PROCEDURE

Allergy shots

Allergy shots are repeated injections that train your immune system to react less strongly to specific allergens.

PURPOSE
Reduce allergic symptoms and future reaction risk

PROCEDURE TYPE
Therapeutic, minimally invasive injections under the skin

WHERE IT IS DONE
Outpatient clinic with emergency treatment available

ANAESTHESIA
None

HOW LONG IT TAKES
1-5 minutes, then at least 30 minutes' observation

PREPARATION
No fasting; report illness, asthma symptoms, and medicine changes

RECOVERY
Same day; driving usually allowed after observation

MAIN RISKS
Injection-site reactions, systemic allergy, anaphylaxis

RESULTS
Improvement is assessed over several months

Overview

Allergy shots are a form of allergen immunotherapy. They contain small, carefully measured amounts of substances to which you are allergic, called allergens. Common examples include pollen, dust mites, mould, animal dander, and insect venom.

The injections are given just under the skin, usually in the upper arm. Over time, the dose is increased. This aims to make your immune system less sensitive to the allergen.

Treatment has two stages. During the build-up stage, injections are usually given once or twice a week, although some clinics use faster schedules. After the effective dose is reached, maintenance injections are commonly given every two to four weeks.

A full course often lasts three to five years. Some people, particularly those receiving insect

venom immunotherapy, may need longer treatment.

Allergy shots are not the same as steroid injections, vaccines against infection, or emergency epinephrine. They are also not used as routine treatment for food allergy.

Why the procedure is performed

Allergy shots may be offered when allergy symptoms are clearly linked to a specific allergen and continue despite reasonable avoidance measures or medicines.

They may help reduce:

Insect venom immunotherapy has a different main goal: reducing the chance of another serious reaction after a future sting.

Allergy shots do not provide immediate relief. They aim to change your immune response over time, rather than simply treating symptoms as they happen.

- Sneezing, congestion, and itchy or watery eyes from allergic rhinitis
- Allergy-related asthma symptoms when asthma is stable
- Reactions to certain stinging insects, such as bees or wasps
- The need for some symptom-relieving allergy medicines

Who should and should not have it

You may be considered for allergy shots if testing confirms an allergy that matches your symptoms or reaction history. Testing alone is not enough. For example, a positive pollen test may not matter if you have no symptoms during that pollen season.

Treatment may be reasonable when symptoms remain troublesome, medicines cause unwanted effects, avoiding the allergen is impractical, or you want a longer-term treatment option. It may also be recommended after certain whole-body reactions to insect stings.

Allergy shots are not suitable for every allergy. They are not used for food allergy because injecting food allergens could cause a dangerous reaction.

Treatment may be avoided or delayed if:

Allergy shots are not usually started during pregnancy because dose increases carry a risk of allergic reaction. People already stable on maintenance treatment may sometimes continue without increasing the dose.

Tell the clinic if you take a beta blocker or an ACE inhibitor like lisinopril or ramipril, or if you

have heart or lung disease. These factors do not always rule out treatment, but they can affect the risks and how an allergic reaction would be managed. This is especially important for insect venom immunotherapy.

- Your asthma is poorly controlled or has recently worsened
- You have a fever, significant infection, or active breathing symptoms
- You cannot safely receive or respond to emergency treatment
- The suspected allergen does not clearly match your symptoms
- You cannot attend regular injections and observation visits

How to prepare

Follow the treating facility's own instructions, which take priority over general information here.

You usually do not need to fast. Eat and drink normally unless your clinic says otherwise.

Before each injection, tell the healthcare team about:

Take your usual allergy or asthma medicines unless instructed otherwise. Some clinics recommend an antihistamine like cetirizine or loratadine before injections, but only follow the plan given to you.

Avoid strenuous exercise shortly before and for several hours after the injection if your clinic advises this. Exercise can increase blood flow and may affect how quickly the allergen is absorbed.

Wear clothing that allows easy access to your upper arm. Plan to remain at the clinic for the full observation period.

- New or worsening asthma, wheezing, cough, or shortness of breath
- Fever, infection, or feeling unwell
- A reaction after your previous injection
- New medicines or changes to existing medicines
- Pregnancy or possible pregnancy
- A recent missed dose or long break in treatment

What happens during the procedure

Before the injection, a healthcare professional will check how you felt after the last dose and whether you have current asthma or allergy symptoms. Your dose may be reduced or postponed if you are unwell, have missed visits, or had a previous reaction.

A small amount of allergen extract is injected under the skin of your upper arm. The needle is fine, and the injection itself usually takes only a few seconds. You may need more than one injection if your allergens cannot safely be combined in the same mixture.

No anaesthetic or sedation is needed.

You will remain in the clinic for at least 30 minutes afterward. Most serious allergic reactions begin during this period, so the clinic must have staff and medicines available to treat them.

Before leaving, report any itching away from the injection site, hives, throat discomfort, coughing, wheezing, dizziness, or nausea.

Recovery and what to expect afterward

Pain: Mild stinging during the injection is common. The area may later become red, itchy, warm, or swollen. A small local reaction often settles within hours. A larger reaction may last longer and should be reported before your next dose.

Eating: You can usually eat and drink normally immediately afterward.

Activity: Most everyday activity is safe once your observation period is complete. Follow your clinic's advice about avoiding vigorous exercise, hot baths, or saunas for several hours.

Driving: Allergy shots do not involve sedation, so you can usually drive after the observation period if you feel completely well. Do not drive if you feel dizzy, faint, short of breath, or otherwise unwell.

Work: Most people return to work or school the same day. Allow enough time for the injection and observation period at every appointment.

Risks and possible complications

The most common effects happen around the injection site. These include redness, itching, tenderness, and swelling. They are usually manageable, but repeated or large reactions may lead the clinic to adjust your dose.

A systemic reaction affects areas beyond the injection site. Possible symptoms include widespread hives, facial swelling, coughing, wheezing, throat tightness, stomach cramps, vomiting, or dizziness.

Anaphylaxis is a severe allergic reaction that can affect breathing or blood pressure. It requires immediate treatment, usually with epinephrine. This risk is why injections are given in a supervised clinic and followed by an observation period.

Reactions can occasionally begin after you leave. Your healthcare team may give you a specific emergency plan or prescribe an epinephrine auto-injector based on your risks.

Poorly controlled asthma increases the risk from a systemic reaction. Always report breathing symptoms before receiving an injection.

Results and follow up

There is no immediate test result. Your response is judged by changes in symptoms, medicine use, and reactions after allergen exposure.

Some people notice improvement during the first year. The full benefit may take longer, especially while the dose is still being increased. Not everyone improves enough to continue treatment.

Keep all scheduled follow-up visits. Your healthcare team will review reactions, symptom control, missed doses, and whether the allergen mixture remains appropriate. The dose may need to be reduced after a treatment gap or significant reaction.

After several years of effective maintenance treatment, you and your allergy specialist can discuss whether to stop or continue. Benefits may last after treatment ends, but symptoms can return in some people.

Alternatives

Alternatives depend on the allergy being treated and what you want treatment to achieve.

Allergen avoidance may reduce exposure without injections. It is simplest when the trigger can be controlled, but pollen, dust mites, and insect stings cannot be avoided completely.

Antihistamines, nasal steroid like fluticasone or mometasone sprays, eye drops, and asthma medicines can control symptoms more quickly. They do not usually change the underlying sensitivity, and symptoms may return when medicine is stopped or exposure continues.

Sublingual immunotherapy places an allergen tablet under the tongue. Approved tablets are available only for certain allergens. After the first supervised dose, treatment is usually taken at home, which avoids regular injections. The trade-off is daily dosing, local mouth or throat effects, and fewer allergen options.

No immunotherapy is reasonable if symptoms are mild and controlled with avoidance or medicines. This avoids injection risks and frequent visits but does not aim to reduce long-term sensitivity.

For insect venom allergy, carrying epinephrine and avoiding stings remain important. These measures help manage accidental exposure but do not reduce sensitivity to future stings in the way venom immunotherapy can.

When to call your healthcare team

Contact your allergy clinic before the next injection if you develop a large or long-lasting injection-site reaction, hives after leaving, new asthma symptoms, or another delayed reaction. Also call if you become ill, start a new medicine, become pregnant, or miss scheduled doses.

Seek urgent medical advice for a rapidly worsening reaction, even if it initially seems mild.

Call emergency services immediately for trouble breathing, throat or tongue swelling, faintness, confusion, blue or grey lips, or symptoms involving several body areas. Use epinephrine immediately if it has been prescribed for you. Do not wait to see whether symptoms settle, and do not drive yourself to emergency care.

Common questions

Will I be asleep for allergy shots?

No. Allergy shots do not require sedation or anaesthesia. You remain awake, and the injection takes only a few seconds.

Can I drive myself home?

Usually, yes. You must first complete the clinic's observation period and feel well. Do not drive if you develop dizziness, breathing problems, or other reaction symptoms.

How painful are allergy shots?

Most people feel a quick pinch or sting. Mild itching, soreness, or swelling around the injection site is common afterward.

When will I know whether they are working?

Improvement is usually assessed over several months, not after one injection. Your clinic will compare your symptoms, medicine use, and response during relevant allergy seasons.

What happens if I miss an injection?

Tell the clinic before your next shot. A gap can require a lower dose to reduce the risk of a reaction. Do not simply continue the previous schedule without review.

Can allergy shots cure my allergies?

They can provide lasting improvement for some people, but they do not guarantee a permanent cure. Some people continue to need avoidance measures or allergy medicines.

Sources

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