Patient information: Asthma treatment in adolescents and adults (Beyond the Basics)

Author
Christopher H Fanta, MD

Section Editor
Bruce S Bochner, MD

Deputy Editor
Helen Hollingsworth, MD

ASTHMA TREATMENT OVERVIEW

Asthma is a common lung disease affecting millions of people worldwide. It is caused by narrowing of the airways (breathing tubes) in the lungs. This narrowing is partially or completely reversible. Symptoms of asthma include wheezing, coughing, chest tightness, and shortness of breath. These symptoms tend to come and go, and are related to the degree of airway narrowing in the lungs. The airways are sensitive to a variety of stimuli, which may include viral illnesses (eg, the common cold), allergens, exercise, medicines, or environmental conditions.

Asthma can usually be treated successfully. This requires being well informed about the disease and being an active player in managing it.

This topic will review asthma treatment in adolescents and adults (adolescents defined as children 12 years and older). Other topics about asthma are also available. (See "Patient information: How to use a peak flow meter (Beyond the Basics)" and "Patient information: Asthma inhaler techniques in adults (Beyond the Basics)" and "Patient information: Asthma and pregnancy (Beyond the Basics)" and "Patient information: Exercise-induced asthma (Beyond the Basics)".)

Topics about asthma in children are also available. (See "Patient information: Asthma symptoms and diagnosis in children (Beyond the Basics)" and "Patient information: Asthma treatment in children (Beyond the Basics)" and "Patient information: Asthma inhaler techniques in children (Beyond the Basics)" and "Patient information: Trigger avoidance in asthma (Beyond the Basics)".)

CONTROLLING ASTHMA TRIGGERS

The factors that set off and worsen asthma symptoms are called "triggers." Identifying and avoiding asthma triggers are essential steps in preventing asthma flare-ups. Common asthma triggers generally fall into several categories:

- Allergens (including dust, pollen, and furred animals)
- Respiratory infections
- Irritants (such as tobacco smoke or chemicals)
- Physical activity
- Certain medicines, known as beta blockers
- Emotional stress
- Menstrual cycle in some women

A small number of patients will develop asthmatic symptoms after exposure to aspirin or other nonsteroidal antiinflammatory medications, like ibuprofen or naproxen. (See "Patient information: Trigger avoidance in asthma (Beyond the Basics)" and "Allergen avoidance in the treatment of asthma and allergic rhinitis".)

After identifying potential asthma triggers, you and your clinician should develop a plan to deal with the triggers. There are three main options:

- Avoid the trigger entirely (eg, if allergic to animals, do not own pets, if sensitive to aspirin or related medications, avoid all forms of these medications).
- Limit exposure to the asthma trigger if it cannot be completely avoided (eg, move to another seat if someone with strong perfume is seated nearby, have someone else do house cleaning if allergic to dust mites).
- Take an extra dose of bronchodilator medication before exposure to an asthma trigger. Talk with a healthcare provider before using this approach; it should only be used if the first two options are not possible. Be careful not to use more than twice the amount of medication normally used.

Special approaches to unavoidable allergic triggers include allergy desensitization injections ("allergy shots") and an injected medication targeting allergy proteins in the blood (anti-immunoglobulin E antibody, called omalizumab).

MONITORING SYMPTOMS AND LUNG FUNCTION

Successful asthma treatment relies on your ability to monitor your condition over time. This is done by recording the frequency and severity of symptoms (such as wheezing, coughing, and shortness of breath) and by measuring lung function with a peak flow meter

Asthma diary — A healthcare provider may recommend keeping a daily asthma diary when symptoms are not well controlled or when starting a new treatment. In the diary, your peak flow readings, asthma symptoms (eg, coughing, wheezing), and medications are recorded (figure 1).

A periodic diary may be recommended if you have stable symptoms and your medications have not changed recently. This type of diary can be completed before visiting the healthcare provider and helps you and your healthcare provider to determine whether the asthma treatment plan needs to be adjusted (form 1).

Peak expiratory flow (PEF) — PEF measures the rate at which you can exhale. This rate is dependent on the degree of airway narrowing. PEF monitoring can be used to monitor your lung function and response to treatment, assess the severity of asthma attacks, and guide decisions regarding treatment.

Peak flow meters are inexpensive and easy to use. Adults with persistent asthma may, at times, use a peak flow meter once or twice daily to monitor their lung function. (See "Patient information: How to use a peak flow meter (Beyond the Basics)".)

Review of treatment — Adolescents and adults with asthma are usually seen by their healthcare provider once or twice a year if their asthma is well-controlled or more often if their asthma is not well-controlled. At these visits, the healthcare provider will evaluate the severity and frequency of your asthma symptoms and response to treatment. If your asthma control has been adequate for at least three months, your medication dose may be decreased. If control is not adequate, your medication schedule, delivery technique, and trigger avoidance will be reviewed, and your medication dose may be increased.