



Firstly, let's meet *Dermotophagoides pteronyssinus* (Trouessart, 1897), the most common species of dust mite in Australia, but there are others. They are distant relatives of spiders.

They live in the fine layer of dust, largely pet and human skin flakes, that continually settles on household surfaces and in particular, our carpets and bedding.

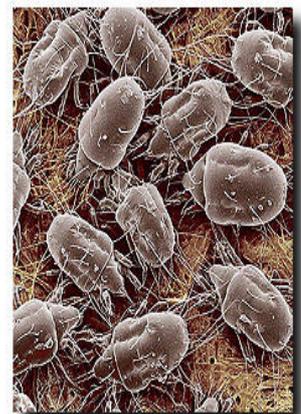
They don't actually bite or sting but they have been closely associated with allergies and respiratory ailments including itchiness, sneezing, inflamed/infected eczema, watery eyes, allergic rhinitis, runny nose, (if asthma), lungs clogging up and hayfever just to mention a few.

**The wheeze-inducing proteins are digestive juices from the mite gut which are quite potent. An exposure to the mites in the first, crucial year of life can trigger a lifelong allergy. There is no cure, only prevention. One must control house dust mite levels somehow.**

Dust mites survive in most climates but they proliferate in warmer temperatures and humid conditions. They especially thrive in our beds and pillows.

**Now how's this ...** dust mites consume minute particles of organic matter. They actually have no stomach and require most of their digestion to occur outside their body. For this reason they secrete enzymes and deposit the fungus *Aspergillus repens* on dust particles, to enable the fungus to pre-digest the organic matter with its enzymes.

They then eat the same particle several times, only partially digesting it each time. Between feedings house dust mites leave particles to decompose further. Dust mite faecal matter consists of these particles at the point where they are fully digested. A person sheds about 1.5 grams of skin cells and flakes every day (approximately 0.3-0.45 kg per year), which it is believed to be enough to feed roughly a million house dust mites under ideal conditions. It is also believed that in bedding, they derive moisture from human breathing, perspiration, and saliva.



They are a tiny 0.5 mm long fully grown and therefore difficult to see with the naked eye. Being so small, they can float around in a breeze and what's worse, actually crawl right through the weave in fabric and hide deep in carpet pile.

Since they avoid full direct sunlight, they prefer to gather in cracks and crevices and in case of our bedding, in the seams, folds and bed frames. A 2 to 3 year old mattress can contain 2 million dust mites plus another 8 to 10 million decaying carcasses and their faeces inside.

One way of detection is to thoroughly vacuum your bed's mattress. If there is an unusual, sickly odour noticeable from the vacuum cleaner, chances are you have plenty of dust mites present.

**So, how do we kill these stinky troublesome little suckers?**

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1. Remove bedding and wash it in hot water (at least 55°C) and even switch it off mid-cycle and let it soak for a while, then finish the cycle.

**Step 2.** Vacuum the mattress very thoroughly paying particular attention to quilting, seams, cracks, fabric creases and bed frame. Note: If you have severe dust mite issues you might require a hospital grade vacuum cleaner which 'heats' the dust with minimal air escape. This prevents the dangerous impurities from blowing back out into the air and perpetuating the problem.

**Step 3.** Take one of our technically advanced air purifiers and rest it on the mattress.

**Step 4.** Lay a kitchen or similar chair over the machine so as to act as a frame. Lay the doona cover or a blanket over the chair sealing off any gaps.

**Step 5.** Switch the Air Purifier on the "Sanitise Mode" and set for 2 or more hours, then leave the room to let it do its thing.

**Step 6.** After the selected period, remove the cover, chair and machine, and let it air off for the rest of the day. By bed-time, it should be sweet smelling and clear of dust mites. Repeat every week or two to maintain the carnage!

**The key is, if you elevate and concentrate the oxygen levels like this for at least a two hour period, any fungus growing on remaining skin flakes will die off leaving the poor old dust mites to starve to death!**

Safe? The enriched oxygen you have created will break down into normal levels within half an hour at normal room temperature. Simple, fast, clean, safe and with no chemicals. How's that?

This is similar to how mother nature cleans the atmosphere outside after a thunderstorm.

**Closing notes...**

When we go to sleep, our body sleeps, but our immune system **doesn't! It works tirelessly all night fighting off internal ailments, toxins and the like, which can cause us to wake up exhausted... literally.** With one million dust mites in our pillow, we could be sleeping (or trying to sleep) in a cloud of dead, decaying dust mites and their droppings. These particles are so small that they enter our lungs similar to smoke particles ..... so "good night and sleep well".

This is why it is suggested to replace pillows every two to three year, they are hard to clean.

**The first thing that owners of our machines commonly remark on is how well they slept the first night they used it in their home.**

**Reference Sources:**

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