

# An egg a day may help keep the doctor away

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What if eating an egg for breakfast is just as good as a bowl of oatmeal for people with diabetes? Maybe even better? Maria-Luz Fernandez, a professor of nutritional sciences in the College of Agriculture, Health, and Natural Resources, says that this may be the case.

In a paper published in the journal *Nutrients*, Fernandez and her colleagues present evidence that an egg a day may not only be an acceptable part of a diabetic's diet, it may prove to offer unexpected protection against the underlying inflammatory process that often leads to heart disease.

Fernandez explains that diabetes affects nearly 25 million Americans and as many as 400 million people throughout the world. Diabetes is a metabolic disease that occurs when the body cannot regulate glucose, or blood sugar. If it is not controlled, it can lead to blindness, kidney failure, the amputation of limbs, [heart disease](#), and even death.

Because control of their diet – including avoiding foods that are high in fat, cholesterol, sodium, and sugar – is important, most diabetics learn that eating grains, such as oatmeal, is good for them. They also learn that eating [eggs](#), because of their cholesterol content, is not.

But Fernandez and her fellow researchers challenged this assumption. They couldn't overlook the facts that eggs are filled with high quality protein and other valuable nutrients, are readily available in most parts of the world, and are easy to prepare. Plus, they taste good to most palates.

"Eggs contain the carotenoids lutein and zeaxanthin which are naturally occurring pigments that provide protection against oxidative stress and inflammation in the body," Fernandez says. "In simple terms, this means that eggs may help protect against cellular damage caused by the presence of unstable molecules called 'free radicals' that are responsible for aging, tissue damage, and some diseases."

Fernandez adds that the individuals in the study had the most common form of diabetes, Type 2, which means they cannot produce enough insulin, or have cells in their bodies that are insulin-resistant. All were under the care of physicians and had good control over their disease.

The experiment was designed so that its participants were randomly selected to consume either one egg or one bowl of oatmeal per day for five weeks. After a three week 'washout' during which time neither eggs nor oatmeal were included in their diets, they were assigned the alternate breakfast.

"At the end of 13 weeks, we found no differences in the levels of plasma total cholesterol, plasma LDL [the 'bad' cholesterol], triglycerides, glucose, or any other parameter we looked at, between the two diets," she says. "That was interesting, because the common expectation is that the oatmeal diet would be better than the egg diet. It turns out that both were equally good. But what really surprised us was that markers for inflammatory processes actually went down during the period when people were eating an egg a day."

This finding is particularly important because patients with diabetes are characterized by having low-grade inflammation that can be measured in plasma, and this was reduced by egg intake.

"We looked at the [tumor necrosis factor](#) (TNF)- $\alpha$  and interleukin 6 (L-6) in our subjects, and were surprised to see that during the time they were eating an egg a day, these levels actually went down," says Fernandez. "This gives us a strong indication that not only is it OK for diabetics to consume at least one egg daily, it actually may be beneficial in the long run."

The study was a controlled clinical intervention, with attention paid to patient compliance in areas of diet, exercise, and medication (dose/type) intake. However, it was of short duration, and patients with uncontrolled diabetes or additional complications were not included.

Plans for the future include measuring a larger cohort over a longer time period, and the controlled introduction of additional eggs in the diet of

participants.

As with any disease, people with [diabetes](#) are encouraged to consult with their own physicians before making any changes to their diet, exercise, and medication regimes.

**More information:** "One Egg per Day Improves Inflammation when Compared to an Oatmeal-Based Breakfast without Increasing Other Cardiometabolic Risk Factors in Diabetic Patients" *Nutrients* 2015, 7(5), 3449-3463; [DOI: 10.3390/nu7053449](https://doi.org/10.3390/nu7053449)

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