

## Thyme Oil Helps Inflammatory Health

By Greg Arnold, DC, CSCS, January 29, 2010, abstracted from "Carvacrol, a component of thyme oil, activates PPAR-gamma and suppresses COX-2 expression" in the January 2010 issue of the *Journal of Lipid Research*

Link - <http://www.nowfoods.com/078475.htm>

Defined as "a crucial protective mechanism" that helps repair tissue and protect the body against infection, inflammation is a normal reaction by our immune system to help keep us healthy. But too much inflammation can have disastrous health consequences and lead to heart disease, dementia, arthritis, and type 2 diabetes (1, 2), which cost our healthcare system \$448 billion (3), \$156 billion (4), \$128 billion (5), and \$174 billion per year (6).

Now a new lab study (7) has found that thyme oil, thanks to an antioxidant it contains called carvacrol, is able to help maintain healthy inflammation levels. It does this by decreasing pro-inflammatory protein activity and increasing anti-inflammatory protein activity.

In the study, researchers exposed two different types of cells (U937 (8) and BAEC (9) to thyme oil and found two different mechanisms by which thyme oil helps maintain healthy inflammation levels. In the U937 cells, thyme decreased activity of an inflammatory protein called COX-2.

Specifically, carvacrol at two different doses (200 and 400 microMolar) decreased COX-2 activity by 40% and 60%, respectively, while a higher dose (1000 microMolar) decreased COX-2 activity in the BAEC Cells by 86%.

The second mechanism by which thyme oil helps maintain healthy inflammation levels is by increasing activity of a protein called PPAR, two different types of which are PPAR-alpha and PPAR-gamma. In both cell lines, carvacrol at levels of 100, 200, and 400 microMolar increased PPAR-alpha levels by 95%, 220%, and 280%, respectively, while increasing PPAR-gamma levels by 45%, 125%, and 145%, respectively, both of which signify a decrease in inflammation (10).

For the researchers, "we identified carvacrol, a chemical component of thyme oil, as a suppressor of COX-2 and activator of PPAR [alpha] and [gamma]" and that "our results may be important in understanding the anti-inflammatory and anti-lifestyle-related disease properties of carvacrol,"

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