

Milk ingredient does a waistline good

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A natural ingredient found in milk can protect against obesity even as mice continue to enjoy diets that are high in fat. The researchers who report their findings in the June *Cell Metabolism* liken this milk ingredient to a new kind of vitamin.

"This is present in what we've all been eating since day one," says Johan Auwerx of École Polytechnique Fédérale de Lausanne.

The researchers identified this ingredient, known as nicotinamide riboside, as they were searching for alternative ways to boost the well-known gene SIRT1, which comes with benefits for both metabolism and longevity. One way to do that is to target SIRT1 directly, as the red wine ingredient resveratrol appears to do, at least at some doses.

Auwerx's team suspected there might be a simpler way to go about it, by boosting levels of one of SIRT1's molecular sidekicks, the cofactor NAD⁺.

This milk ingredient does just that in a rather appealing way. Not only is it a natural product, but it also gets trapped within cells, where it can do its magic.

Mice that take nicotinamide riboside in fairly high doses along with their high-fat meals burn more fat and are protected from [obesity](#). They also become better runners thanks to muscles that have greater endurance.

The benefits they observe in [mice](#) wouldn't be easy to get from drinking

milk alone, Auwerx says. It may be more likely that the compound would serve as a new kind of metabolism-boosting supplement. Tests done in people are now needed to help sort out those details.

On the other hand, he says, this [milk](#) substance ultimately offers the same benefits attributed to resveratrol, but in a different way. It's possible that many small effects of ingredients found in our diets could add up to slimmer waistlines—perhaps longer lives, too.

More information: Canto et al.: "The NAD⁺ precursor nicotinamide riboside enhances oxidative metabolism and protects against high-fat diet induced obesity." *Cell Metabolism*, [DOI:10.1016/j.cmet.2012.04.022](https://doi.org/10.1016/j.cmet.2012.04.022)

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