

The Myth of Exercise, Metabolism and Weight Loss

Evolutionary anthropologist Herman Pontzer explains why you can't run away from your fat

by Stephen Perrine, **AARP The Magazine**, December 2018/January 2019



In Tanzania, members of the Hadza tribe hunt their food with simple tools and build their huts from mud; working day and night for survival, they must burn a lot of calories, right? Surprisingly, no. When Duke University anthropologist Herman Pontzer measured their [metabolic rates](#), he discovered that the average Hadza burns no more calories in a day than the average American couch potato. Pontzer, who has traveled the world studying the metabolisms of different cultures, explains why it's so hard to burn calories through exercise and why extreme dieting is so dangerous.

Q: You claim that exercising more won't increase how many calories I burn. How is that possible?

A: The number of calories you burn per day stays pretty consistent regardless of activity level; the average adult over age 50 burns about 2,500 calories a day, depending primarily on body size. That's your daily calorie budget. When you exercise more, your body simply lowers the number of calories it burns performing other functions, such as respiration or hormone production. So the number of calories you burn per day — your metabolism — remains constant, whether you work out or not.

Q: Yet exercise is linked to weight loss. If I'm not burning calories, how am I losing weight?

A: When people exercise, inflammation levels go down. That's because your body is spending your energy budget on exercise and not on creating chronic inflammation. Think of inflammation as a luxury — it's what your body will do with extra calories if you have them. And it's inflammation that causes most of the diseases of aging, including obesity.

Q: Extreme diets (*The Biggest Loser* type) can lower metabolism. If a diet can lower metabolism, why can't we increase it?

A: From an evolutionary standpoint, it makes sense that we can turn our metabolism down, because that preserves our life in times of famine. But it makes no sense to turn your metabolism up, because once you do that, you need more food, and you increase your risk of starvation.

Q: Superathletes such as swimmer Michael Phelps eat and burn [tons of calories](#). They've turned up their metabolisms, right?

A: No. If you ramp up your training to an astronomical level, you can boost your energy burn for a bit, but even elite athletes settle back into the same range. Even Phelps.

Q: What about diets or workouts that promise to “supercharge” metabolism?

A: There is no such thing as a diet that can speed up your metabolism. The most effective diet is one that provides all the healthy nutrients you need while reducing your calorie intake to below your calorie budget. Think of diet and exercise as two separate tools. Exercise is great for heart health, for preventing cognitive decline, for preserving physical fitness. But if you want to lose weight, the tool for that is diet.