

Mistletoe Therapy

What Is Mistletoe?

Helixor's mistletoe products are pure, sterile filtered, aqueous fresh plant extracts of *Viscum album L.* (white-berried mistletoe). *Viscum Album* is the most commonly used non-conventional treatment in Germany. VA has other historical applications including hypertension, epilepsy, and osteoarthritis. Its first recorded use in cancer patients was in 1916 in Leukemic patients. The traditional mode of application of *viscum album* is via subcutaneous injection beginning with low doses and gradually escalating dose in a methodical way based on patient constitution and tolerance. In this manner it can be an effective supportive therapy for cancer patients helping improve conventional treatment tolerance and efficacy, enhancing quality of life, and potentially positively affect survival. Mistletoe (VA) therapy is a useful complement to surgery, chemotherapy and radiation. The goal is to strengthen the body's resistance and immune system, and to improve sleep, mood and frequent complaints such as fatigue and loss of appetite.

Clinical Indications

- Tumor response in patients on 2nd line or beyond conventional treatment protocols
- Palliative treatment of metastatic disease (especially bone mets) for pain control and other QOL measures
- Primary treatment in patients who have refused conventional care with the known caveat that there have been only 2 published cases of CR in IV and intra-lesional VA. Therefore patients need to be advised that this is not a likely curative treatment
- Immunomodulation: activation of macrophages, dendritic cells and natural killer cells, enhancement of phagocytosis as well as increase of eosinophils, lymphocytes and T-helper cells.
- DNA protective effects on peripheral immune cells, protection from immunosuppressive effects of chemotherapy, therefore better tolerability of chemotherapy.

How Often Should I use Mistletoe?

The goal for subcutaneous injections of mistletoe is 2-3x /week, however this will depend on your body's immune system's reactions. The optimal dose can be determined by observing reactions involving improvement of general condition, improvement of particular complaints, slight increase in body temperature (0.5-1.0 degrees C), and/or redness and swelling at the injection site 1-2 days post injection. Your dosing schedule will be further discussed with your Naturopathic Doctor or Nurse.

During the early phases of treatment a transient local reaction (redness, swelling and induration of the skin) may occur at the injection site. This is a normal, therapeutically desired reaction and does not indicate an allergy. The local skin reaction indicates that the immune system responds to the therapy.



Mistletoe Therapy (Continued)

Contraindication for Use

- Patients where strong immune stimulation may lead to a worsening of comorbid conditions or may lead to allergic type reactions
 - Patients with Auto-immune conditions (Type A is OK in these conditions)
- Tumor location where significant swelling (100-200% of pretreatment size) might lead to dangerous complications. Examples include:
 - Head and neck tumors
 - Prostate tumors
 - Lung tumor

How to Inject:

1. Remove one ampoule from the package.
2. Open the ampoule by snapping it backwards at the red dot.
3. Place the injection needle (already attached to the syringe) into the ampoule and remove the contents by drawing back on the syringe. Be careful not to bang the needle on the side or bottom of the ampoule as this dulls the needle and results in a more difficult injection.
4. If some air is remaining in the syringe, hold the needle upright and slowly push the plunger until a drop of fluid comes out the top of the needle, indicating that the air is removed.
5. Take a skin fold between your thumb and index finger and insert the short needle entirely with your other hand at a 45 degree angle. Check whether the needle is inserted correctly by depressing the plunger. If blood appears in the syringe, pull the needle back and insert again at a shallower angle.
6. Inject the entire contents of the syringe slowly into the fold of skin.
7. Dispose properly of the needle and ampoule in a sharps container (available from your local pharmacy). The syringe can be disposed in normal household waste.

- If no reaction > continue to increase dose.
- Desired reaction up to 5cm in diameter > maintain dose
- Reaction of 5cm in diameter > reduce dose by one strength
- Reaction of more than 5cm > reduce dose by two strengths

Note: before the next injection, wait for the previous reaction to start to fade. Please inform your Naturopathic Doctor if you experience redness and swelling at the injection site greater than 5cm in diameter, fever/flu-like symptoms or an allergic reaction.

Do not inject in inflamed skin (such as inflamed area from an earlier injection), fresh scars, radiation fields, the breast or arm next to the breast where you have had surgery. Appropriate injection sites are abdomen, upper thigh or upper arm. Take care to rotate injection sites, and to inject as far away from recent injection sites as possible.