



ASK A NUTRITIONIST

by Tara Postnikoff

Q: Is diet and nutrition just about calories in versus calories out? Are all calories created equally?

A: A Calorie (capital C) or kcal is the amount of energy required to raise the temperature of one kilogram of water by one degree Celsius. If you are a chemist in a food laboratory, then a calorie is pretty easy to measure and track.

In the human body, however, it's not quite that simple. For years, fitness experts have said that "a calorie is a calorie", meaning if you eat less than you need, you'll lose weight. While this statement is true in a laboratory setting, in humans, not all calories are created equal. Quality matters!

For starters, there is what's called the 'thermal effect of food' or TEF, meaning certain foods require more energy to be digested. In other words, you need to spend energy to make energy. Digesting proteins takes the most energy, followed by carbohydrates, then fats. On average, the body uses about 10% of its daily energy expenditure on digesting and absorbing food, but this varies greatly depending on the foods you eat.

It turns out that processed foods take less energy to digest and absorb than whole foods, because the body doesn't have to work as hard to turn those calories into energy. If you eat more complex, whole foods, you will need to eat more of them to meet your needs. However, if you eat processed foods, you actually need fewer calories to reach your daily energy needs.

But calories (or energy) aren't the only thing the body needs to be healthy and function properly. If we solely focus on calories, we fail to take into account the quality of the food. Whole foods offer different micronutrients such as vitamins, minerals, fibre, phytonutrients, and zoochemicals. All these nutrients are integral to the body; they are necessary for the calories to be turned into usable energy and sent to the right part of the body, at the right time, to do the right work. Food isn't just for calories—it's for information.

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For their part, junk foods and processed foods can be thought of as "empty calories". They do not contain many of the micronutrients required by the body and despite sometimes being fortified with selected vitamins and minerals, they lack the key immune boosting phytonutrients or essential fatty acids that the body requires. It's very common today for many of us to be overfed (consuming more than enough calories) but undernourished (not getting all the micronutrients we need for the body to function well).

Remember that 100 calories of broccoli is not the same as 100 calories



Despite the cute factor, 100 calories of this chocolate are not the same as 100 calories of broccoli.

of candy. Those calories will have very different biological effects in the body in terms of how they are digested and how you feel after consuming them. Focus on food quality versus food quantity. Vegetables and fruits are some of our most nutrient-dense food choices available. Try to consume one cup of fresh vegetables with each meal, especially if it is not a home-cooked meal. This will improve your overall nutrient density without feeling like you have to cut back. Rather than focus on calorie counting, make the calories that you do eat, count! **RR**

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