Mistletoe (Viscum album)

Mistletoe is a plant that grows on trees such as apple, pine, oak, and elm. It is also called iscidor, helixor, and isorel. Scientifically, it is known as viscum album. It is a semiparasitic plant because it can absorb nutrients from its host plant.

There are many different types of mistletoe. The most well-known is the Western European version, which has rounded emerald leaves and white berry clusters that can have anywhere from 2 – 6 berries. The Eastern European version can have as many as 10 berries and shorter broader leaves.

**Historical Uses**

Mistletoe was used as an antidote for poisons and to treat barrenness and constipation. It has cultural significance, as some Cornish traditions made replicas of the cross out of mistletoe. There is also the act of kissing someone if you are both "under the mistletoe."

**Current Uses**

As an alternative form of medicine in European countries, mistletoe is used to treat cancer. Mistletoe extract has been shown to kill cancer cells in test animals and to boost the immune system by increasing the number of white blood cells. It has also been shown to reduce the side effects of chemotherapy and radiation therapy and improve quality of life. There have been many studies looking at these uses, though weaknesses in these research studies have prevented mistletoe from being used in the U.S. Researchers believe it fights cancer by stopping the creation of blood vessels that help cancerous tumors grow. For this reason, mistletoe has been classified as a biological response modifier and anti-angiogenic.

**Active Compounds**

Researchers believe viscotoxins, polysaccharide, and lectins are the active ingredients in mistletoe extract.

**Parts Used and Preparations Available**

Mistletoe extracts depend on the species of plant used, how it is prepared, and even what time of year it is harvested. This makes study results hard to generalize. Mistletoe extracts are available in many parts of Europe and are usually given by injection under the skin. Sometimes they are given into a vein, pleural cavity, or directly into a tumor. The U.S. Food and Drug Administration (FDA) has not approved the use of mistletoe for any medical purpose in the U.S. that is not research.

**Side Effects and Safety Concerns of Herbal & Nutritional Supplements**

Side effects vary depending on the type of mistletoe used. Raw mistletoe leaves, branches, and berries are poisonous and should not be eaten. Mistletoe can cause stomach pain, diarrhea, low heart rate, seizures, and even death.

Purified mistletoe, which is made for injection, is considered safer. Side effects include inflammation at the injection site, headache, fever, and chills, though these are not very common. Side effects of purified mistletoe tend to be minor and not serious enough to cause concern. In rare cases, a person could be allergic and have a reaction that can cause trouble breathing, rash, redness, and low blood pressure.

You should talk to your provider about any questions you have about mistletoe.
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OncoLink should not be used for diagnosing or treating a health problem or a disease. It is not a substitute for professional care. If you have or suspect you may have a health problem or have questions or concerns about the medication that you have been prescribed, you should consult your health care provider.