

## Asthma

Asthma is a chronic lung disease caused by airway inflammation resulting in wheezing, chest tightness, coughing, and shortness of breath. With access to quality health care and appropriate medications, combined with an understanding of how to avoid specific environmental triggers, asthma is a controllable disease. The keys to control are knowledge, skill, and behavior. Asthma affects both adults and children, and according to the Center for Disease Control and Prevention, is the most common chronic childhood disease resulting in 14.7 million missed school days every year. Statewide, in 2006, approximately 373,000 (8.9%) adults and 125,000 (9.1%) children had asthma. In 2006, there were approximately 44,300 asthma-related emergency department visits, and approximately 9,700 asthma hospitalizations in Maryland for asthma.

### **Management of asthma should have the following goals:**

- Maintain normal activity levels (including exercise).
- Maintain (near) “normal” pulmonary function rates.
- Prevent chronic and troublesome symptoms (e.g., coughing or breathlessness after exertion).
- Prevent recurrent worsening symptoms (exacerbations) of asthma.
- Avoid adverse effects from asthma medications.



Early interventions in treating acute exacerbations of asthma reduce the likelihood of developing severe airway narrowing. An early warning sign of an asthma episode may be a drop in peak expiratory flow rate and/or symptoms. Asthmatics are often aware of other warning signs such as recurrent coughing, wheezing, breathing through the mouth, shortness of breath, more rapid breathing than usual, and nasal flaring. These usually happen before more serious symptoms occur. Awareness of these warning signs allows early medication at a time when asthma is easiest to control.

There are three features of an asthma episode. One is the contraction of the involuntary muscles surrounding the airways. This is known as bronchospasm, which causes airway obstruction. Bronchospasm can be reversed quickly by using a short acting inhaled bronchodilator, which is used for short-term relief of symptoms during an asthma episode. Secondly, inflammation of the lining of the airways (edema), results from the release of chemicals made by cells in the airway. Inflammation further narrows the airways. Medications such as corticosteroids are used to reduce inflammation and prevent recurrence. Thirdly, excessive, thick mucus that narrows the airways is often produced during an asthma episode.

Identifying “triggers” is very important in order to avoid or control the causes of asthma episodes. Some common asthma triggers are:

- Air pollution
- Allergies caused by dogs, cats or other animals
- House dust-mites or mold
- Pollen from trees, grasses, flowers and weeds
- Aspirin and non steroidal anti-inflammatory agents
- Colds or flu
- Exercise
- Smoke from cigarettes or fires
- Strong odors from perfumes or solvents
- Cold air or weather changes
- Strong physical expressions: hard crying, laughing, or yelling



Frederick Memorial Hospital’s Community Outreach Program was created to increase awareness of the fact that asthma is a significant health problem. Certified asthma educators (AE-C) are dedicated to helping patients manage their disease, and to educating the community about this chronic disease that strikes so many throughout the state of Maryland. The AE-Cs will offer a series of educational sessions, covering topics such as: basic asthma facts, inhaler/peak flow technique, levels/goals of asthma control, medications/why they are needed, when to seek help, self monitoring by symptoms or peak flow assessment, and use of a written action plan. No physician’s order or referral is necessary to schedule an asthma education session. These services are offered at no charge.

For more information call Cherie Hyssong or Shanna Figgins at 240-566-3836.