

STRESS AWARENESS

YES, STRESS CAN HURT YOUR HEART: 3 THINGS TO KNOW

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1. There are many ways stress can affect the heart

There are several pathways in which stress can lead to heart disease...



2. Stress affects people in different ways

When it comes to stress, everyone is different—and the same is true with heart disease...



3. Talk to your health care provider about your level of stress

Anyone concerned about their stress levels should talk about it when they visit their primary care provider...



Stress management can help keep your heart healthy

Virtually everyone has experienced stress at one time or another—a feeling of emotional or physical tension that can come from any event or thought that makes you feel

frustrated, angry, or nervous. But did you know that stress can affect your body—especially your heart?



There are many people, over the course of their lives, that have experienced some acute (or short-term) stress, a physiological and psychological reaction to a specific event that goes away quickly, such as giving a speech (if you are nervous about public speaking), hitting the brakes suddenly to avoid an oncoming car, or having a fight with your partner. Chronic stress, however, is a consistent sense of feeling pressured and overwhelmed over a long period of time—it could result from a toxic work environment, for instance, or caregiving, or being unable to pay your bills.

“Stress is sometimes underrecognized as a risk factor for heart disease,” says Rachel Lampert, MD, a Yale Medicine cardiologist.

In fact, some experts go even further to say that stress is a *leading* risk factor for heart disease—the biggest killer in the United States—up there with unhealthy diet, physical inactivity, smoking, excessive alcohol use, and obesity.

We talked with Dr. Lampert; Yale Medicine cardiologist Erica Spatz, MD, director of the Yale Medicine Preventive Cardiovascular Health Program; and Allison Gaffey, PhD, a

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Yale Medicine psychologist who specializes in cardiology—all of whom have particular interests in the effects of stress on the heart, both clinically and in their research.

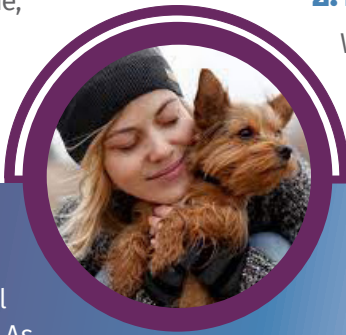
Below, they will discuss the connection between stress and heart health, as well as some strategies for keeping your heart healthy.

1. There are many ways stress can affect the heart

There are several pathways through which stress can lead to heart disease. “Long-term—or chronic—stress can cause higher levels of inflammation in the body that contribute to increases in plaque buildup in the arteries—and that can lead to such problems as **coronary artery disease**,” says Dr. Lampert. Coronary artery disease can lead to **heart attack**, abnormal heart rhythms, and **heart failure**.

Stress drives an increase in catecholamines, hormones made in the adrenal glands. One catecholamine is adrenaline, the “fight or flight” hormone, which increases mental alertness during stressful situations. But adrenaline also causes the heart to beat faster and raises blood pressure. Too much of that, over time, can eventually damage the heart.

Prolonged elevations of another stress hormone, called cortisol, also increases **blood pressure**, as well as blood sugar, cholesterol, and triglycerides.



For a person living with chronic stress, the result can be chest pain, irregular heartbeats, shortness of breath, and an increased risk of heart attack and **stroke**.

Short-term stress can have an impact as well. “For example, in people who already have a buildup of plaque in their arteries, the surge of adrenaline can sometimes contribute to a plaque rupturing, resulting in a blood clot that could grow large enough to block blood flow completely and cause a heart attack,” Dr. Lampert says.

People that have pre-existing heart problems, for example, **arrhythmias** (abnormal heart rhythms), sudden stress can exacerbate their symptoms, Dr. Lampert adds.

But stress can also have indirect effects on the heart. “When people feel that they cannot escape the circumstances of their chronic stress, they may cope by turning to unhealthy behaviors,” says Gaffey. “We see that stress is associated with actions such as smoking, unhealthy diet, and increased use of alcohol.” These behaviors can lead to health issues as **hypertension** and **high cholesterol** which are primary risk factors for heart disease.

2. Stress affects people in different ways

When it comes to stress, everyone is different—and the same is true with heart disease, Gaffey explains. “What is considered to be a stressor

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or what can be stressful for one person versus another is subjective—there’s also a lot of variability in the effects of that challenge, depending on your past experiences and how you have learned to cope with the emotional effects,” Dr. Lampert says.

To that end, some people who have experienced significant stress will develop heart disease, while others won’t, adds Dr. Lampert. “This is similar to cancer,” she says. “Among people who smoke, some don’t get cancer, while others do. Why is that? It’s a combination of their genetic vulnerability, environment, and lifestyle—and how all those factors work together in the development of disease.”

A study in *The Lancet* showed that people who reported high stress, a history of depression, and other psychosocial factors were 2.5 times more likely to have a heart attack than those who had low stress or no history of depression, Gaffey says. Other research has linked stress and heart disease in groups that have also experienced discrimination, including women, people from particular ethnic or racial backgrounds, and those with mental health disorders.

Not all symptoms during stress are due to heart problems, Dr. Lampert adds. Stress can also cause symptoms, such as a racing heart, “that are just how your body normally feels when you’re overwhelmed.” Most importantly, anyone experiencing new or recurrent symptoms should talk to their doctor to figure out to what extent a heart issue might—or might not—be causing the symptom, she says.

3. Talk to your health care provider about your level of stress

Anyone concerned about their stress levels should talk about it when they visit their primary care provider or, if they have one, their cardiologist. “I talk a lot about stress with patients,” says Dr. Spatz. “We want to know how stress

from their community or family or job, has impacted them. And how that may be able to contribute to their blood pressure, their weight, and, ultimately, to their risk of developing heart disease.”

“During these appointments, it’s always important to raise the issue of **stress** because a provider may not always ask you about your current life circumstances, stress level or stressors,” Gaffey says. “But they can share helpful tools, recommendations, and resources, to help people better manage their stress.” Those might include increased yoga, physical activity, and relaxation techniques; improvements to sleep hygiene; spending time with others; social work resources; psychotherapy; or help with health care access; and even medication to help with ongoing symptoms of depression or **anxiety**.

The type of stress reduction that works best is different for everyone, Dr. Lampert adds. Some people find yoga or meditation helps; others may prefer a walk in the woods or a run. “It’s whatever works to keep your stress levels in check,” she says.



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Content from Yale Medicine (Kathy Katella)