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Olive Oil May Protect Against Breast Cancer

MONDAY, Jan. 10 (HealthDayNews) For years, scientists have thought that olive oil might help prevent breast cancer.

Now they may have discovered why.

In laboratory experiments, oleic acid, the main monounsaturated fatty acid in olive oil, suppressed one of the most important genes involved in breast cancer.

This is the first molecular support for the Mediterranean diet, said study author Javier Menendez, a research scientist with the Evanston Northwestern Healthcare Research Institute in Illinois. The report appears in the Jan. 10 issue of the *Annals of Oncology*.

Others, however, urged caution in interpreting the findings.

It's an interesting story, but it's all done in cell cultures and that's not necessarily how it will interact in the body, said Dr. Jay Brooks, chief of hematology/oncology at the Ochsner Clinic Foundation in New Orleans.

It certainly is very promising, but there is a very long way to go between doing this in an animal or human context versus doing it on cells in a test tube, added Dr. Marleen Meyers, a medical oncologist with the New York University Cancer Institute.

Epidemiological studies have reported lower rates of breast cancer in people from the Mediterranean region, where a lot of olive oil is produced and consumed. This has led to speculation that the diet, including olive oil, may be responsible.

No one knows, however, if the protective effect can be found in olive oil, or in another ingredient besides oleic acid in olive oil, or in another food or if it has nothing whatsoever to do with diet and instead can be attributed to genetics.

For this study, Menendez and his colleagues examined human breast cancer cells that had been grown for this research.

Specifically, they were looking at the effect of oleic acid on the Her-2/neu gene. The Her-2 gene is overexpressed in more than one-fifth of people with breast cancer and also tends to signal the presence of a particularly bad cancer.

Higher Her-2 levels generally mean the cancer is more aggressive and tends to respond less well to certain kinds of chemotherapy, Meyers said. It is prognostically unfavorable.

In the cells, oleic acid cut levels of the gene Her-2/neu by up to 46 percent.

In addition, oleic acid seemed to enhance the effectiveness of the drug Herceptin, which targets the Her-2/neu gene, and increased the expression of a protein that works to suppress tumors.

Menendez and his colleagues are now seeking funds to confirm the findings in animal studies.

For Menendez, the news is already good. I'm really happy. I'm from Spain. I eat a lot of olive oil, he said. Spain is the world's biggest producer of olive oil.

Olive oil is not toxic at all. It's a very safe habit for people, he added.

For others, though, any move to consume more olive oil needs more research behind it.

Things that we take into our body can have profound effects, Brooks said. Before you start adding things to your diet, be very careful because we don't know what the effects will be.

If it does turn out to be an effect, it's an easy step in terms of recommending to people, but caveats have to be taken, Meyers added. While olive oil is a healthy oil, in people who have high cholesterol or triglycerides or weight problems, it's still an issue.

