

ALLERGY



Child Care Training and Resource Kit - Allergy in Child Care - Overheads

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Child Care Training and Resource Kit

Allergy Overheads

Epidemiology

- ◆ 31 million Americans have allergies
- ◆ 4000 deaths from asthma per year.
- ◆ 300 deaths from anaphylaxis per year.
- ◆ 2.5 million children have partial hearing loss secondary to blocked ears and noses.

Let's take a look at how often allergies occur.

What Are Allergies?

- ◆ Immune system: Rids the body of antigens
- ◆ Antigens: Things foreign to the body.
- ◆ Allergen: The thing that causes the overreaction of your immune system.

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What are allergies?

Your body is made up of many little living things. Part of your body's working system is your immune system. It is the job of the immune system to get rid of things foreign to the body. Things foreign to the body are called antigens. Bacteria and virus are antigens. This is a good system because it protects us from dangerous diseases.

If you have allergies, you have a super sensitive immune system which reacts to harmless substances, like dust, animal fur or plant pollen. The things that cause the overreaction of your immune system are called allergens.

With allergens, the more often and the more directly you come in contact with an allergen, the more likely you are to develop an allergy to it.

Allergy and Inheritance

- ◆ Tendency toward allergy is inherited.
- ◆ Allergies usually begin in childhood.



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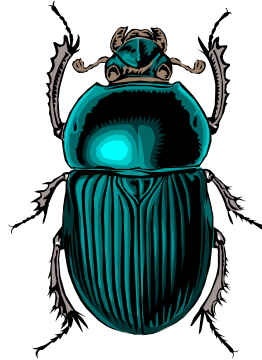
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Super sensitive immune systems tend to run in families. You are not born with allergies, but you can inherit the tendency to develop them. If one parent has allergies, the children have a 50% chance of developing some sort of allergy. If both parents have allergies, the children have a 75% chance. However, the children may be allergic to different things than the parents.

Allergies usually begin to develop in childhood, although they can develop at any age. The most common allergies among infants are food allergy and eczema. This same child may then get hay fever, which is more common after age 6. Then the child may have asthma when they become an adult. These are simply different symptoms of the same allergy. Sometimes symptoms disappear for a while and reappear later in life. No one knows why this happens.

Common Allergens

- ◆ Dust mites and their waste



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Dust mites are microscopic insect-like animals which are found wherever dust can collect. They live on skin cells continually shed by humans. They also live in spring mattresses, blankets, carpets, upholstered furniture, draperies, clothes and stuffed toys. They like warmth and humidity, so they prefer damp weather. Their droppings cannot be easily vacuumed up because they pass straight through standard vacuum bags and float in the air. So, vacuuming makes the situation worse.

Common Allergens

- ◆ Dander and saliva of animals with fur or feathers.
- ◆ Cockroaches and their waste.



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Read slide. Dander is the scaly particles like dandruff on animals and birds. About 2 million people in America have some allergic symptoms when they are exposed to cats. Allergy to dogs is much less common.

There was one study that reported that urban poor children were more likely to develop allergic asthma because of the cockroaches in their homes.

Common Allergens

- ◆ Weed, grass and tree pollens



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Read slide. Pollen is the fine powder produced by flowers, trees, grass and weeds. It's role is to fertilize plants and help them reproduce. Pollen is the most common cause of hay fever. The timing of the symptoms often depends on the pollen season. This varies from one region of the country to the next, but the pattern usually goes:

- Spring: Mostly tree pollen
- Spring to fall: Grass pollen
- Late summer: Weed pollen

Airborne pollen is usually at it's highest on warm, dry, breezy days. The times of highest concentration each day are usually early in the morning and late in the evening.

Common Allergens

- ◆ Mold and mildew spores



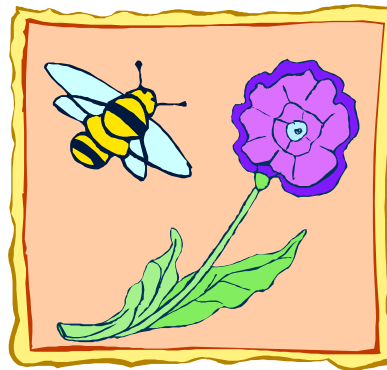
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Read slide. Mold is the gray, green or blue and often fuzzy substance that forms on old food, shower curtains, or any surface that stays damp. Mold produces spores that float in the air and are especially numerous in the humid weather of late summer or fall. The spores may cause allergy symptoms such as hay fever or asthma. Mold can grow on damp furniture, clothes, shoes, toys and in refrigerators, damp basements, cellars, and bathrooms. It thrives in the soil of certain houseplants. Outside, mold is found on plants, or on piles of leaves and cut grass. People may carry it indoors on clothes and shoes.

Common Allergens

- ◆ Stinging insects
- ◆ Drugs



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Read slide. These stinging insects include, but are not limited to, bees, wasps, yellow jackets, hornets and fire ants.

Not all reaction to insect stings are allergic. Swelling, itching, and redness may be normal reactions near the sting, even if they last for days. However, about 2 million Americans each year are stung and have allergic reactions to insect stings. If the person stung has wheezing, coughing, chest tightness, difficulty speaking or swallowing, dizziness, or loss of consciousness, get medical help immediately. Someone who has a life-threatening reaction to bee and/or insect stings should always have immediate access to an emergency kit.

The drugs that have the most allergic reactions are penicillin and sulfa drugs.

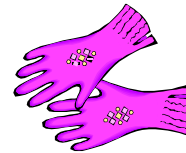
Common Allergens

- ◆ Foods



- ◆ Plants such as poison ivy and poison oak

- ◆ Ingredients found in dyes, cosmetics and latex



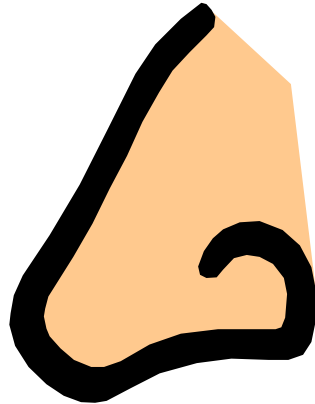
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Foods such as eggs, milk, nuts and seafood are common allergens. Allergies to food are often wrongly blamed for episodes of headache, diarrhea, vomiting and even hyperactivity in children. These symptoms are more often brought on by a sensitivity to food that does not involve the body's immune system. Reactions to food that are not allergic reactions are called food intolerance. If allergic reactions occur, they may include skin rashes, wheezing, and nasal stuffiness. Food allergies can also cause severe allergic shock, and/or anaphylaxis. We have an entire class on food allergies.

Chemical allergies are on the rise. There are more people allergic to scents and perfumes than ever before, and there are more people developing allergies to latex. Latex allergies tend to be severe and life-threatening. The implications for child care is that you should use non-latex but non-permeable gloves for your universal precautions.

Cause of Allergy Symptoms



- ◆ Contact
- ↓
- ◆ IgE
- ↓
- ◆ Mast cells
- ↓
- ◆ Histamine

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Let's talk now about how your body makes those allergy symptoms.

The first time you come in contact with something, your body may overreact and produce IgE antibodies. The IgE antibodies are proteins and part of your immune system.

These antibodies attach to what are called mast cells in your nose, and they remain in your body.

Every time you get near this same thing your body will produce more IgE antibodies against it.

At some point, your body, in trying to protect you from this thing which is probably harmless, will produce a chemical called histamine. The histamine causes sneezing, watery eyes and a runny nose. Now, this thing that your body produced IgE to is an allergen for you.

There are different kinds of allergies. The poison ivy allergy doesn't involve IgE.

Allergic Rhinitis

- ◆ Hay fever
- ◆ Symptoms:
 - Nasal stuffiness
 - Sneezing
 - Nasal itching
 - Nasal discharge
 - Itchy ears and roof of mouth



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Now we need to talk about some of the symptoms caused by allergies.

Allergic rhinitis is an inflammation of the mucus membranes in the nose, throat, sinuses and ear passages. This is what is commonly known as hay fever. It has nothing to do, however, with hay or fever. It is brought on by allergy to pollen, dust or mold.

Common symptoms include nasal stuffiness, sneezing, nasal itching, clear nasal discharge and itching of your ears and the roof of your mouth.

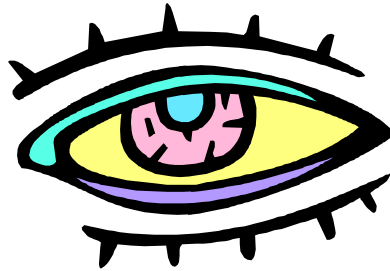
Symptoms can be made worse by changes in temperature, humidity, weather or by exposure to irritants such as cigarette smoke or heavy perfume.

It is year round or seasonal.

About 30% of children who get hay fever outgrow it.

Allergic Conjunctivitis

- ◆ Allergic pink eye



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Allergic conjunctivitis presents with red, itchy, watery eyes. It is an inflammation of the surface of the eye and the inside of the eyelid. Sometimes it can be treated with oral antihistamines or with an eye drop with antihistamines in it.

Atopic Dermatitis

- ◆ Eczema
- ◆ 10%-15% affected
- ◆ What makes it worse:
 - Hot, cold or dry weather extremes
 - Physical exertion
 - Perspiration
 - Emotional stress
 - Skin irritants



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Commonly known as eczema, atopic dermatitis includes red, itchy, dry skin usually on elbows, knees and skin folds.

It affects 10-15% of children. And 30-50% of these go on to develop asthma or hay fever. Half, however, outgrow it before they are 5 years old and most of the others will be free of it by puberty.

Things that made eczema worse are hot, cold or dry weather extremes, physical exertion, perspiration, emotional stress, URI infections, anything that irritates the skin (wool or toxic chemicals).

There is no cure. The best course is to avoid that which causes it. You can provide comfort with skin ointments and keeping the skin cool and dry.

Other Allergic Syndromes

- ◆ Urticaria: Hives
- ◆ Contact Dermatitis



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Hives are itchy welts which may appear on any part of your body. They usually last less than a day, or at most a week. In rare cases they may occur daily for weeks or longer. Hives can occur after a food allergy exposure or a medication allergy exposure.

Contact Dermatitis is an itchy rash which breaks out where an allergen has touched your skin. Poison ivy rash is an example of this.

Finding the Cause of Allergy Symptoms

- ◆ Extensive history
- ◆ Physical examination
- ◆ Allergy testing
- ◆ Food elimination/food challenge



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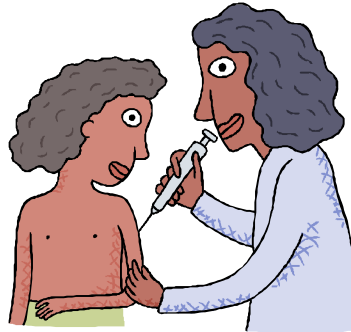
To find out what causes your allergy symptoms, you need to start with an extensive personal history. There are so many variables in our lives, that tracking down the exact cause can take some deep reflection. But you need to get at what you touched when, or what you ate when.

You may also need a physical examination and allergy testing. The decision to allergy test is a decision made in consultation with your medical provider.

There are also food elimination tests, followed by food challenge tests, if you are ruling out a food allergy. These are quite accurate, but take a long time to do because of the amount of time you have to be off the food before you can consider it eliminated.

Allergy Treatment

- ◆ Avoid the allergen
- ◆ Medications
- ◆ Allergy shots



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The primary directive for people with allergies is that they avoid the allergen. If that is impossible, because of what the allergen is (dust mites, etc.) then they may choose medication.

There are also allergy shots which are used to prevent allergy symptoms. With the shots, you are given increasingly higher doses of the allergen over time. You gradually then become less sensitive to that allergen. This is effective for people with reactions to insect stings. It is not effective for allergies to food or feathers.

The Allergic Child in Your Classroom

- ◆ Know what they are allergic to
- ◆ Know extent of the reaction
- ◆ Know treatment plan



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If you are going to have a child with an allergy in your classroom, you need to know if they are allergic to something or not. This information should be received with a short history from the parents at the time of enrollment. If they are allergic to anything, then you want to eliminate that from their environment. You will need to know the treatment plan. For example, if this child is severely allergic to insect stings, you will need to have the plan with the signed permission to give the Epi-Pen, and you will need to have the Epi-Pen. If they are allergic to a food item, it will need to be posted and the labels read so that exposure cannot happen. If they are accidentally exposed, then you need to have a written plan in place and permission to do that plan.

You will need to post what they are allergic to and the plan in an accessible but confidential place in the classroom.

Let's look at a couple of example forms in your handout packets. (Review forms with them and discuss the implications of how this would work in their setting.)