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Memorial Sloan Kettering
Cancer Center

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Pennyroyal is an extremely toxic herb that has caused multiorgan failure and death in several people.

Pennyroyal is a flowering plant that was used in folk medicine to induce abortion, alleviate menstrual symptoms, and to treat inflammatory conditions and minor ailments. The oil itself is highly toxic, and is not recommended for internal use. A substance called pugelone in pennyroyal is thought to be responsible for its toxic effects and tissue damage. Studies in both animals and humans show that pulegone is also directly toxic to the nervous system. There have been a number of case reports and also several deaths attributed to the use of this botanical.

What are the potential uses and benefits?

There is no scientific evidence for use of pennyroyal in the following conditions:

- To induce menstruation
- To treat lung conditions
- To treat cancer
- To treat colds or flu
- To treat headaches
- To induce abortion
- To reduce inflammation
- As an insect repellent
- To relieve PMS symptoms
- To treat toothaches

What are the side effects?

- Dizziness
- Weakness
- Hallucinations
- Nausea, cramps, and stomach upset
- Liver and kidney toxicities

Case Reports

- At least 24 cases of pennyroyal toxicity, including liver and kidney failure, low blood sugar, blood clotting problems, acidic blood pH, GI hemorrhage, lung congestion, mental status changes, brain swelling, seizures, and death.
- A 76-year-old woman experienced acute liver failure, possibly caused by drug interactions with pennyroyal tea.
- There are several reports of young women who took pennyroyal oil for its abortion-inducing effects and died of multiorgan failure.
- Two cases of multiorgan failure in infants who were given pennyroyal herbal tea as home remedies.

What else do I need to know?

Patient Warnings:

- This botanical contains compounds that are toxic to both animals and humans.

Do Not Take if:

In general, pennyroyal oil is highly toxic and is not recommended for internal use.

- You are pregnant or breastfeeding: Pennyroyal can cause miscarriage and other toxic effects.
- You are taking iron supplements: Pennyroyal may reduce bioavailability by 50% or more.
- You are taking CYP450 substrate drugs: A case report of acute liver failure was possibly caused by drug interactions with pennyroyal tea.

If you have questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

Pennyroyal - Last updated on January 12, 2022

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