

A basic rule of asthma therapy is that the intensity of treatment should match the severity of asthmatic symptoms. Therefore, history is essential in determining if your disease is mild, moderate, or severe and whether the asthma is intermittent or persistent. Asthma is associated with a chronic allergic irritation of the chest that in some patients can progress to permanent changes. This can lead to irreversible obstruction which is called Chronic Obstructive Pulmonary Disease, or COPD. This is why it is important to recognize and treat asthma. The primary goals of treatment are relief of patient symptoms, prevention of acute asthmatic attacks, and an improved quality of life.

**The successful management of patients with asthma includes four essential components:**

- **Routine monitoring of symptoms and lung function**
- **Patient education to create a partnership between clinician and patient leading to reduction of symptoms**
- **Controlling environmental factors (trigger factors) and co-morbid (two or more co-existing conditions or diseases) that contribute to asthma severity**
- **Pharmacologic therapy to reduce damage to the lungs and inflammation**

## MONITORING PATIENTS WITH ASTHMA:

Currently, the majority of medical visits for asthma are for urgent care. Effective asthma management, however, requires a preventative approach, similar to the treatment of hypertension or diabetes. Routine follow-up visits for patients with asthma are recommended, at a frequency of every one to six months, depending upon the severity of asthma. These visits should be used to assess multiple aspects of the patient's asthma. Even if you're well today you need to keep your appointments and seek further education and reduction of risk of asthma flare. Some therapies and monitoring can only be done when you are healthy, i.e. skin testing. We ask at each visit the following: signs and symptoms of your asthma, how you're functioning, quality of life, asthma exacerbations, adherence with treatment and medication side effects. We want to know about nighttime symptoms, use of short acting inhaled beta agonists (SABAs) to relieve symptoms, and difficulty in performing normal activities and exercise. Well-controlled asthma is our goal.

## ASTHMA ACTION PLAN:

The patient's normal Peak Flow Meter PEFr value can be used to construct a personalized "asthma action plan." The asthma action plan provides specific directions for daily management and for adjusting medications in response to increasing symptoms or decreasing PEFr. Instructions and forms for asthma action plans are important tools.

## CONTROLLING TRIGGERS & CONTRIBUTING CONDITIONS:

The identification and avoidance of asthma triggers is a critical component of successful asthma management.

**Inhaled allergens-** The patient should be aware of symptoms triggered by common inhaled allergens, at home, daycare, school, or work. Indoor allergens, such as dust mites, animal dander, molds, and cockroaches, are of particular importance. Food allergy rarely causes isolated asthma symptoms, although wheezing and cough can be symptoms of food-induced anaphylaxis. If your history suggests these allergic triggers, basic avoidance measures will be advised.

**Respiratory irritants-** Inhaled irritants include tobacco smoke, wood smoke from stoves or fireplaces, strong perfumes and odors, chlorine-based cleaning products, and air pollutants. Patients should be cognizant of avoiding irritants, and avoid exertion outdoors on days when levels of air pollution are elevated

**Contributing conditions-** In adults, these conditions include chronic obstructive pulmonary disease/emphysema (COPD), allergic bronchopulmonary aspergillosis, gastroesophageal reflux, obesity, obstructive sleep apnea, rhinitis/sinusitis, vocal cord dysfunction, and depression/chronic stress.

Aspirin and non-steroidal anti-inflammatory drugs can trigger asthma symptoms in approximately 3 to 5 percent of adult asthmatic patients. The incidence of aspirin-exacerbated respiratory disease is higher among asthmatic patients with nasal polyposis (constituting "triad asthma" or Samter's triad). Aspirin-sensitive asthma is uncommon in children.

**Complications of influenza-** Annual administration of the influenza vaccine is recommended for patients with asthma because they are at risk for complications of infection. However, vaccination does not reduce the number or severity of asthma exacerbations during the influenza season.

**Dietary sulfites-** Sulfite compounds are used in the food industry to prevent discoloration. As many as 5 percent of patients with asthma may note significant and reproducible exacerbations following ingestion of sulfite-treated foods and beverages, such as beer, wine, processed potatoes, dried fruit, sauerkraut, or shrimp.

## SUMMARY AND RECOMMENDATIONS:

Effective asthma management requires a preventative approach, with regularly scheduled visits during which symptoms are assessed, pulmonary function is monitored, medications are adjusted, and ongoing education is performed. Patients should learn to monitor asthma control at home (e.g., frequency and severity of dyspnea, cough, chest tightness, and albuterol use). Patients with moderate to severe asthma and those with poor perception of increasing asthma symptoms may also benefit from assessment of their peak expiratory flow rate at home. A personalized asthma action plan should be provided with detailed instructions on how to adjust asthma medications based upon changes in symptoms and/or lung function. Environmental triggers and co-existing conditions that interfere with asthma management should be identified and addressed for each patient.