



Hormones can play havoc with appetite

I've heard that a hormone called leptin can affect your weight. How does it work?

That's a complex question, and entire research studies are devoted to try to find the answer.

Simply put, leptin is a hormone associated with suppressing appetite and stimulating energy expenditure — both of which can be key ingredients in maintaining a healthy weight. But, scientists have found, leptin doesn't always appear to work the way it should.

Leptin is produced by fat cells in your body. The more fat cells you have, the more appetite-suppressing leptin the body produces, and, in theory, your appetite should decrease. Leptin acts through the nervous system, sending signals to receptors in your brain's hypothalamus telling you to stop eating.

But in some people, particularly obese people, those receptors don't seem to respond to leptin's signals. Scientists aren't sure why, but they do know this: Leptin doesn't act alone. There are a number of hormones that play a role in appetite and energy use in the body.

One hormone, ghrelin, is produced in the stomach -- its role is to increase appetite, giving you those hunger pangs. Insulin, a hormone produced in the pancreas as a reaction to glucose entering the bloodstream after you eat, also plays a role — among other things, it triggers the release of leptin.

In recent years, researchers have discovered that hormones can be affected by your sleep patterns. According to some studies, people who don't get enough sleep tend to have increased circulating levels of appetite-stimulating ghrelin, lower levels of appetite-suppressing leptin, and — you guessed it — they're more likely to be obese.

But none of this means you need to be a victim of your hormone production. While it's helpful to know the hormonal pushes and pulls within your body, appetite doesn't necessarily have to equate with calorie intake. And that's the bottom line: If your calorie intake is higher than your energy expenditure, you'll gain weight. So, if your leptin receptors aren't suppressing your appetite, you do have an uphill battle. But instead of heading for the pantry when you can't satisfy your appetite, find ways to combat these internal urges with a nice, brisk walk; a cup of hot tea or tall glass of ice water; or, if you're sleep-deprived, a well-deserved nap. If you simply must eat, some research suggests that choosing something low in fat and refined carbohydrates but high in protein or whole grains does a good job suppressing ghrelin. It's not always easy, but you can lose weight even if your body is full of hormonal quirks.

Chow Line is a service of Ohio State University Extension and the Ohio Agricultural Research and Development Center. Send questions to Chow Line, c/o Martha Filipic, 2021 Coffey Road, Columbus, OH, 43210-1044, or filipic.3@cfaes.osu.edu.



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