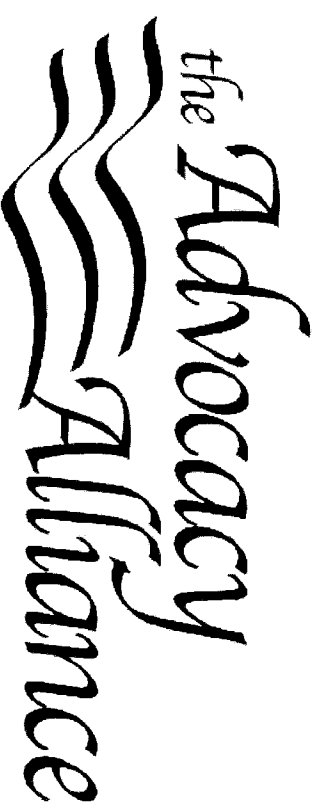


Asthma



Health Care Quality Units

Objectives

- The participant will learn:
 - Definition of Asthma.
 - Risk Factors for Developing Asthma.
 - Classifications of Asthma.
 - Types of Asthma.
 - Asthma Triggers.
 - Signs and Symptoms of Asthma.
 - Diagnosis of Asthma.
 - Treatment of Asthma.

Definition of Asthma

- Asthma is a chronic and potentially life-threatening lung disease in which the main air passages of the lungs, the bronchial tubes, become inflamed.
- The muscles of the bronchial walls tighten and cells in the lungs produce extra mucus which further narrows the airway – making it difficult to breath.

Risk Factors for Developing Asthma

- One or both parents having asthma.
- Respiratory infections as a child.
- Low birth weight.
- Obesity.
- Gastroesophageal reflux disease (GERD).
- Exposure to secondhand smoke.

Risk Factors for Developing Asthma

- Allergic rhinitis or hay fever.
- Sensitivity to irritants and/or environmental allergens.
- Residing in large urban areas, which may increase exposure to environmental pollutants.
- Exposure to occupational triggers (i.e., chemicals used in farming, hairdressing, paint, steel, plastics and electronic manufacturing).

Classifications of Asthma

- Mild intermittent – Mild allergy symptoms up to two days a week and two nights a month.
- Mild persistent – Asthma symptoms more than twice a week, but no more than once in a single day.

Classifications of Asthma

- Moderate persistent – Asthma symptoms every day and night time symptoms more than once a week.
 - Asthma attacks may affect activity level.
- Severe persistent – Asthma symptoms throughout the day on most days and frequently at night.

Types of Asthma

- Allergic Asthma
 - Most common form of asthma.
 - Triggered by inhaling allergens.
 - Caused by the IgE antibody, which is produced by the body in response to allergen exposure.

Types of Asthma

- Allergic Asthma
 - Release of potent chemicals called mediators are a result of the combination of the IgE antibody and allergens.
 - Mediators cause inflammation and swelling of the airways, resulting in the symptoms of asthma.

Types of Asthma

- **Exercise Induced Asthma (EIA)**
 - Triggered by exercise.
 - Airways are overly sensitive to sudden changes in temperature and humidity, especially drier colder air.

Types of Asthma

- Occupational Asthma
 - A lung disorder caused by exposure to fumes, gases, dust or other potentially harmful substances inhaled while on the job.
 - Pre-existing asthma may be aggravated by exposures in the work place.

Asthma Triggers

- Allergens
- Irritants (i.e., strong odors, tobacco smoke)
- Weather changes
- Viral or sinus infections

Asthma Triggers

- Medications
- Foods
- Emotional anxiety
- Exercise
- Reflux disease

Signs and Symptoms of Asthma

- Cough
- Chest tightness or pain
- Shortness of breath
- Wheezing

Diagnosis of Asthma

- Based on the results of several tests, since signs and symptoms of asthma are similar to those of other diseases.
- Complete medical history and physical exam.
- Pulmonary function tests.
- Allergy testing.

Diagnosis of Asthma

- Tests to see how the airway reacts to exercise.
- Tests to determine if the individual has a diagnosis of gastroesophageal reflux disease (GERD).
- Tests to determine if the individual has a diagnosis of sinus disease.
- Chest X-ray or electrocardiogram.
- Based on test results, the physician will be able to determine the classification of asthma severity.

Treatment of Asthma

■ Medications

- Long term control medications are used on a regular basis to control chronic symptoms and prevent asthma attacks.
- Quick relief medications are used as needed for rapid short term relief of symptoms during an asthma attack.
- Medications for allergy induced asthma reduce the body's sensitivity to a particular allergen and prevent the immune system from reacting to allergens.

Treatment of Asthma

- Medications
 - Long term control medications are usually taken every day to control persistent asthma.
 - Inhaled corticosteroids (i.e., Flovent, Pulmicort, Azmacort, Aerobid, Ovar and Advair diskus)
 - Long acting beta 2 agonists (LABAs) (i.e., Serevent Diskus and Formadil)
 - Leukotriene modifiers (i.e., Singulair and Accolate)
 - See how to use a dry powder disk inhaler.

Treatment of Asthma

- Medications
 - Quick relief medications are used to stop the symptoms of an asthma attack in progress.
 - Short acting beta 2 agonists (i.e., Albuterol)
 - Anti-cholinergic (i.e., Atrovent)
 - Oral and intravenous corticosteroids for asthma attacks (i.e., Prednisone, Methylprednisone and Hydrocortisone)

Treatment of Asthma

- Medications
 - Medications for asthma triggered by allergies
 - Immunotherapy-allergy (i.e., desensitization shots)
 - Anti-IgE monoclonal antibodies (i.e., Xolair)
 - Treatment by severity for better control

Treatment of Asthma

■ Self Care Activities

- Exercise.
- Use air conditioner.
- Decontaminate the bedroom.
- Maintain optimal humidity.
- Reduce pet dander.
- Clean regularly.
- Limit use of contact lenses.

Treatment of Asthma

■ Complications

- School/Work absenteeism
- Home confinement
- Difficulty breathing
- Bronchospasm
- Hospitalization
- Asphyxia
- Status asthmaticus/Death

Treatment of Asthma

- **Prevention**
 - The best way to prevent asthma attacks is to identify and avoid allergens and irritants.
 - Develop an action plan.
 - Monitor breathing.
 - Treat attacks early.
 - Utilize self care guidelines.

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