



Food Allergies: Protecting Your Clients

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After reading the newsletter, the home health aide should be able to:

1. Describe how allergic reactions occur in the body.
2. Identify foods that commonly cause allergic reaction.
3. Identify the risk factors and signs of allergic reaction.
4. Discuss prevention and care of food allergy reactions in clients.

Mrs. Duke, a 58-year old client, was enjoying a frozen crab cake that her aide, Shauna, had heated up for her. Within minutes, however, Mrs. Duke was covered in red hives and gasped to Shauna, "I'm so dizzy and sick!" Shauna called 911 and helped Mrs. Duke by lowering the head of her bed and raising her legs. Emergency personnel arrived quickly and administered epinephrine to Mrs. Duke. She was then transported to the hospital, where she recovered. Thanks to Shauna's quick action, Mrs. Duke received immediate treatment for her severe allergic reaction.



When the topic of food allergies comes up, many people think mainly about allergies in children. In fact, food allergies occur in all age groups, and can be very severe in adults and aging adults. Food allergies may continue into adulthood from a childhood allergy, or may develop for the first time in adulthood, such as Mrs. Duke's shellfish allergy. Food allergies affect 2-3% of adults in the US, and can develop at any time. All healthcare staff should be alert for possible allergies in their clients.

This newsletter will discuss food allergies in adult clients, including how and why allergies occur, common food allergens and medical treatment. The home health aide's role in helping to prevent and manage allergic reactions caused by food will also be covered.

How Allergies Occur

Allergies result from activation of the body's immune system. The immune system serves to protect the

body from foreign "invaders", such as bacteria, by attacking and destroying them. A very important function of the immune system is to know the difference between a real threat and substances that pose no threat, such as the body's own tissues or food that is eaten. In some cases, the immune system is unable to do this, and mounts an attack on substances such as bee venom, latex, or various foods.

To attack invaders, the immune system creates antibodies. These cells attack specific allergenic substances, called antigens. In order for an allergic reaction to occur, the antigen, such as a specific food, must first enter the body. The immune system then makes antibodies to attack that substance. These antibodies are proteins called immunoglobulin E (IgE). There is no allergic reaction the first time the substance enters the body, since antibodies have not yet been formed. But the next time the antigen enters the body, the antibodies are ready to attack.

During this attack, chemicals such as histamine are released, causing dilation of blood vessels, constriction of smooth muscles of the airway, and inflammation of the skin. This response produces the signs of allergic reaction, such as itching, hives, shortness of breath, wheezing, and low blood pressure.



Common Food Allergies

The most common food allergens are cow's milk, eggs, fish, shellfish, soy, wheat, peanuts and tree nuts, such as pecans, walnuts and almonds.

These foods account for 90% of food allergy reactions. Allergic cross-reactions with some of these foods are common. For example, a person who is allergic to shrimp is also likely to be allergic to other shellfish, such as crab. Cross-reactivity can also occur between foods and non-food substances. Approximately half of those with latex allergy also have certain food allergies, especially to avocados, bananas and kiwi fruit.



Allergies to milk, eggs, wheat and soy are most common during childhood. These are also the least likely allergies to continue into adulthood, usually resolving before adolescence. Childhood allergies to peanuts, tree nuts, fish and shellfish are the most likely to continue to adulthood. When adults develop food allergies for the first time, tree nuts, fish and shellfish are the most common allergens. Adults are also most likely to develop oral allergy syndrome. This is an allergic cross-reaction between pollen allergy and certain raw fruits and vegetables, such as apples, strawberries, peaches and carrots. In most cases, this results in only mild symptoms, such as itching of the mouth, throat and lips. If the fruits and vegetables are cooked, such as applesauce or steamed carrots, the structure changes and no allergic reaction occurs.

Risk Factors and Signs & Symptoms

While anyone can develop food allergies, some people are more likely than others to develop them. Genetics play a role, so a family history of food allergies increases the risk. People with other allergies, such as to latex or pollen, are more likely to have food allergies. And, those with conditions such as asthma and eczema are also more likely to develop food allergies. People with asthma tend to have the most severe and/or fatal food allergy reactions.

Allergic reactions can range in severity from mild to extremely serious, even resulting in death. Signs of allergic reaction can occur minutes to hours after exposure to the food. Signs of mild allergic reaction are usually limited to one area of the body and often include localized signs and symptoms, such as rash, itching, swelling, runny nose, watery eyes, blisters, hives, and/or redness. Severe reactions, called anaphylaxis, occur throughout the whole body, and typically involve the respiratory system. These signs may include:

- shortness of breath
- increased heart rate
- decreased blood pressure
- noisy respirations, cough or hoarseness
- difficulty speaking or swallowing
- swelling of the eyes, face, lips, tongue, or throat
- diarrhea
- dizziness/fainting
- nausea/vomiting

Diagnosis and Treatment

Current guidelines recommend use of the oral food challenge if diagnosis of a specific food allergy is necessary. In this test, the person eats or drinks small but increasing amounts of the suspected food allergen under careful medical supervision. If a reaction occurs, the food allergy is confirmed. Other tests, such as measuring the serum IgE, may be used to help confirm the diagnosis.

There is currently no cure for food allergies. The only ways to manage them are by strict avoidance of the food and treatment of allergic symptoms if they occur. For mild reactions, antihistamines may be ordered, such as Benadryl. Severe reactions require immediate use of epinephrine to help reverse the symptoms and promote normal breathing and blood pressure. Epi-pen is a prefilled quick injector that should be readily available for anyone who has serious allergic reactions. IV fluids and oxygen are also administered, along with transport to a hospital.

Protecting Your Clients

The first step in protecting your clients from food allergy reactions is to have accurate knowledge of any allergies they may have. Keep this information in mind, particularly when serving meals and snacks. Be familiar with how clients having food allergies are identified by your agency. This may include an allergy bracelet, and/or a prominent notice on the printed care plan or electronic record. Also be familiar with your agency's policies regarding what to do if an allergic reaction occurs.

If you prepare or serve food to your clients, check for any allergies first. Food allergies can develop at any time, even with foods that have been eaten before, so be watchful of all clients. If any part of a meal intended for the client contains a food that he/she is allergic to, the meal should not be served to the client. If your client has a history of allergic reactions and keeps epinephrine pens in the home, make sure you know where they are located, and how to obtain and use them, if this is part of your legal role and you have received appropriate training. If your client shows signs of allergic reaction, call 911 and/or the nurse immediately, depending on the severity and agency policy. Position the client lying flat with legs raised to improve blood pressure and circulation, if he/she can tolerate it. If shortness of breath occurs, however, you may need to raise the client's head to promote breathing. Do not give the client anything to eat or drink. For milder reactions, the client can usually be treated in the home with oral medication and comfort measures, such as cool compresses.



By maintaining awareness and knowing what to do, you can help to prevent food allergy reactions and promote early treatment if they occur.



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NAME: _____ DATE: _____ UNIT: _____

Directions: Place the letter of the one best answer in the space provided.

- _____ 1. Adults may have food allergies because these allergies can develop:
- A. for the first time in adults
 - B. in children and continue into adulthood
 - C. at any age
 - D. all of the above
- _____ 2. Allergies in adults do not cause severe reactions, such as anaphylaxis.
- A. True
 - B. False
- _____ 3. Which of the following are produced by the immune system and attack substances that may be harmful to the body?
- A. antigens
 - B. red blood cells
 - C. plasma
 - D. antibodies
- _____ 4. Foods that commonly cause allergic reactions include all of the following EXCEPT:
- A. rice
 - B. soy
 - C. peanuts
 - D. eggs
- _____ 5. Which of the following is true regarding oral allergy syndrome?
- A. often causes a severe, whole-body allergic reaction
 - B. eating certain raw fruits/vegetables causes itching of the mouth
 - C. swelling of the lips occurs if certain cooked fruits/vegetables are eaten
 - D. typically causes hives and swelling of the face and neck

- _____ 6. Which of the following clients is most likely to have a severe food allergy reaction?
- A. Mr. R, whose brother has several food allergies
 - B. Mrs. B, who is allergic to latex
 - C. Mrs. W, who has asthma
 - D. Mr. A, who has diabetes
- _____ 7. If a food allergy reaction is going to occur, it will happen within 15 minutes of eating the food.
- A. True
 - B. False
- _____ 8. Which of the following symptoms is most characteristic of a mild allergic reaction?
- A. watery eyes
 - B. decreased blood pressure
 - C. diarrhea
 - D. hoarseness
- _____ 9. The home health aide is caring for Mrs. Taylor, who is allergic to tree nuts. Mrs. Taylor is having her dinner delivered, and when it arrives, there are a few pecans on it. The home health aide should:
- A. ask Mrs. Taylor if the meal is OK for her to eat
 - B. use a fork to remove and discard the nuts, then serve the meal
 - C. call to have the meal replaced or give Mrs. Taylor something else
 - D. serve the meal to Mrs. Taylor, since the amount of nuts is very small
- _____ 10. When the home health aide notes signs that may indicate an allergic reaction in a client, the highest priority is to:
- A. position the client comfortably
 - B. document the signs and symptoms in the record
 - C. call 911 and/or the nurse immediately
 - D. try to determine what caused the allergic reaction

