Does eating fat keep the body warm in winter? [1]

(1) Alice,
Is it true that eating fat keeps the body warm in cold weather?

? Land's End Ad

(2) Hi Alice,
What I'd like to know is, does my body burn more calories to keep me warm when it's cold out? Thanks!

? Chilly in NY

Answer

Dear Land's End Ad and Chilly in NY,

Quick, get a jacket, it's chilly in here! Staying warm during the cold winter months is not always easy, but with proper clothing and nutrition, cold weather doesn't have to turn you into a walking ad for, well? Land's End. Because of the process of metabolism, eating fat, or any other type of food for that matter, may make you feel warmer. Curious? Read on!

Metabolism is a series of chemical reactions in the body's cells that converts calories from the fats, proteins, and carbohydrates in our food to energy that we use for just about everything we do, from sleeping to running that NYC marathon. Think of it as a bureau d'exchange, where you convert one currency to another. Metabolic reactions constantly take place throughout the cells in our bodies with the help of enzymes, which help your body break down fats, proteins, and carbohydrates into their simplest forms, respectively, fatty acids, amino acids, and simple sugars (glucose).

The number of calories we burn in a day depends on a variety of factors, including the amount of exercise we do, the amount of fat and muscle in your body, as well as your basal metabolic rate (BMR), which is your metabolism when at rest. To learn more about factors that affect BMR, check out Does altitude affect calorie-burning? [2] in the Go Ask Alice! Nutrition and Physical Activity [3] archives. To better understand calories and how fat works in your body, check out What's more important: Calories or fat grams? [4] and Fat to muscle? [5] in the Go Ask Alice! General Health [6] archives.
When you "burn" calories, your bodies experience a slight elevation in temperature, and Chilly, here's the lowdown: when you're feeling cold (in NY or anywhere), your metabolism slows down a bit. That's why you shiver: your body is attempting to create heat and keep our internal organs warm. When you feel hot, such as when working out, your bodies expend more energy to cool off.

So, does having more body fat keep you warmer? Perhaps, and this is why: fat acts as an insulator because it doesn't conduct heat as well as other types of body tissues. Ergo, having more fat would result in more insulation.

Protecting yourself from the cold may feel like a lot of extra work (and layers), but being comfortable and warm during the winter is actually pretty cool.

Alice!
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