

# House Dust Mites

(*Dermatophagoides pteronyssinus* and *Dermatophagoides farinae*)

House dust mites are one of the most significant indoor allergens in the human environment. They are actually related to spiders (eight legs) rather than insects, and love to feed on human skin scales and dander. They thrive in human bedding, where skin scales accumulate. Since the average human sloughs off about 10 grams of dead skin per week, the mites can have plenty to grow on! Mites grow best in warm temperatures (75 - 80° F) and high humidity (above 60%). Under such ideal conditions, bedding can harbor millions of these mites. Mites do not actually drink water, but absorb it from the humidity in the air – thus keeping humidity below 50% will usually kill mites. Mites do not bite, do not carry or transmit diseases, and rarely actually live on humans. Their main cause for health concern is that they are a major cause of allergy and asthma symptoms in susceptible patients.

The allergenic proteins that cause the allergy symptoms originate in the tiny feces of the mite, as well as other small body parts of dead and decayed mites. These particles are a common and significant component of most house dust, thus their common name of house dust mites. The small allergenic particles easily become airborne with any disturbance (changing bedding, vacuuming, etc), and therefore high levels of mite allergen can occur in the home environment.

Mite allergens have been widely studied, and multiple proteins in each mite have been identified as allergens. While there is cross-reactivity between the two mites, there are also enough different and unique allergens that most physicians will test and treat for the two mites separately.

