

# Thyme oil can inhibit COX2 and suppress inflammation

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For those who do not drink, researchers have found that six essential oils -from thyme, clove, rose, eucalyptus, fennel and bergamot—can suppress the inflammatory COX-2 enzyme, in a manner similar to resveratrol, the chemical linked with the health benefits of red wine. They also identified that the chemical carvacrol was primarily responsible for this suppressive activity.

These findings, appearing in the January issue of [Journal of Lipid Research](#), provide more understanding of the health benefits of many botanical oils and provide a new avenue for anti-inflammatory drugs.

Essential oils from plants have long been a component of home remedies, and even today are used for their aromatherapy, analgesic (e.g. cough drops), or antibacterial properties. Of course, the exact way they work is not completely understood. However, Hiroyasu Inoue and colleagues in Japan believed that many essential oils might target [COX-2](#) much like compounds in wine and tea.

So, they screened a wide range of commercially available oils and identified six (thyme, clove, rose, eucalyptus, fennel and bergamot) that reduced COX-2 expression in cells by at least 25%. Of these, thyme oil proved the most active, reducing COX-2 levels by almost 75%.

When Inoue and colleagues analyzed thyme oil, they found that the major component -carvacrol- was the primary active agent; in fact when they use pure carvacrol extracts in their tests COX-2 levels decreased by

over 80%.

**More information:** "Carvacrol, a component of thyme oil, activates PPAR-gamma and suppresses COX-2 expression" by Mariko Hotta, Rieko Nakata, Michiko Katsukawa, Kazuyuki Hori, Saori Takahashi, and Hiroyasu Inoue, *Journal of Lipid Research*.

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