

Oil of wintergreen is an essential oil traditionally obtained from wintergreen plants such as *Gaultheria procumbens*. Its primary active chemical is **methyl salicylate**, a salicylate closely related to aspirin. It has the familiar strong, sweet “wintergreen” smell and is used in some topical muscle/joint pain products, flavorings, fragrances, and industrial products. Concentrated wintergreen oil deserves particular caution because methyl salicylate can be absorbed through the skin and is especially dangerous if swallowed.

Short-term effects of exposure

The effects depend heavily on **how you were exposed, the concentration, and how long the exposure lasted.**

Exposure route	Possible short-term effects
Breathing vapors	Irritation of the nose/throat, headache, nausea or dizziness, particularly with concentrated or prolonged exposure
Skin contact	Irritation, redness or burning; methyl salicylate can also be absorbed through the skin
Eye contact	Burning, redness, tearing and irritation
Swallowing	Nausea, vomiting, abdominal symptoms and potentially serious salicylate poisoning
Significant systemic exposure	Ringing in the ears (tinnitus), rapid breathing, sweating, dizziness, confusion and disturbances in the body's acid-base balance
Severe poisoning	Seizures, altered consciousness, respiratory problems, organ injury and potentially death

One reason concentrated wintergreen oil is deceptive is that **a relatively small volume can contain a substantial amount of methyl salicylate.** Poison Control specifically warns that swallowing wintergreen oil can produce the equivalent of taking a large quantity of aspirin.

What about long-term exposure?

This is where the distinction between occasional exposure and **repeated occupational exposure** becomes important. Long-term effects from simply smelling small amounts of wintergreen aren't as well characterized as acute methyl-salicylate poisoning.

However, **repeated or substantial absorption of methyl salicylate** can potentially produce chronic salicylate toxicity. Symptoms may include persistent headache, nausea, dizziness, tinnitus or hearing changes, rapid breathing, fatigue, confusion and other neurological symptoms. Repeated skin exposure can also produce irritation or dermatitis.

A person using methyl-salicylate products repeatedly over large areas of skin can absorb much more than expected. Absorption can increase when the product is applied heavily, used on damaged skin, covered with an occlusive dressing, or combined with heat.