble fiber. Good sources of soluble fiber include barley, oatmeal, beans, nuts, and fruits such as apples, berries, citrus fruits, and pears.

Fiber's health benefits—which include reductions in cholesterol, blood pressure, and body weight—were apparent at levels

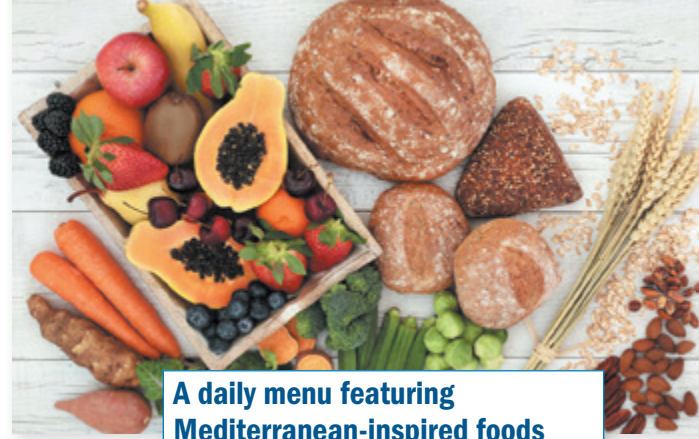
of at least 25 to 29 grams of fiber a day, according to the *Lancet* article. The average American consumes only about 15 to 16 grams of fiber daily. For inspiration for adding more fiber to your diet, see the sample menu (right), which follows the principles of the heart-friendly Mediterranean diet and provides 30.5 grams of fiber.

Gains from grains

One advantage to eating whole grains is that you're likely to use them to replace refined grains, such as white rice and white bread. The refining process not only strips away fiber but also removes up to 70% of many vitamins, minerals, and other healthful plant-based chemicals. Those compounds remain intact in whole-grain foods. Refined grains also tend to raise blood sugar and have other harmful metabolic effects. "So when you eat whole grains, you're cutting back on foods with adverse health effects and adding foods with positive health effects," says Dr. Willett.

Fake fiber?

If you need to add more fiber to your diet, don't rely on processed foods with added fiber, warns Dr. Willett. The evidence for fiber's health benefits is based on whole foods, not foods that contain synthetic or purified fiber. These "fake fibers" are now being added to many foods (such as bars, yogurt, and juices) and are allowed to be counted as fiber on the Nutrition Facts label, he says. Because over 30 such fibers have been approved, they're not always easy to identify, but they include inulin, cellulose, and many others. Another reason to avoid them: these unnatural fibers are usually added to foods that contain refined starch and sugar. ♥



A daily menu featuring Mediterranean-inspired foods

By following a plant-focused diet rich in whole grains, vegetables, and fruits, it's not hard to meet your daily fiber requirement. For men, the recommended daily fiber intake is 38 grams daily until age 50 and 30 grams daily after age 50. For women, the respective values are 25 and 21 grams.

	Fiber (grams)
Breakfast (Total fiber: 8.8 grams)	
1 cup cooked oatmeal (made with water)	4
1 medium banana, sliced	3.1
2 tablespoons chopped walnuts	1
½ teaspoon cinnamon	0.7
Morning snack (Total fiber: 1.3 grams)	
6 ounces low-fat plain Greek yogurt	0
¼ cup mixed berries	1.3
½ tablespoon honey	0
Lunch (Total fiber: 7.7 grams)	
Warm quinoa salad with goat cheese and grilled chicken:	
½ cup cooked quinoa	2.6
¼ cup chickpeas	3.5
2 tablespoons red onion	0.2
¼ cup diced bell pepper	0.3
¼ cup cucumber	0.1
1 cup arugula	0.3
1 cup spinach	0.7
2 tablespoons crumbled goat cheese	0
4 ounces grilled chicken	0
Lemon and olive oil-based dressing	0
Afternoon snack (Total fiber: 7 grams)	
1 medium apple	4
2 tablespoons peanut butter	3
Dinner (Total fiber: 3.7 grams)	
4 ounces baked salmon	0
8 spears roasted asparagus	2.4
½ cup cooked brown rice	1.3
Evening snack (Total fiber: 2 grams)	
2 pieces of dark chocolate	2
Total fiber for day: 30.5 grams	

Menu courtesy of dietitian Elizabeth Moore and Caroline Loveland, dietetic intern, Beth Israel Deaconess Medical Center.

Put your heart in the right place

After a serious heart-related event, cardiac rehabilitation can help you feel better and live longer.

If you have a heart attack, heart surgery, or another cardiac event, what's the best way to prevent future heart problems? Participate in cardiac rehab, a program that provides supervised exercise and teaches you the fundamentals of a heart-healthy lifestyle over a three-month period.

"The benefits of cardiac rehab are indisputable. It's more effective than any other intervention for preventing future heart-related problems and hospitalizations," says Dr. Hicham Skali, associate director of the Cardiac Rehabilitation Program at Harvard-affiliated Brigham and Women's Hospital. Eligible people who participate in cardiac rehab have a 24% lower risk of dying of cardiovascular disease compared with those who do not attend a rehab program. Cardiac rehab has also been found to improve your ability to exercise and your quality of life, he adds.

The good news: Medicare and most private insurance plans cover cardiac rehab following most heart surgeries and procedures (see "Who's eligible for cardiac rehab?"). The bad news: Only about one in six people who are eligible participates in these programs. And the rates are often even lower among women, older people, and minorities.

Access issues?

Some of the reasons more people don't attend cardiac rehab are logistical. People may find it hard to arrange regular transportation to rehab sessions. Also, rehab centers are sparse in some rural areas. But some people never even get referred in the first place, which can happen if the paperwork simply falls through the cracks. "Your cardiac surgeon may assume that your cardiologist will send in the referral, but your cardiologist may think your primary care physician will do it," Dr. Skali explains.

Don't be shy about advocating for yourself and asking for a referral, he advises.

Although Medicare will cover rehab for up to a year after a heart attack, starting sooner after the event may offer more benefit. Most people can start within a week of coming home from the hospital after a heart attack or an



Supervised exercise is a key part of cardiac rehab, but the program also provides coaching on healthy eating and stress management.

Who's eligible for cardiac rehab?

Medicare Part B covers comprehensive cardiac rehabilitation programs for the following conditions and procedures if you have a referral from your doctor:

- ▶ a heart attack in the last 12 months
- ▶ current stable angina
- ▶ coronary artery bypass surgery
- ▶ coronary angioplasty or coronary stent
- ▶ heart valve repair or replacement
- ▶ heart transplant or heart-lung transplant
- ▶ stable chronic heart failure.

angioplasty with stent placement. After heart surgery, you'll probably need to wait at least one month. To find a program near you, search the online directory of cardiac rehab programs maintained by the American Association of Cardiovascular and Pulmonary Rehabilitation (www.aacvpr.org).

The rehab routine

During your initial visit, you'll undergo testing to assess your ability to exercise and your heart disease risk factors. You'll get an individualized treatment plan with goals for your blood pressure, blood sugar, heart rate, and weight (and smoking cessation, if needed). Most programs involve three hourlong sessions per week over a three-month period.

Typically, two of the sessions include supervised exercise, which can include walking on a treadmill or stair machine or riding a stationary or recumbent bike, along with some light stretching and weight training.

One of the weekly sessions focuses on all the other aspects of a heart-healthy lifestyle. For example, you learn about diet, nutrition, and healthy cooking techniques (spouses or other family members can attend some of these sessions); the importance of sticking to your medication regimen; and how to recognize and react to cardiovascular symptoms. Stress-easing strategies such as relaxation and breathing techniques are also included in cardiac rehab. Some programs incorporate yoga or tai chi, both of which have proved to enhance cardiac rehab.

Worth the effort

Completing cardiac rehab requires a fair amount of effort and commitment, but people who have gone through the program are glad they did, says Dr. Skali. Some aren't thrilled about having to cut back on their favorite foods, and others aren't enthusiastic about exercising at first, he says. "But for most people, a cardiac event is a life-changing occurrence. It often puts people in a different mindset, because they realize that they need to make some changes." Once they finish the program, they know how to make healthier food and lifestyle choices, and they feel better after starting an exercise routine, he says. ♥

Lessons from the blood pressure drug recall

Here's what you need to know about the discovery of contaminants in a popular class of heart medications.

Last summer, a number of prescription medications containing the generic drug valsartan were recalled by manufacturers after investigators found trace amounts of possible cancer-causing impurities in some of the products. Over the following months, additional lots of valsartan, as well as batches of two similar drugs, losartan and irbesartan, were also pulled from pharmacy shelves.

All three of these drugs belong to a class of medications known as angiotensin-receptor blockers, or ARBs. These drugs block the effects of a hormone that narrows blood vessels and are used to treat high blood pressure and heart failure. The recalled products also include combination drugs that contain one of those three ARBs. (See “Medication recall information” for accessing the list of affected products.)

When you consider the billions of medications manufactured worldwide each year, it's no surprise that drug recalls occur on a regular basis. Some are relatively innocuous problems, such as minor irregularities in the size, color, or quantities of pills. In the recent ARB recall, the contamination occurred during the production of the drug's active pharmaceutical ingredient. “As a result, the recall affected a number of different manufacturers and companies,” says John Fanikos, executive director of Pharmacy Services at Harvard-affiliated Brigham and Women's Hospital.

Comparatively low risk

According to the FDA, at least a million people in the United States were likely exposed to the recalled drugs, which were contaminated with nitrosamine compounds, including N-nitrosodimethylamine (NDMA) and

N-nitrosodiethylamine (NDEA). Both compounds are considered probable carcinogens and may have been present in valsartan products for up to four years, perhaps longer. However, people may be exposed to these chemicals from other sources. Workplace or environmental exposure can occur from the industrial production of leather, pesticides, and tires, for example. NDMA is also found in tobacco smoke, foods such as bacon and beer, and household products such as toiletries and detergents. NDEA is also created by various industrial processes and found in tobacco smoke.

The risk to an individual who took the recalled medication is likely very low, says Dr. Naomi Fisher, director of the Hypertension Service and Hypertension Innovation at Brigham and Women's Hospital. “We recognize the health hazards of those compounds from studies done in rodents, which used much larger doses of the agent,” she says. The FDA estimates that if 8,000 people took the highest valsartan dose (320 milligrams) from recalled batches every day for four years, there would likely be one additional case of cancer over the lifetimes of those 8,000 people.

When patients called Dr. Fisher's office asking about the recalled drugs, she advised them to contact their pharmacy to see if their pills were part of the recall. But she emphasized the importance of continuing to take medication to control their high blood pressure. “The most dangerous action would be to stop taking blood pressure pills,” she says. Doing so can boost a person's risk of a heart attack and stroke. In this instance, many substitutes were available: doctors could replace the recalled medication with the same or similar drug from a



Medication recall information

To check if a particular drug has been recalled, you'll need the name, dose, and manufacturer from the prescription label. Check the FDA's online list of recalled drugs at www.fda.gov/Drugs/DrugSafety/DrugRecalls or call the agency's consumer inquiry line at 888 INFO FDA (888-463-6332).

different manufacturer. Switching to a brand-name version of the drug may be another option, as these versions were not recalled. But they typically cost considerably more than generics.

Contacting consumers

Although the ARB recalls were reported widely by major news outlets, it's possible that some people missed the media reports. When pharmacies receive recall notifications, they immediately stop dispensing the medications. But what about people who've recently filled prescriptions for recalled drugs? Major pharmacy chains such as CVS and Walgreens send letters to (or, in some cases, call) affected consumers. The challenge is finding the best channel to get the message out, says Fanikos. “While some people might be fine simply getting a message on their smartphone, others are still used to getting letters through the postal service,” he says.

If you take any prescription drugs, pay close attention to news alerts about drug recalls and be your own advocate, says Fanikos. It's also a good idea to reassess all of your prescriptions periodically with your physician. ♥

How do race and ethnicity affect heart risk?

Your genetic background and cultural identity are both important, but they're only part of the story.

In recent years, many people curious about their heritage have done at-home DNA tests such as those sold by 23andMe or Ancestry. By analyzing variations in your DNA, the tests can reveal where your distant ancestors may have lived, providing clues to your racial and ethnic heritage. These results are usually presented in percentages by geographic location—for example, Western Europe, Northern Africa, Central America, and Southern Asia.

But does that information reveal any hints about your risk of cardiovascular disease? In the United States, certain racial and ethnic groups face a higher risk of dying from heart disease than others. The latest statistics from the American Heart Association show the highest risk among blacks. Non-Hispanic whites are second, with the lowest risk seen among Hispanics (see “Ethnic and race categories in the United States”).

Inherited vs. acquired risks

Still, diversity within different racial groups means that genetic traits common to some groups can't be generalized



Some cardiovascular risk factors are more prevalent in certain ethnic groups. But lifestyle habits play a bigger role than genetic factors.

to an entire race. For example, two black people may be more genetically different from one another than either of them is from a white person. And non-genetic factors can have powerful effects, says Harvard Medical School professor Dr. Elliott Antman, a cardiologist at Brigham and Women's Hospital.

“A person of any race can inherit a low-risk genetic profile but then grow up in an environment without access to healthy foods or safe places to exercise,” he says. These and other socioeconomic factors may also induce a chronic state of stress that is difficult to quantify but is now increasingly recognized as an important risk factor for heart disease.

Blood pressure: An added risk for blacks?

One possible explanation for the higher heart disease risk among blacks living in this country may be a genetic difference

that predisposes them to high blood pressure. Compared with whites, blacks tend to be more salt sensitive, which means their bodies tend to hold on to sodium and water. “That may be an evolutionary survival advantage when you're living in a hot, dry climate, such as in Africa,” says Dr. Antman. But in America, with its cooler climate (and widely available high-sodium foods), it's a disadvantage, he adds. Extra sodium and water raise blood volume, which in turn raises blood pressure.

The Hispanic paradox

As the largest ethnic minority in the United States, Hispanic Americans are a fairly diverse group, although nearly two-thirds are of Mexican origin. Despite having higher rates of obesity and diabetes, Hispanics living in America are about 25% less likely to die of heart disease than non-Hispanic whites. This so-called Hispanic paradox is not fully understood, although some experts believe that their lower smoking rates could be a factor. Just under 11% of Hispanics smoke cigarettes, compared with about 16% among non-Hispanics.

Asians: East vs. South

People of Asian descent are a small but growing population in this country. Those from East Asia (mostly from China, Japan, and Korea) have lower rates of cardiovascular disease than other Americans. In contrast, those with South Asian roots—from Bangladesh, India, Nepal, Pakistan, and Sri Lanka—tend to have higher rates. The reason may stem from a genetic tendency to accumulate fat in the belly, which is dangerous for the heart.

While it's helpful to be aware of these racial and ethnic risk factors, your heritage is just one of many factors that influence your heart's health, says Dr. Antman. Focus more on the factors you can change, such as eating a low-sodium diet, avoiding tobacco, staying active, and maintaining a healthy weight. ♥

Ethnic and race categories in the United States

Ethnicity refers to a group of people who share a geographic area, religion, culture, or language. The two main ethnic groups in the United States are classified as either “Hispanic or Latino” or “not Hispanic or Latino.” Hispanics and Latinos (17%)* trace their origins to Spanish-speaking countries. But they can belong to the white, black, Native Indian, or Asian races.

Race refers to common characteristics passed down through the genes. Non-Hispanic whites (63%) have roots in Europe, the Middle East, or North Africa. Blacks (13%) have ancestors from any of the black racial groups of Africa or Afro-Caribbean countries. Asians (5%) may have origins anywhere from India to Japan.

*Percentages are approximate values from the latest U.S. Census.

Sex hormones ... from p. 1

function, says Dr. Rexrode. If lifestyle changes don't help, hormone therapy is an option for women without high cardiovascular risk. Using estrogen for a few years after menopause (which begins at age 51, on average) doesn't appear to cause major changes in blood vessel function, recent studies suggest.

For women who need hormones, those taken transdermally—that is, delivered through a small patch placed on the skin—are less likely to trigger blood clots than hormones taken in pill form, and are therefore generally a better choice, says Dr. Rexrode. Women who want to try hormone therapy should first have a doctor assess their risk of heart disease. Take the lowest possible dose for the shortest possible time, which will require annual check-ins with your doctor, she advises. Also, vaginal estrogen products (creams, suppositories, and rings), which can relieve vaginal dryness and discomfort during sex, do not appear to be linked to any increased health risks, she adds.

Testosterone therapy

Unlike estrogen levels, which drop rather abruptly when a woman reaches her late 40s to early 50s, testosterone levels in men decline gradually, beginning around their mid-20s. But the trends for treating these age-related hormone drops have some similarities.

Testosterone therapy is approved only for men who have testosterone deficiency caused by a disorder of the testicles, pituitary gland, or brain. Known as hypogonadism, this can cause symptoms such as decreased beard and body hair and loss of muscle mass, as well as lack of interest in sex, low energy levels, and depressed mood. But about a decade ago, pharmaceutical companies began marketing the hormone to treat vaguer symptoms associated with aging. As a result, testosterone prescriptions soared.

In 2015, after some studies linked testosterone use with a higher risk

of heart attack and stroke, the FDA added a warning about that possible danger to product labels. Since then, testosterone prescriptions have dropped substantially.

In fact, the evidence regarding testosterone's effects on the heart has been mixed, with some studies suggesting benefits or no effect and others hinting at harm. "There is insufficient evidence to determine whether testosterone increases the risk of major cardiac events," says Dr. Shalender Bhasin, an endocrinologist at Harvard-affiliated Brigham and Women's Hospital. We may know more in a few years, when an FDA-mandated trial to assess the cardiovascular risks associated with testosterone treatment in middle-aged and older men with testosterone deficiency is complete. Testosterone is usually given as a gel rubbed into the skin, a transdermal patch, or by injection.

Often, mildly low testosterone stems from obesity and diabetes, and treating those problems with lifestyle changes may boost testosterone levels and improve symptoms, says Dr. Bhasin.

Still, men with troubling sexual dysfunction and fatigue may want to ask their doctors about checking their testosterone levels, he says. For men who are 65 and older with low testosterone (less than 300 milligrams per deciliter), research suggests that testosterone therapy improves libido and sexual satisfaction, as well as other age-related issues such as low bone density and anemia. Although the potential risks of testosterone therapy aren't fully understood, the improvements in quality of life may be worthwhile for some men, says Dr. Bhasin.

Compared with our distant ancestors, we now spend a far greater fraction of our lives past our reproductive years, Dr. Bhasin notes. "I think it's worth considering whether and how we can reduce suffering from the consequences of reproductive aging caused by low hormone levels in both men and women." ♥

Legume of the month



Lentils

Lentils are tiny, lens-shaped legumes that come in array of colors, including yellow, red, green, brown, and black. Compared with other legumes, lentils are particularly rich in compounds known as polyphenols. These plant-based micronutrients are thought to help protect against cardiovascular disease.

Another advantage to lentils is that you don't need to soak them in advance, as is necessary with beans. And they cook quickly—usually in about 20 minutes or less. In fact, red lentils (which are actually orange) cook in just five minutes. Add one cup of lentils to three cups of water in a saucepan and bring to a boil. Once the water boils, the lentils are ready; you can then drain, rinse in cool water, and use them in salads. If you cook red lentils longer, they turn yellow and become very soft, with a smooth, pureed texture.

Lentils are popular in cuisines around the world. *Dal*, a curried lentil dish, is a staple throughout India. *Mujadara*, from the Middle East, is a mixture of lentils, rice, and onions seasoned with cumin. The French use *lentilles du Puy*, a dark-green variety considered the caviar of lentils, in salads and soups.





Being sedentary may be as bad for the heart as being overweight

Even if you're at a healthy weight, being out of shape may increase your risk of heart disease just as much as if you were overweight, a study in the March 1 *Journal of the American College of Cardiology* reports.

The study included data from people ages 40 to 79 who were at a healthy weight or overweight based on their body mass index (see www.health.harvard.edu/bmi for a calculator). The participants also provided information about

their exercise habits, how long they sat each day, and whether they ever felt short of breath when hurrying or walking up a slight hill.

Using a standard heart disease risk calculator, researchers determined that nearly 30% of the people at a "healthy" weight were at increased risk for heart disease. Factors such as having a large abdomen, not getting recommended amounts of physical activity, and becoming breathless with exertion were all characteristics of a sedentary lifestyle. Having these factors increased the risk for cardiovascular disease of "healthy" weight people to that seen in people who were overweight, according to the authors.



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After hospitalization for heart disease: Avoid opioid drugs?

People with heart disease who leave the hospital with a prescription for opioids may be more likely to miss follow-up care than those not prescribed opioids, a new study finds.

The study included nearly 2,500 people (mostly white men with an average age of 60) who were discharged from a university medical center after a heart attack or sudden heart failure. One in five were prescribed the powerful pain relievers known as opioids. Those people were less likely to follow up with their health care provider or to

participate in cardiac rehabilitation than those not prescribed opioids.

The study authors, who reported their findings in the February 5 *Journal of the American Heart Association*, speculated that diminished physical and mental functioning—known effects of opioids—may have contributed to the observed findings. But other factors, such as the characteristics of the patients who were prescribed opioids and not the opioids themselves, also may have played a role.

Diabetes? Go nuts to lower your heart risk

A near-daily serving of nuts may lower the risk of cardiovascular disease in people with type 2 diabetes, new research suggests. The study, published online February 19 by *Circulation Research*, relied on diet surveys from more than 16,000 people before and after they were diagnosed with type 2 diabetes, a condition that elevates the risk of heart disease. Researchers asked them about their nut-eating habits over a period of several years. People who ate five servings of nuts per week had a 17% lower risk of cardiovascular disease compared with those who ate less than a serving per week.

Chock full of unsaturated fat, fiber, and minerals, nuts can help control blood sugar, blood pressure, and cholesterol. Tree nuts, which include walnuts, almonds, and pistachios, seemed to offer the strongest benefits in the study. Peanuts, which aren't technically nuts but legumes, weren't quite as healthy. While this study can't prove cause and effect, eating a small handful of unsalted nuts on most days will likely help your heart, even if you don't have diabetes. ♥



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What's coming up:

- ▶ The benefits of exercising outdoors
- ▶ Are fermented foods favorable for heart health?
- ▶ Updated guidelines for treating atrial fibrillation
- ▶ How to recognize and respond to symptoms of a "ministroke"