



**Detailed  
guide to  
dust mite  
allergies**

# Dust mite allergies

Dust mite allergies are among the most common types of allergies, **according to some sources, up to 85% of all allergy sufferers.**

Dust mites are **close relatives of ticks and spiders.** They are minuscule in size, reaching only a tenth of a millimetre. Yet, they are extremely active, producing up to 200 times as many droppings in their lifetime as they weigh. **And these droppings, or rather the enzymes contained within them, cause allergies.** **Additionally, dust mite excrement gradually breaks down into smaller particles ranging in size from 300 nanometres to 2 micrometres.**

Although approximately 40,000 different species of dust mites live in agricultural operations or food warehouses, for example, house dust mites are the most important in terms of allergies.



# The biggest problem is the bed – why?

Beds are the primary environment for dust mites, and a typical mattress can contain **approximately 100,000 to 10 million dust mites**. According to some research, after two years, dust mites make up **10% of an average pillow**.

Why is the bed full of dust mites? Dust mites need darkness, warmth, moisture, and, of course, nutrients to live. This is provided by people by staying in bed or on textile furniture. The warmth of the human body provides them with an ideal temperature, and the remains of human skin become nutritious food for them. Dust mites do not drink water but absorb it from moisture in the atmosphere. **Dust also contains dust mite faeces and decomposing dust mite bodies, and the proteins present in these dust mite „leftovers“ are the culprit of dust mite allergies.**

In addition, dust mites multiply relatively quickly. The female dust mite can live up to 70 days and lays 60-100 eggs in the last 5 weeks of her life. The average life cycle is 65-100 days. **In 10 weeks of life, the dust mite produces about 2000 particles of faeces** and an even larger amount of partially digested dust particles coated with enzymes (allergens).



# How do dust mite allergies occur?

Allergies are caused by an inappropriate immune system reaction to foreign substances such as pollen, animal hair, or dust mites. The immune system produces proteins known as antibodies that protect you from unwanted invaders that could cause disease or infection.

**When you have an allergy, your immune system produces antibodies that identify a particular allergen as harmful, even if it is not.** When you meet an allergen, your immune system triggers an inflammatory reaction in your nasal passages or lungs. Long-term or regular exposure to an allergen can cause permanent (chronic) inflammation associated with asthma.

People with asthma and allergies to dust mites often have difficulty managing their asthma symptoms. They may be at risk of asthma attacks that require immediate medical treatment or emergency care.

## **Dust mite allergy symptoms:**

- sneezing and coughing,
- stuffy nose and runny nose,
- itchy, red, or watery eyes,
- itchy skin, nose, mouth or throat,
- fatigue even after a long sleep.

## **If a dust mite allergy provokes asthma, you may also feel:**

- difficulty in breathing,
- tension or pain in the chest,
- whistling or wheezing sound when exhaling,
- difficulty sleeping due to shortness of breath, coughing, or wheezing.

# How does a physician diagnose a dust mite allergy?

To diagnose a dust mite allergy, your allergist will first discuss your symptoms with you and perform a physical examination. They will pay attention to **your skin condition, conjunctivae, eyelids, and nasal mucosa and listen to lung findings**. If your physician thinks you have a dust mite allergy, they may suggest a skin or blood test.

## Skin prick test (SPT)

The **test is simple and painless**. In skin prick tests, drops of a solution containing selected allergens are applied to the skin of the forearm, and each solution is pressed into the upper layer of the skin with a plastic needle. Reactions are evaluated after 15-20 minutes. If the patient reacts to the allergen, an itchy bump forms at the injection site. A positive response is counted from a bump with a diameter of 3 mm.

## Specific IgE blood test

The blood test can be used alone or to support the skin prick test results. **The blood is tested for antibodies to immunoglobulin E (IgE), which are substances produced by the body in the event of an allergic reaction**. The doctor takes a blood sample and sends it to the laboratory. The laboratory will add the allergen to the blood sample. Then, they will measure the antibodies that your blood produces to attack the allergens. If high levels of IgE antibodies are present in the blood and associated symptoms are also present, this will help to confirm the diagnosis.



# How is a dust mite allergy treated?

The most important step is prevention. Reducing the number of dust mites in your home, especially in the bedroom, can, in some cases, completely suppress allergic reactions. If you have a more severe allergy, you will probably also need medication to suppress allergic reactions.

## Antihistamines

Antihistamines are available as tablets, liquids, or nasal sprays. They can relieve sneezing as well as eye and nasal itchiness, also a runny nose and, to a lesser extent, a stuffy nose.

## Nasal sprays and eye drops

**Nasal sprays** and **eye drops** make life easier for the allergy sufferer, but they must always be used in line with the doctor's recommendation.

## Nasal sprays

Nasal sprays for allergy sufferers help to reduce swelling in the nose, relieve stuffy noses, and block allergic reactions. **However, most nasal sprays are unsuitable for long-term use** because they contain corticosteroids, which can dry out the nasal mucosa and increase the risk of nosebleeds.

Natural alternatives may not be as effective but can be used long-term. Regular nasal rinses are also recommended to relax the nose. **Nasal lavage is also suitable to excessively dry the nasal mucosa.** Additionally, regular **nasal** hygiene with lukewarm salt water increases the immunity of the nasal mucosa.

## Eye drops

Allergy eye drops help to relieve the burning and itchy eyes that often accompany dust mite allergies. Every individual could experience different eye allergy symptoms. Often, there is **redness of the**

**whites and inner eyelid, itching and burning of the eyes, tearing, and blurred vision.** As with nasal sprays, it is important just to use eye drops for the time prescribed by your doctor.

Many people with dust mite allergies do not get complete relief when taking medication. Therefore, it is important to take preventive measures, such as eliminating dust mites in your home.

### **Specific Allergen Immunotherapy (SAIT)**

Immunotherapy (allergy shots) can also be of significant help. **Immunotherapy is a long-term treatment that can help to prevent allergic reactions or reduce their severity.** The immune system is purposely „trained“ to learn that allergens are not dangerous to the body.

For this purpose, the allergy sufferer is given „his“ trigger in gradually increasing doses. SAIT aims to return the immune system to its natural balance.

**Treatment takes approximately three to five years, and the chance of success is 80 to 90 percent for dust mite allergies.** If you want more information, consult your allergist.



# How can I prevent allergic reactions to dust mites?

Remember that the presence of dust mites does not mean that your house is a mess. Dust mites live in every home, no matter how clean it is. Studies show that more dust mites live in the bedroom than anywhere else in the home, **so it is the best place to start.**

## To protect the mattress from dust mites, you can use:

- Anti-dust mite cover with a nanofibre membrane
- Anti-dust mite bed sheet with a nanofibre membrane

**Millions of dust mites live in mattresses**, so it is a good idea to cover them **with anti-dust mite covers or use an anti-dust mite bed sheet.** To protect yourself even from decayed dust mite excrements, it is advisable to choose covers and sheets made of nanofiber materials that have holes in the order of tens to hundreds of nanometres in size.

## To protect pillows from dust mites, you can use

- Anti-dust mite pillowcase with a nanofibre membrane
- Anti-dust mite bed linen with a nanofibre membrane
- Anti-dust mite pillow with a nanofibre membrane

**You can also protect your pillow with a nanofibre membrane pillowcase or a Nanocotton® bed linen**, a revolutionary sandwich fabric combining a functional nanofibre membrane and organic cotton sateen. You can also replace your current pillow directly with an anti-dust mite pillow with a nanofibre membrane, on which you can use your existing bed linen.



## To protect the duvet from dust mites, you can use:

- Anti-dust mite cover with nanofiber membrane
- Anti-dust mite bed linen with nanofiber membrane
- Anti-dust mite duvet with nanofiber membrane

You can also protect your duvet from dust mites and their allergens with a cover with a nanofibre membrane or a Nanocotton® bed linen. **However, there are also anti-dust mite blankets with nanofibre membranes that** fully replace covers and anti-dust mite bed linen in terms of protection.

## What else helps allergy sufferers:

- Optimal humidity  
(The humidity in the bedroom should not be less than 50%).
- High-quality air purifier with HEPA filter.
- Photocatalytic coatings that remove allergens from the air.

## What does not belong in the bedroom of someone with allergies?

Avoid wall-to-wall carpets, curtains, blinds, upholstered furniture, and traditional duvets and pillows in the bedroom. Put roller shades on the windows instead of curtains.

- Carpets
- Upholstered furniture
- Curtains



# Why is hollow fibre bedding worse than feather duvets?

Most allergy sufferers know sleeping in down feathers is not ideal. However, they mistakenly believe that hollow fibre duvets are preferable. Because of their size, dust mites are smaller than the cavities of the filament, so instead of making their lives miserable, they provide a great hiding place.

**Up to ten times more dust mites live in a regular hollow fibre pillow than a conventional down pillow.**

The recommended regular washing of duvets and pillows does not help either. If they are not sufficiently dried, mould forms and the decayed bodies of dead dust mites still cause allergic reactions.

The best choice, therefore, is special anti-dust mite pillows, duvets, or anti-dust mite covers and bed linens. Moreover, the highest quality ones with a nanofiber membrane do not need to be washed at 60 degrees or boil washed, as dust mites do not live in them. This extends the lifespan of the bedding, allows for more environmentally friendly washing, and is cheaper overall.





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