



THE SKINNY ON FAT

It plays a vital role in keeping you healthy, and one kind may even help you lose weight.

BY KAREN ASP

WHATEVER YOUR BODY shape or size, everyone has two types of fat tissue. We're most familiar with the white kind, whose job it is to store the energy that comes from the calories we consume and then release it when needed (like during exercise). Generally, the more white fat you have, the greater your risk of obesity, type 2 diabetes, heart disease, and other conditions.

Then there's brown fat—or brown adipose tissue (BAT)—which gets its color from iron-containing mitochondria. Instead of simply storing energy, this kind of fat actually burns it—enough to produce heat

that helps maintain body temperature in response to a cold environment. As fuel to generate the heat, BAT uses its own fat stores and also takes glucose and fat from the bloodstream, explains Roland Stimson, PhD, professor of endocrinology at the University of Edinburgh. In the process, BAT burns calories, which can have a small but beneficial effect on weight: People with a higher amount of brown fat may have lower body weight.

Because BAT could potentially protect against weight gain, insulin resistance, and diabetes, researchers are working on treatments to help us convert white fat to brown and activate or expand the brown fat we have, says Labros Sidossis, PhD, professor and chair of kinesiology and health at Rutgers University. To a very small degree, you can activate it yourself by eating chile peppers—spicy foods stress the body just enough to ignite the process, Sidossis says—or drinking coffee to stimulate the nervous system, which is believed to be a regulator of brown fat activity, says Michael Symonds, PhD, a professor at the University of Nottingham School of Medicine. To boost brown fat even more, consider doing the following:

THE STATS ON OUR STORES

WHITE FAT

Typically, people carry 20 to 100-plus pounds of this fat, which is found everywhere, but mainly under the skin and around internal organs.

BROWN FAT

In most people, this weighs in at only about one-tenth of a pound, according to Labros Sidossis, PhD, and is found primarily in the neck, collarbone, kidneys, and spinal column.

CHILL OUT “Exposure to cold is the main way to activate and perhaps increase brown fat,” says Patrick Seale, PhD, associate professor at the Perelman School of Medicine at the University of Pennsylvania. In a study in the journal *Diabetes*, five healthy male participants who slept in a cool room (66 degrees) for one month with only standard hospital clothes and bedsheets for warmth saw a 42 percent increase in brown fat and a 10 percent increase in the metabolic activity of fat in the BAT region compared with when they slept in temps of 75 or 81 degrees for a month. The researchers concluded that our bodies might acclimate to cool environments by increasing brown fat, which could in turn lead to improvements in glucose metabolism. You can try this at home by lowering the thermostat to 67 or 68 and not bundling up, Sidossis says. A more recent study of four people who participated in a 250-meter open-water swim event found that immersion in 44.6-degree water was linked to increased BAT activity. Said the study authors (Symonds was one): Regular exercise in cold water could be a strategy to amp up BAT and thus improve metabolic health.

WORK OUT When people rode a stationary bike for 40 minutes or ran on a treadmill for 45 minutes at a vigorous intensity, they had positive changes in brown fat, according to a study in *Cell Metabolism*. Exercise has been found to increase the endocrine activity of brown fat, improving cell-to-cell communication between BAT and other tissues. We already know exercise is beneficial for your body; think of this as yet another way it can help with weight loss and maintenance, says Kristin I. Stanford, PhD, lead study author from the Ohio State University College of Medicine. Federal guidelines recommend at least 75 to 150 minutes per week of vigorous aerobic activity for your general health—so take this advice to heart for your fat, too.



5/4/20 CODE: 504