

Seasonal Allergies

Allergies are a short-term inflammation of the mucous membranes that line the nasal passages. "Hay fever," as the condition is commonly called, is caused by airborne pollens from trees, grasses, flowers, and weeds. Allergy season typically kicks off in the spring and fall when certain trees or grasses pollinate. The start of a pollen season, and how long it lasts, varies in each country.

Although it's usually not a dangerous condition, it can be very uncomfortable and, for some people, can severely disrupt daily activities. The standard reactions include sneezing, itchy throat, headache, swollen sinuses, runny nose, and itchy, watery eyes.

Causes

In allergies, airborne pollen from various seasonal plants—or, in some cases, spores from mold—enter the body through the eyes, nose, or throat, and trigger an allergic reaction. Normally, the immune system does not respond to mild substances like pollen and mold. But in sensitive individuals, the body's defense mechanism views these allergens as it was an infectious agent and mounts an attack. Once the immune system has detected the "invader," it unleashes a cascade of chemicals such as histamine and other compounds resulting in localized inflammation that leads to irritation and discomfort. The symptoms of an allergic reaction begin 5 to 10 minutes after allergen exposure, subside within an hour, and may return two to four hours later.

Symptoms

Allergies produce an array of symptoms, including eye irritation, sneezing, and congestion. Hay fever is not caused by hay, nor does it result in fever.

Common Symptoms of Allergies:

- Sneezing
- Runny nose
- Congestion
- Itchy, watery, red eyes
- Itchy throat
- Dry cough
- Impaired sense of taste or smell
- Sleep disturbances

Itchy, watery eyes are often the first sign pollen season is underway. Or there may be an initial tickle on the roof of the mouth or in the back of the throat. Sneezing and a runny nose soon follow. Some allergy sufferers experience congestion, headaches, wheezing, and coughing.

In This Issue

Seasonal Allergies.....	1
Terminology.....	4
FDA News.....	4
Drug-Drug interaction...	6
Test Your Knowledge....	6
Real Enquiries.....	7
Ask the Expert.....	7
Assiut Health News.....	8

Symptoms may interfere with sleep and result in irritability. Allergic conjunctivitis, a condition in which the inner eyelids and whites of eyes become inflamed, may occur as well.

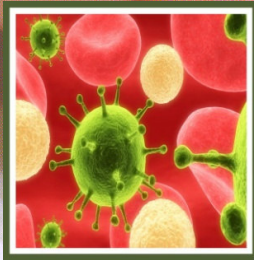


Risk Factors

Although allergies can develop later in life, they usually show up before age 20. The average age that allergies begin is 10 years. Sometimes, people first get allergies as young adults or, occasionally, in middle age or later years. Like other problems that involve an abnormal immune system response, allergies tend to run in families. More than half of hay fever sufferers have a close relative with a history of allergies. Hay fever does not seem to discriminate between men and women or ethnic background.

Diagnosis

To determine what is causing your symptoms, your doctor will start with a medical history. Allergic symptoms that show up during pollen season are the biggest indication that you are suffering from allergies.



Allergies can be triggered by many things, including exposure to house dust and animal dander. Your doctor will want to know if you have pets, if anyone in the house smokes, or if you are taking any medications in order to decide the cause of your symptoms. Your doctor also will want to know how old you were when you started getting allergy symptoms and if anyone in your family suffers from allergies.

A physical examination can help your doctor rule out mechanical or physical abnormalities that may be causing your symptoms. Your doctor may use a strong light and a nasal speculum to examine your nasal passages for evidence of mechanical obstruction. Clear nasal discharge and a characteristic appearance of the back of the throat suggest that allergic rhinitis is causing your upper respiratory symptoms. Polyps, tumors, and a deviated or perforated septum can cause symptoms that mimic allergies.

Allergy skin tests can help determine which allergens are responsible for your symptoms. For an allergy skin test, your doctor will prick or scratch your skin with a series of needles that contain a minuscule amount of allergens. If one of these areas becomes red or itchy or a raised welt appears, that allergen is the offender. Sometimes your doctor will order a blood test to see if you have a high number of eosinophils, the type of white blood cell that responds to allergies.

Treatment

Urgent Care

Allergies themselves are not serious. However, infections—such as a sinus infection characterized by fever, pain, and green or yellow nasal discharge—can mimic allergies.

Self Care

Over-the-counter (OTC) allergy medications may ease your discomfort. Antihistamines can stop the itching and sneezing caused by the release of histamine that the body produces in response to allergens. Antihistamines block the action of histamine. There are many over-the-counter varieties, including diphenhydramine and clemastine.

Although OTC antihistamines are effective in minimizing hay fever symptoms, they can cause extreme drowsiness. In fact, some people use antihistamines as a sleeping aid. Dry mouth is another common side effect. Less common are confusion and blurred vision. Over-the-counter antihistamines all have warning labels urging users not to operate heavy machinery or drive while taking the medication. Pilots are prohibited from using an OTC antihistamine. Some people are able to push themselves to stay awake and remain semi-functional, but do not be fooled by a false sense of well-being. Even if you think you are alert, your coordination and reaction skills are still impaired while on OTC allergy medication.

A nasal decongestant such as pseudoephedrine may help relieve a stuffy nose due to allergies. This medication constricts the blood vessels and reduces blood flow to the nasal passages, which reduces swelling. Insomnia, restlessness, and difficulty urinating are among the possible side effects. For some people, however, a simple nasal decongestant is not effective because it will not stop sneezing and a runny nose. The pollen will relentlessly trigger the release of histamines, and a nasal decongestant, depending on the severity of the allergies, may not be able to combat the force of the body's reaction.

A commonly used nasal decongestant, phenylpropanolamine (PPA), was pulled off the shelves after the FDA issued a warning on its possible side effects. Research has linked PPA (a common ingredient in both cold medicines and appetite suppressants) to a slight increase in stroke risk in women. Occasional reports of hemorrhagic stroke in people using PPA-containing products prompted a careful look at the drug. The studies found that people taking PPA were more likely to have strokes than those not taking PPA. Although the risk of stroke was very low, the FDA recommends not using any products that contain PPA because of the seriousness of a stroke and the inability to predict who will be affected. The risk was found primarily in women, though the FDA notes that men may be affected as well.

Other Therapies

Consider allergy shots if you suffer from allergies for many months of the year, cannot tolerate allergy medications, or develop asthma during pollen season. A series of injections can make you less sensitive to the effects of pollen by helping your immune system become increasingly resistant to it. "Immunotherapy" involves injecting small amounts of the specific allergen you are allergic to and gradually increasing the dose so that you develop a tolerance to it. To be effective, injections must be given a regular basis (determined by your allergist) over the course of three to five years.



Alternative Medicine

Some alternative remedies may be helpful in minimizing allergy symptoms. However none of these remedies have been shown to be effective in carefully controlled studies. The herb ephedra (ma-huang) contains ephedrine, a naturally occurring compound that has been employed by pharmaceutical companies in numerous allergy medications. The FDA has banned sales of the herb because it can be dangerous and has been associated with heart attacks and strokes. Do not take ephedra with allergy medications that contain ephedrine as doubling the dose may cause dangerous side effects.

Nettle is a folk remedy for the sneezing, itching, and swelling associated with allergies. The plant contains quercetin, a substance that has been shown to inhibit the release of

histamine. In one study of allergy sufferers, more than half of those who took nettle reported that the herb was at least moderately effective in reducing allergy symptoms compared with a placebo. Nettle is considered to be very safe.



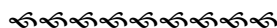
Statins

Statins are the most effective and widely used medicines to treat high cholesterol. Evidence shows that statins can reduce the risk for heart attack, stroke, and death in people who are at high risk of a heart attack or stroke. Other medicines also lower cholesterol, and some may be used to lower triglycerides or raise HDL.

- Some people can try diet and exercise for at least 3 months before medicines are started. But people who have coronary artery disease (CAD) should start taking medicines immediately.
- Other people who may need to start taking medicine as soon as possible include those who have a family history of early CAD, those who have inherited forms of high cholesterol, and those who have peripheral arterial disease or diabetes or who have had a previous heart attack or stroke.



Cholesterol treatment guidelines will continue to evolve as experts learn more about how best to treat heart disease. But everyone can benefit from eating a balanced low-fat diet, getting regular exercise, and reducing other heart disease risks, such as smoking.



Terminology

Halitosis



Halitosis is bad breath. Causes of halitosis include dietary factors, poor oral hygiene, tobacco use, certain chronic medical conditions, or dry mouth (as a side effect of medications, from mouth breathing, or from problems with the salivary glands leading to decreased production of saliva).



FDA News

☐ Clopidogrel Receives Boxed Warning for Reduced Benefit in Poor Metabolizers

The US Food and Drug Administration (FDA) announced it is requiring a boxed warning for the anticoagulant clopidogrel (Plavix, Bristol-Myers Squibb/Sanofi Pharmaceuticals Partnership)



to caution that poor metabolizers of the drug may not receive full protection from heart attacks, stroke, and cardiovascular death.

The boxed warning also states that tests are available to determine the genetic profile of a key liver enzyme and predict whether a patient will ineffectively convert clopidogrel to its active form. It advises clinicians to consider other antiplatelet medications or alternative dosing strategies for clopidogrel in patients who are poor metabolizers.

However, the FDA noted that although higher doses of clopidogrel increase antiplatelet response in poor metabolizers, an appropriate dose regimen for these patients has not been established in a clinical outcome trial.

The liver enzyme CYP2C19 is primarily responsible for converting clopidogrel into an active metabolite that will protect patients from blood clots. Some patients, however, have alleles, or variations, of this enzyme and cannot metabolize the drug to its active form.

Roughly 3% of the populations are poor clopidogrel metabolizers, according to a press release issued by Sanofi-Aventis and Bristol-Myers Squibb. However, this metabolism inefficiency varies significantly by race.

Drug-Drug interactions

Antidiabetics + Salicylates

Aspirin and other salicylates can lower blood sugar levels, but small analgesic doses do not normally have an adverse effect on patients taking antidiabetics. Larger doses of salicylates may have a more significant effect, and caution is warranted.

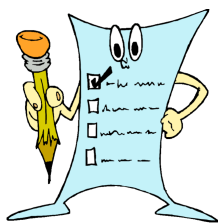


Mechanism:

It has been known for over 100 years that aspirin and salicylates have hypoglycaemic properties and in relatively large doses can be used on their own in the treatment of diabetes. The simplest explanation for this interaction with antidiabetics is that the blood sugar lowering effects are additive, but there is some evidence that other mechanisms may come into play. In addition aspirin can raise serum chlorpropamide levels so that its effects are increased, possibly by interfering with renal tubular excretion.

Reference: Stockley's, Karen Baxter, Stockley's Drug Interactions, 7th edition, Page 415, UK, William Clowes Ltd, Beccles, Suffolk, 2006.

Test Your Knowledge



1- 500g of an ointment containing 12.5% w/w of emulsifying wax is prepared. The weight of emulsifying wax in 280g of ointment is:

- A. 9.6g
- B. 22.0g
- C. 26.8g
- D. 29.0g
- E. 35.0g

2- Which of the following medicines would require women to take more than 400 mcg of folic acid before and during pregnancy?

- A. Carbamazepine
- B. Fluoxetine
- C. Sulpiride

3- What is the first option for treating acute diarrhea?

- A. Antibiotics
- B. Antispasmodics
- C. Kaolin and morphine mixture
- D. Loperamide
- E. Oral rehydration preparations

(You will find the right answers at the bottom of the last page)

Real Enquiries

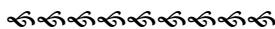
At the "Drug Information Center", we respond to enquiries from the professional health team as well as from others. Here's one of the interesting enquiries received at the center!

Enquiry received from: Dr. Ahmed Saeed – Physician at the University Pediatric Hospital

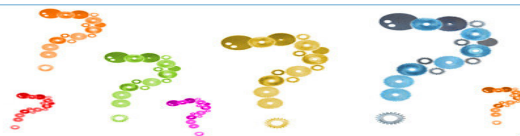
Enquiry: Would like information on drugs and dose regimens used in treatment of congenital toxoplasmosis in children.

Answer:

Pyrimethamine, sulfadiazine, and leucovorin are used for neonates. Treatment of symptomatic and asymptomatic neonates may improve outcome. Therefore, treatment is begun with pyrimethamine (initial loading dose of 1 mg/kg po bid for 2 days followed by 1 mg/kg po once/day, maximum 25 mg), sulfadiazine (50 mg/kg po bid, maximum 4 g), and leucovorin (5 to 10 mg po q 3 days). After the initial 6 mo of treatment, sulfadiazine and leucovorin are continued at the same dose, but the pyrimethamine is given less; this regimen is continued for at least 6 more mo. All treatment should be overseen by an expert. The use of corticosteroids is controversial and should be determined case by case.



Ask the Expert



Q: Why are men who take methotrexate told not to father a child until 3 to 6 months after stopping the medication?

Low-dose methotrexate is a common treatment for several types of arthritis (including rheumatoid arthritis) and other inflammatory conditions. High-dose methotrexate may be given to people with certain types of cancer as a part of their chemotherapy.

The recommendation for men to wait up to 6 months after stopping the drug to conceive comes from the combination of the lifespan of sperm (up to 90 days) and how long methotrexate stays in the body after it is discontinued (up to several months in the liver). There are at least two reasons that doctors advise men to stop taking methotrexate prior to fathering a child:

1. The drug may lower the sperm count and impair fertility.
2. Methotrexate could cause mutations or chromosomal damage to sperm. Although this damage is well-established in mice, it's not clear whether it occurs in humans.

Despite these concerns, the safety of methotrexate is quite good for men who are considering fatherhood. That is, most men who have taken methotrexate in the past are able to father normal, healthy babies.

However, the stakes are higher for women. Taking methotrexate during pregnancy can cause terrible birth defects. So, there are strong recommendations to avoid taking this drug for women contemplating pregnancy.



Assiut University Health News

Answers:

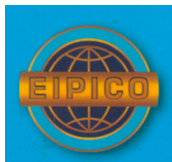
1-(D) Omega -3 marine triglycerides present in oily fish can help to reduce plasma triglycerides.

2-(E) Miconazole oral gel is indicated for the treatment of fungal infections of the lips, mouth and throat. It can be used for people of any age.

3-(C) Cow's milk has a higher content of protein and electrolytes, and lower amount of iron, compared to breast milk or infant feeds. Infants under 12 months of age should not be fed cow's milk.

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