

European Mistletoe

This fact sheet provides basic information about the herb European mistletoe—common names, uses, potential side effects, and resources for more information. European mistletoe is a semiparasitic plant that grows on several types of trees in temperate regions worldwide. Where the term “mistletoe” is used in this fact sheet, it refers to European mistletoe. (European mistletoe is different from American mistletoe, which is used as a holiday decoration.)

Common Names—European mistletoe, mistletoe

Latin Name—*Viscum album* L.

What It Is Used For

- Mistletoe has been used for centuries in traditional medicine to treat seizures, headaches, and other conditions.
- Mistletoe is used mainly in Europe as a treatment for cancer.

How It Is Used

- The leafy shoots and berries of mistletoe are used to make extracts that can be taken by mouth.
- In Europe, mistletoe extracts are prescription drugs that are given by injection. In the United States, mistletoe by injection is available only in clinical trials.

What the Science Says

- Laboratory studies have found that mistletoe kills cancer cells and stimulates the immune system.
- The use of mistletoe to treat cancer has been studied in Europe in more than 30 clinical trials. Although improvements in survival or quality of life have been reported, almost all of the trials had major weaknesses in their design that raise doubts about the findings. For example, many of the studies had a small number of participants or did not have a control group.
- NCCAM is sponsoring a clinical trial of mistletoe, given in combination with the drug gemcitabine, for cancer. The study will look at toxicity, safety, and immune system effects of mistletoe extract when combined with this chemotherapy drug.

Side Effects and Cautions

- Raw, unprocessed mistletoe is poisonous. Eating raw, unprocessed European mistletoe or American mistletoe can cause vomiting, seizures, a slowing of the heart rate, and even death. American mistletoe is unsafe for medicinal use.

- In countries where commercial mistletoe is available by injection, such as Germany, those extracts are considered to be generally safe when used according to product directions and under the supervision of a health care provider.
- Injected mistletoe extract may cause itching or redness in the area of the injection. Less commonly, side effects may include more extensive skin reactions, low-grade fevers, or flu-like symptoms. There have been very rare reports of more serious allergic reactions, such as difficulty breathing.
- Because mistletoe has not yet been proven to be a safe and effective cancer treatment, it should not be used outside of clinical trials.
- It is important to inform your health care providers about any herb or dietary supplement you are using, including mistletoe. This helps to ensure safe and coordinated care.

Sources

National Cancer Institute. *Mistletoe Extracts (PDQ)*. National Cancer Institute Web site. Accessed at <http://www.cancer.gov/cancerinfo/pdq/cam/mistletoe> on June 30, 2005.

National Center for Complementary and Alternative Medicine. *Frequently Asked Questions About the Mistletoe-Gemcitabine Study*. National Center for Complementary and Alternative Medicine Web site. Accessed at <http://nccam.nih.gov/mistletoe/faq> on June 30, 2005.

European mistletoe. Natural Medicines Comprehensive Database Web site. Accessed at <http://www.naturaldatabase.com> on June 30, 2005.

American mistletoe. Natural Medicines Comprehensive Database Web site. Accessed at <http://www.naturaldatabase.com> on June 30, 2005.

For More Information

Visit the NCCAM Web site at nccam.nih.gov and view:

- “What’s in the Bottle? An Introduction to Dietary Supplements” at nccam.nih.gov/health/bottle
- “Herbal Supplements: Consider Safety, Too” at nccam.nih.gov/health/supplement-safety

NCCAM Clearinghouse

Toll-free in the U.S.: 1-888-644-6226

TTY (for deaf and hard-of-hearing callers): 1-866-464-3615

E-mail: info@nccam.nih.gov

CAM on PubMed

Web site: www.nlm.nih.gov/nccam/camonpubmed.html

NIH Office of Dietary Supplements

Web site: www.ods.od.nih.gov

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