

Allergic reactions, anaphylaxis

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Learning objectives

- The student will learn the symptoms of allergic reactions.
- The student will learn first aid for allergies and anaphylaxis.
- The student will learn what an allergy first aid kit is and how to use an epinephrine pen correctly.

What is an allergic reaction?

- Exaggerated reaction of the human immune system to a foreign substance - the so-called "Allergen"
- The most common allergens include:
 - Plant pollens, dust, mold, mites
 - Pets
 - Animal poison
 - Foodstuffs
 - Medicines



What are the symptoms of an allergic reaction?

- **Local** – a local reaction caused by the allergen encountering the body
 - **Skin** – swelling, redness, paleness
 - **Mucosal** – cold, cough, lacrimation

- **General**
 - **Skin** – urticaria, angioedema, oedema, pruritus
 - **Digestive system** – nausea, vomiting, diarrhoea, convulsions
 - **Respiratory system** – stridor, hoarseness, cough, dyspnoea
 - **Circulatory system** – hypotension, heart arrhythmias
 - **Nervous system** – syncope, convulsions, alterations of consciousness
 - **Shivering**
 - **Anaphylactic reaction**

What is anaphylaxis?

- Life threatening situation !!!
- An allergic reaction with a severe course, affecting organism in general
- One of the causes of shock development
- Can cause
 - swelling of the airways, shortness of breath until respiratory arrest
 - drop in blood pressure, shock until circulatory arrest
 - fall in consciousness, malaise, unconsciousness

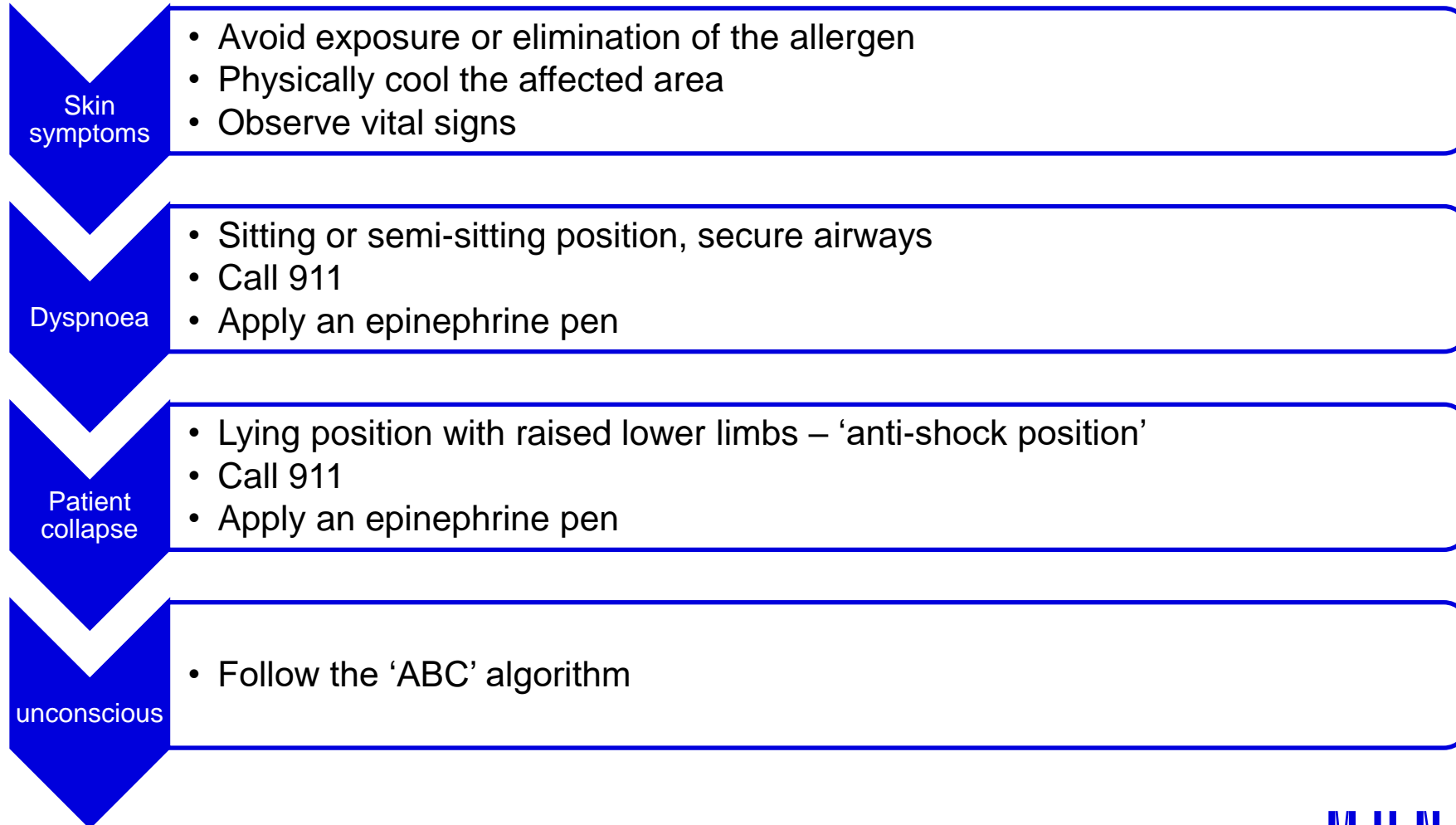
When to call 911?

General
symptoms
appear

History of
severe allergic
reaction



First aid



First aid kit with allergy medication

- An allergy sufferer can be equipped with her/his own medication
- The allergy sufferer himself is instructed on how to take the medication.
- The kit should also include instructions on what medications, what form, and what dose to administer
- These are most often as pills, inhalers and epinephrine injection

Epinephrine injection / pen

- Used for intramuscular administration of adrenaline in an anaphylactic reaction
- The injection is in a form that the allergy sufferer can self-administer
- The site of application is usually the thigh muscle
- Leave the injection at the injection site for 10 seconds
After 5-15 minutes without improvement, the 2nd dose can be given

Epinephrine injection / pen

- Video application of an epinephrine pen in First Aid e-learning.

Biphasic anaphylactic reaction



- In some cases, a second anaphylactic reaction occurs
- It most often occurs a few hours after anaphylaxis
- The allergy sufferer must be monitored in a monitored bed for at least 24 hours after anaphylaxis
- Always call 911, even if the anaphylactic symptoms go away

Take home message

- Severe forms of allergies and anaphylaxis are life-threatening conditions
- Carefully monitor the condition of the allergy sufferer, respond to the onset of general manifestations of allergy
- Call 911 in time
- Find out an allergic history and possibly arrange an allergy first aid kit
- In case of dyspnoea or worsening of consciousness, apply an adrenaline pen

Learning outcomes

- The student can describe the process of an anaphylactic reaction.
- The student knows the contents of the allergy first aid kit and knows what it is for.
- The student can describe the procedure for the application of epinephrine pen.

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