

## Olive oil could hold key to developing new breast cancer drugs

Olive oil could hold the key to creating new drugs to combat some cases of breast cancer after researchers found it contains chemicals that stop cancerous cells growing.

By Rebecca Smith, Medical Editor  
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The oil makes up a large component of the Mediterranean-style diet which is known to protect against some forms of cancer.

Researchers have now isolated chemicals that could be the active ingredient in the oil which affects cancerous cells.

A team from the University of Granada in Spain found two chemicals made by the plant and present in the oil blocked the protein involved in some breast cancers.

Around one fifth of breast cancer tumours have the Her2 protein and grow more quickly than other forms of the disease.

Drugs such as Herceptin work against these cancers and help prevent them from returning.

New research in the journal BioMed Central reveals that chemicals called lignans and secoiridoids may work in a similar way.

Javier Menéndez from the Catalan Institute of Oncology and Antonio Segura-Carretero from the University of Granada said: "Our findings reveal for the first time that all the major complex phenols present in extra-virgin olive oil drastically suppress overexpression of the cancer gene HER2 in human breast cancer cells".

Extra-virgin olive oil is the oil that results from pressing olives without the use of heat or chemical treatments and so contains phytochemicals that are otherwise lost in the refining process.

The team isolated the chemicals called lignans and secoiridoids and tested them against breast cancer cells in the lab.

The authors said although these findings provide new insights on the mechanisms by which good quality oil, polyphenol-rich extra-virgin olive oil, might contribute to a lowering of Her 2 breast cancers the results from the laboratory cannot be extrapolated to a human diet as the concentrations needed to produce an effect were much higher than could be obtained from food.

They said: "These findings, together with the fact that that humans have safely been ingesting significant amounts of lignans and secoiridoids as long as they have been consuming olives and extra-virgin oil, strongly suggest that these polyphenols might provide an excellent and safe platform for the design of new anti breast-cancer drugs".

Dr Joanna Owens, Cancer Research UK senior cancer information officer, said: "We already know that a Mediterranean-style diet can help to protect against cancer, which includes cutting down on saturated fats often found in chocolate, crisps and cakes in favour of the monounsaturated fats found in foods like olive oil.

"In this study the researchers separated out the natural plant chemicals in olive oil and looked at their effects on different types of breast cancer cells in the lab – but the concentrations they've used are much higher than you could ever obtain from eating olive oil.

"This research is at a very early stage but investigating the potential of plant chemicals is an exciting area of research that could pave the way for the development of cancer-preventing drugs in the future."



Extra virgin oil has anti-ageing properties Photo: GETTY

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