

## Air Purifier Animal Dander



Dander is the fine, dry, shed skin particles of animals. Shedding dead skin cells is a normal process mammals use to remove bacteria and other contaminants from the skin. Humans produce dander as well, most noticeable in the scalp as dandruff. The reason dander is a concern is not just because of the particles themselves, which can be small enough to breathe in, but also because they become the vehicle for allergy causing materials that otherwise wouldn't float around in the air.

### Dander and allergies

According to the Asthma and Allergy Foundation of America, one in five Americans suffer from one or more allergies. What's worse, the rate is increasing. The situation is worse for children with allergy being the third most common chronic medical condition in those under 18.

While we usually think of allergies as linked to pollen or pollutants, the most common indoor allergy is to pets, and of those, cat dander allergy accounts for 10 million cases a year. Pet dander, along with rodent dander (both pets and pests), tends to accumulate in carpeting, ceiling tiles, furniture, behind walls and in bedding. Even though dogs produce the most (because of size and scratching behaviors), cat dander is the most allergenic – and all breeds of cats and dogs produce dander.

Surprisingly, the culprit isn't the dander itself. The actual molecules that cause the allergic symptoms are proteins that these animals produce. The proteins are present in saliva and urine. The dander acts as a vehicle to spread the proteins throughout the house. When the animal licks their fur, some of the protein gets transferred to the skin or dander that is present in the fur. This then dries and falls off the pet. The small particles then become airborne when disturbed or through normal air currents present in the house. If you've ever seen dust particles dancing in a

beam of sunlight, you've seen dander floating in the air. Each of these particles is loaded with proteins that originated in saliva or urine – importantly, they don't break down for weeks to months. The solution is to remove them entirely.

## **Air purifier to remove dander**

First, a caution: furnace air filters, even good ones, will not remove the majority of dander from the air. The reason is that the best air filter cannot remove what doesn't reach it. Since the fine particles settle out or get caught in carpets, furniture and other fibrous materials, the dander never reaches the furnace air filters.

The best [air filter](#) has to be combined with enough air movement to capture any dander floating around. This is why an air purifier for home use will be rated by how much square footage it can cover effectively. The balance is between moving enough air to get the dander before it settles and having the best air filter available. The better the filter, the finer the material and the harder it is to move air through it.

You may see [air cleaners](#) that are very small but are advertised as “whole room” or even “whole house.” Moving that much air is only possible if the filter is poor (and too porous). A true [air purifier](#) will not make claims that aren't tested and supported. The same caution comes for furnace air filters. These are generally meant to capture only relatively large dust particles – animal dander flows right through the system and is redistributed around the house by the blower of the furnace itself.

Along with a true air purifier, frequent vacuuming and cleaning of surfaces is recommended, as well as bathing pets, changing their bedding, and keeping your animals off furniture where dander can lodge.