

Ready to start planning your care? Call us at [800-525-2225](tel:800-525-2225) to make an appointment.

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Cancer Center

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A specific form of perillyl alcohol may be helpful in palliative care patients with recurrent gliomas. However, oral forms were not effective in several cancers and were accompanied by adverse side effects.

Perillyl alcohol (POH) is a natural substance called a monoterpenene, isolated from the essential oils of [lavender](#) , [peppermint](#) , spearmint, cherries, celery seeds, and several other plants. Laboratory evidence suggests that it interferes with the replication of dividing cells. POH has shown antitumor activity against a range of cancer types including pancreatic, lung, colon, and liver cancers in laboratory and animal studies, but these results have not yet translated into benefits in humans. Clinical trials of oral POH for various cancers including breast, prostate, and ovarian cancers did not find benefit and also noted adverse side effects, even after modifying dosing regimens to try to improve effectiveness and tolerability. However, an inhaled form of POH has shown preliminary evidence of safety and effectiveness in patients with recurrent gliomas. In addition, other purified forms are being studied as chemical modifiers of established drugs used to treat cancer in order to improve outcomes.

Natural products such as tart cherry juice may contain POH. However, the POH that occurs in natural

products is different from the highly purified form that is being used for research and clinical trial purposes to determine safety and efficacy.

What are the potential uses and benefits?

- To prevent and treat cancer

POH developed as a nasal spray has shown initial evidence of safety and effectiveness in palliative care patients with recurrent gliomas. Topical POH applied to sun-damaged skin was not effective in preventing skin cancers. Use of oral POH has been associated with adverse effects.

What are the side effects?

- Oral POH: Nausea, unpleasant taste, gastrointestinal distress, feeling full after eating a small amount of food, fatigue

Toxicity can develop at high doses including nausea, fatigue, diarrhea, low blood potassium levels, inflamed oral mucous membranes, and loss of appetite. There have also been cases of vomiting, low white blood cell counts, and inflammation of the pancreas.

- Intranasal POH: Initial studies have shown good tolerability and no adverse effects.

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.

Perillyl Alcohol - Last updated on March 17, 2023

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