

While the results are intriguing, don't be too hasty in ditching that treadmill. One piece of chocolate has about 50 calories; at the rate of 50 calories per hour, losing one pound would require about 12 hours of concentrated laughter!

Laughter's Effects on the Body

In the last few decades, researchers have studied laughter's effects on the body and turned up some potentially interesting information on how it affects us:

- **Blood flow.** Researchers at the University of Maryland studied the effects on blood vessels when people were shown either comedies or dramas. After the screening, the blood vessels of the group who watched the comedy behaved normally -- expanding and contracting easily. But the blood vessels in people who watched the drama tended to tense up, restricting blood flow.
- **Immune response.** Increased stress is associated with decreased immune system response, says Provine. Some studies have shown that the ability to use humor may raise the level of infection-fighting antibodies in the body and boost the levels of immune cells, as well.
- **Blood sugar levels.** One study of 19 people with diabetes looked at the effects of laughter on blood sugar levels. After eating, the group attended a tedious lecture. On the next day, the group ate the same meal and then watched a comedy. After the comedy, the group had lower blood sugar levels than they did after the lecture.
- **Relaxation and sleep.** The focus on the benefits of laughter really began with Norman Cousins's memoir, *Anatomy of an Illness*. Cousins, who was diagnosed with ankylosing spondylitis, a painful spine condition, found that a diet of comedies, like Marx Brothers films and episodes of *Candid Camera*, helped him feel better. He said that ten minutes of laughter allowed him two hours of pain-free sleep.

The Evidence: Is Laughter the Best Medicine?

But things get murky when researchers try to sort out the full effects of laughter on our minds and bodies. Is laughter really good for you? Can it actually boost your energy? Not everyone is convinced.

"I don't mean to sound like a curmudgeon," says Provine, "but the evidence that laughter has health benefits is iffy at best."

He says that most studies of laughter have been small and not well conducted. He also says too many researchers have an obvious bias: they go into the study wanting to prove that laughter has benefits.

For instance, Provine says studies of laughing have often not looked at the effects of other, similar activities. "It's not really clear that the effects of laughing are distinct from

screaming," Provine says.

Provine says that the most convincing health benefit he's seen from laughter is its ability to dull pain. Numerous studies of people in pain or discomfort have found that when they laugh they report that their pain doesn't bother them as much.

But Provine believes it's not clear that comedy is necessarily better than another distraction. "It could be that a compelling drama would have the same effect."

One of the biggest problems with laughter research is that it's very difficult to determine cause and effect.

For instance, a study might show that people who laugh more are less likely to be sick. But that might be because people who are healthy have more to laugh about. Or researchers might find that, among a group of people with the same disease, people who laugh more have more energy. But that could be because the people who laugh more have a personality that allows them to cope better.

So it becomes very hard to say if laughter is actually an agent of change, or just a sign of a person's underlying condition.

Laughing It Up for Quality of Life

Laughter, Provine believes, is part of a larger picture. "Laughter is social, so any health benefits might really come from being close with friends and family, and not the laughter itself."

In his own research, Provine has found that we're thirty times more likely to laugh when we're with other people than when we're alone. People who laugh a lot may just have a strong connection to the people around them. That in itself might have health benefits.

Wilson agrees there are limits to what we know about laughter's benefits.

"Laughing more could make you healthier, but we don't know," he tells WebMD. "I certainly wouldn't want people to start laughing more just to avoid dying -- because sooner or later, they'll be disappointed."

But we all know that laughing, being with friends and family, and being happy can make us feel better and give us a boost -- even though studies may not show why.

So Wilson and Provine agree that regardless of whether laughter actually improves your health or boosts your energy, it undeniably improves your quality of life.

"Obviously, I'm not antilaughter," says Provine. "I'm just saying that if we enjoy laughing, isn't that reason enough to laugh? Do you really need a prescription?"

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[Sources](#) ^

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SOURCES: Steve Wilson, MA, CSP, psychologist, Columbus Ohio; board member of the American Association for Therapeutic Humor, Columbus, Ohio. Robert R. Provine, professor of psychology and neuroscience, University of Maryland, Baltimore County; author, *Laughter: A Scientific Investigation*. Association for Applied and Therapeutic Humor web site: "The Humor Connection." Gervais M. and Wilson D.S. *Quarterly Review of*

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