

## Ragweed Allergies and Air Purifiers

Ragweed is a flowering plant that comes from the sunflower family.

Unfortunately, once this plant takes root in a given area, it is very difficult to completely rid the area of ragweed. Thus, it is considered an invasive plant species. Ragweed can be found in the temperate regions of North and South America, as well as other temperate regions in the Northern Hemisphere.

### **Why Are People Allergic to Ragweed?**

The flower of the ragweed plant typically blooms from early July until the weather gets colder. One ragweed plant can release as many as a billion pollen grains. Ragweed pollen grains are very small. At approximately 19-20 microns in diameter (or 1/25,000<sup>th</sup> of an inch), these grains are microscopic (humans can usually see no smaller than 40 microns). Goldenrod is often mistaken for ragweed, but goldenrod does not release pollen into the air. Instead, goldenrod is pollinated by insects and so is typically not an allergenic plant. Those who suffer from ragweed pollen allergies are said to suffer from 'hay fever'.

When small grains of pollen are ingested or inhaled, the body recognizes these particles as foreign entities. One in seven people have bodies that 'overdo' the immune response to these pollen grains. Their bodies mount an immune response by releasing antibodies into the body's system and by creating a large inflammatory response (with chemicals from within the body such as histamine). The effects of these responses include runny nose, swollen and teary eyes, coughing, increase in mucus production, sneezing, itchy eyes and skin, swollen nasal passages, rashes and hives. Some people may even suffer from asthma.

### **What Can I Do About Ragweed Allergies?**

There are many things you can do to make yourself more comfortable during hay fever season:

1. One can purchase over the counter anti-histamine medications to prevent part of the immune response in the body. This tends to be very effective, but can have side effects such as drowsiness or dry mucous membranes.
2. Immune therapy is also a popular form of medical treatment. Doctors will give patients a shot of the exact allergen that causes a problem, but in very dilute form. The body mounts an antibody response against the protein, thus essentially 'vaccinating' the person from the foreign particle. People must go for shots from once a week to once a month....a very inconvenient therapy. When people stop the shots, their acquired immunity usually dissipates as well (in other words, one must continue this therapy indefinitely).
3. One can stay indoors as much as possible. Unfortunately, pollen tends to follow you indoors and has many ways of finding its way into houses and

other buildings. Keeping windows closed and bathing yourself and your pets



often will keep the density of pollen down.

4. One can buy a HEPA air purifier. HEPA purifiers are designed to capture small particulate matter from micron to sub-micron sizes. Prefilters will capture the larger particles, but ragweed pollen, at 19-20 microns in diameter, will likely pass right through the prefilter. Since HEPA filters capture particles as small as 0.3 microns in size, they will absolutely capture ragweed pollen grains. It is important to note that the size of the air purifier matters in relation to the size of the room. It is also important to realize that one must maintain the filter and replace it at regular intervals. Good quality HEPA air purifiers will help you by digitally keeping track of the efficiency of the filter and of the cleanliness of the filter. Good quality HEPA air purifiers will also have a good fan to push air through the filters such that they will cycle the air in the room at least 4-5 times. Check out [Airgle Room Air Purifiers](#).