

Adverse reactions to alternative medicines

While complementary and alternative medicines (CAM) are often considered to be safe, side-effects and allergic reactions may occur. Allergic reactions to CAM are most common in people with other allergic diseases, such as asthma or allergic rhinitis (hay fever). These people are often sensitive to many allergens, including those in herbal medicines.

Adverse interactions with CAM and drug treatments can occur

Many adults and children in Australia and New Zealand use CAM to treat or prevent various ailments. Some people use these together with medications prescribed by their doctor.

Regardless of your decision in this regard, it is important to let your doctor know if you are taking CAM. This is because side effects from some CAM may occur, and because some CAM may interfere with the action of conventional medications can occur. It is also important to realise that CAM have not been subjected to the rigorous study undertaken with conventional medicines.

Many herbal medicines are made from Asteraceae flowering plants

The Asteraceae are common flowering plants. Exposure to these plants is common and hard to avoid. Pollen from Asteraceae plants are an important cause of allergic rhinitis (hay fever) and asthma. These plants are sometimes used as herbal medicines. Asteraceae plants include:

- FLOWERING PLANTS such as **chrysanthemums, dahlias, sunflowers, marigolds, safflower** and **daisies** - the pollen from *Chrysanthemum* and sunflower cause symptoms in some people who are exposed to heavy concentrations, such as flower growers.
- EDIBLE PLANTS such as **lettuce, safflower, chicory** and **artichoke**
- WEEDS such as **Ambrosia (ragweed) species, Artemisia (mugwort, sagebrush, wormwood) species, Parthenium (feverfew)** - the pollen from these plants are important causes of allergic rhinitis (hay fever) and asthma
- CAM such as **echinacea, dandelion, chamomile, feverfew, milk thistle** and **wormwood**.

Cross-reactivity may explain allergic reactions to CAM and some foods

Some people who are sensitive to substances in pollen will also be sensitive to similar substances present in other plants, like raw or semi-cooked fruit or vegetables. This is known as cross-reactivity. One of the most common examples is "**Oral Allergy Syndrome**". In this condition, itching and swelling of the mouth and tongue occurs, usually after eating uncooked or semi-cooked fruit. Most of those affected have other allergies like asthma or allergic rhinitis (hay fever), and are sensitive to pollen allergens.

Sensitisation to Asteraceae pollen has also been linked with allergic reactions to plant-derived CAM such as **Echinacea, Royal Jelly, bee pollen extracts** and chamomile, as well as foods like **celery, honey, sunflower seeds, carrot, lettuce, watermelon** and **nuts**.

Allergic reactions to Echinacea can be severe

Echinacea (from the Asteraceae group of plants) is a popular herbal remedy in Australia, with around 1 in 20 people taking it in any one year. More than 24 allergic reactions to Echinacea had been described in Australia by the end of 2000 (Mullins and Heddle, 2002). Reactions included anaphylaxis (the most severe type of allergic reaction), acute asthma attacks, severe urticaria (hives) and swelling. Four were hospitalized and *Echinacea* was the only implicated medication in 15 cases. Over half were known to have other allergies. Many reactions occurred after their first ever known dose.

Other adverse reactions to Echinacea

Burning or stinging of the tongue is a common experience. Injections of Echinacea can cause shivering, fever and muscle weakness. Hepatitis has also been described. Other symptoms reported include rashes, delayed asthmatic reactions, muscle aches and pains and stomach upset.

Contact allergic dermatitis

Asteraceae plants may cause contact allergic dermatitis. Echinacea, daisies, chrysanthemum, chamomile, tansy, dandelion, feverfew and sunflowers have all been associated with contact allergy in gardeners and florists. Similar symptoms can be caused by plant extracts in cosmetics, shampoos and massage oils. Contact with airborne plant-derived allergen can also trigger rashes in exposed skin, a condition commonly known as "Australian bush dermatitis".

Use of Asteraceae containing CAM in pregnancy may be unwise

Few published studies have looked at the safety of CAM during pregnancy or lactation. This is an important issue, as up to 1 in 6 pregnant women in the developed world use these medications. Unfortunately, toxicity (such as a baby born with lead poisoning) and serious allergic reactions (such as to **chamomile**) have been described. Only one very small study of 206 pregnant Canadian women has examined whether **Echinacea** is safe to use during pregnancy. While no adverse reactions were noted, this study only had the power to detect major causes of deformities.

The properties of some other *Asteraceae* plants suggest they should be avoided. For example, **feverfew** can trigger pregnancy loss in cattle and stimulate uterine contractions in pregnant women. **Chamomile** causes malformations in animal studies. **Safflower, tansy, feverfew, calendula, chamomile, yarrow, milk thistle** and **wormwood** promote menstruation, stimulate uterine contraction and can trigger abortions in animals (Ernst, 2002a; Newall et al., 1996). Taken together with the potential for allergic reactions, the safety of *Asteraceae*-containing CAM during pregnancy is unknown.

Drug interactions, contraindications and precautions

One in 5 people in Canada, the USA and Australia use prescription drugs at the same time as CAM. The risk of adverse events is increased if the CAM has drug like activity or interferes with the way in which the body deals with these drugs.

For example, some liver enzymes play a major role in drug breakdown and detoxification by the liver. Echinacea, milk thistle and chamomile can interfere with some of these enzymes and increase or decrease the effects of some medications. This can lead to increased side effects or reduced benefit from taking these medicines.

Feverfew has aspirin-like activity and may increase the risk of bleeding while taking blood thinners like warfarin or aspirin. **Chamomile** contains natural warfarin-like "coumarins" which increase the risk of bleeding in those taking warfarin as a medication.

Because of the claim that **Echinacea** has a short-term stimulatory effect on the immune system, some authorities recommend that echinacea be avoided in patients with autoimmune disease (such as lupus or multiple sclerosis), in those with chronic HIV/AIDS infection or TB/tuberculosis. For similar reasons, it is commonly recommended that echinacea be avoided in patients undergoing organ transplantation, to reduce the risk of rejection. Similarly, echinacea is thought to inhibit wound healing and should be avoided if surgery will be performed in the near future.

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