

Medicinal Effects of Menthol

Medicinal effects of menthol, a natural plant-based compound, have been used for millennia for common health conditions. Today it is used in many antiseptic and analgesic compounds. Menthol's cooling effect helps relieve sore throat pain and other mouth irritation as well as respiratory ailments. It is helpful in relieving itching and has a cooling effect on the skin. Menthol also helps gastrointestinal problems such as gas and bloating.

Menthol is an important component of a number of essential oils. It is present in significant amounts in the following oils:

- [Peppermint](#) 33–60%
- Spearmint 16%

Here are a few research studies that confirm the medicinal effects of menthol.

Effects of Menthol on Coughing



Advertising For Spud Menthol Cigarettes, A Great New Product Of Philip Morris Inc., Life Magazine, January 28, 1957



This is one of the medicinal effects of menthol which is important to cigarette manufacturers. One of the important selling points for a cigarette is to reduce the amount of coughing a smoker does. This makes the cigarette seem more “healthful.”

A study ([Effect of inhaled menthol on citric acid induced cough in, normal subjects](#)) reported in the medical journal *Thorax* described a study in which twenty healthy people inhaled a spray intended to induce coughing. Five minutes before inhaling the cough inducing spray, the subjects were given an inhaler spray with wicks of either 75% menthol in eucalyptus oil or one of two placebos. Those receiving the menthol spray had a highly significant ($p < 0.0005$) reduction in cough frequency.

Effects of Menthol on Itching

An article in the *Singapore Medical Journal* ([Phenol and menthol in the treatment of chronic skin lesions following mustard gas exposure](#)) reported on how menthol helped Iranian soldiers affected by mustard gas.

About 10% of sulfur mustard or mustard gas is absorbed into the skin. This sulfur mustard is very difficult to remove. The most common complaint by those exposed to sulfur mustard is itching (pruritus).

Eighty subjects were selected for the study. Forty received an ointment with 1% phenol and 1% menthol while the others received a placebo ointment. The group receiving the phenol/menthol ointment experienced a significant ($p = 0.02$) reduction in itching while the placebo group did not see a statistically significant reduction.

Another article ([The Effect of Peppermint Oil on Symptomatic Treatment of Pruritus in Pregnant Women](#)) in the *Iranian Journal of Pharmaceutical Research* described a study of menthol for treatment of itching in pregnant women.

Pruritus gravidarum (generalized itchiness of late pregnancy) is present in 1-8% of women during the late second through third trimester of pregnancy. Itching starts in the abdomen and often expands to the chest and upper extremities.

A total of 96 women completed this study. 47 of the women received a 60mL bottle of sesame oil base with 0.5% peppermint oil. 49 women received a 60mL bottle of sesame oil (placebo). All patients applied the ointment twice a day to affected areas. Researchers evaluated the severity of itching before and after the two week study period.

Both groups experienced a very significant ($p < 0.001$) reduction in the severity of itchiness. However, after treatment the severity of itchiness was significantly lower ($p = 0.02$) for the peppermint group.

Effects of Menthol on Sufferers of Chemotherapy Induced Nerve Injury

Then journal *Supportive Care in Cancer* published an article ([Cancer treatment-related neuropathic pain: proof of concept study with menthol—a TRPM8 agonist](#)) showing how menthol reduced pain in patients suffering from chemotherapy-induced peripheral neuropathy (nerve injury).

Neuropathic pain resulting from cancer treatment is increasing because more people are getting cancer and survival rates are increasing. Certain chemotherapy drugs cause chemotherapy-induced peripheral neuropathy in up to 96% of patients. This study tested the pain relieving properties of menthol for neuropathic pain.

Researchers were able to evaluate pain levels in 38 patients after a 4-6 week trial. The patients treated the painful areas twice a day with a topical 1% menthol cream. Researchers interviewed patients to determine the level of pain before the trial, after at two weeks, and again at 4 to 6 weeks.

In this study 31 out of 38 patients had improvements in the pain scores. The pain level improved from an average of 47 to 34 (out of 70 pain points). This represented a highly significant ($p > 0.001$) reduction in pain. In addition to improvements in pain, there were improvements in walking velocity and cadence, mood, sensation, as well as overall increased functionality.

Effects of Menthol on Diaper Rash

An article ([Role of menthol in treatment of candidial napkin dermatitis](#)) in the *World Journal of Pediatrics* how menthol can help heal diaper rash (candidial napkin dermatitis).

In this report 70 patients completed the study. 35 received a common treatment (topical clotrimazole) plus menthol drops. 35 received the common treatment plus placebo drops. The menthol drops consists of 5% menthol in an ethanol and polyethylene glycol base. The placebo did not contain menthol. The menthol or placebo drops were applied twice daily and after 10 minutes the clotrimazole was applied.

The rash in patients using the menthol drops decreased significantly more rapidly and complete healing was shorter in the menthol group ($p = 0.0001$).

Medicinal Effects of Menthol Summary

Menthol has been studied extensively and the medicinal effects of menthol have positive, scientifically verified results. New studies of its medicinal effects are ongoing. At the time of this writing some upcoming studies include:

- [Topical Menthol +/- Mannitol for Painful Diabetic Peripheral Neuropathy](#)
- [L-Menthol Infusion as a Novel Technique During Colonoscopy \(MINT-C\)](#)
- [Effects of Flavors on Nicotine Reinforcement in Smokers](#)
- [Menthol for PDT Pain \(MentholPDT\)](#)

It's clear that menthol as contained in some essential oils has clear medicinal effects. Because it's a natural substance, it may be better for you than some pharmaceutical drugs that have negative side effects.