



Asthma Information Packet

Prevention

For people with asthma, having an “asthma management plan/Asthma Action Plan” is the best strategy to prevent symptoms. An asthma management plan is something developed by you and your doctor to help you control your asthma, instead of your asthma controlling you. An effective plan should allow you to:

- Be active without having asthma symptoms.
- Participate fully in exercise and sports.
- Sleep all night, without asthma symptoms.
- Attend school or work regularly.
- Have the clearest lungs possible.
- Have few or no side-effects from asthma medications.
- Have no emergency visits or stays in the hospital.

Four Parts of Your Asthma Management Plan:

1. **Identify and minimize contact with your asthma triggers.** Avoiding your triggers is the best way to reduce your need for medication and to prevent asthma episodes. But first, you have to learn what those triggers are. Any time you have an asthma episode, think about where you were and what you were doing in the past day or so. Answer questions like these in a diary or on your calendar:
 - Was I making a bed or vacuuming?
 - Was I near an animal? Cigarette smoke?
 - Did I have a cold or other infection?
 - Was I running, playing or exercising?
 - Was I upset, excited or tired?

Discuss your notes with your doctor to look for trends. As you identify your triggers, talk about which ones can be avoided, and how to best avoid them. For instance, if you are allergic to dust mites you should put an airtight cover around your pillow and mattress. You may also want to discuss with your physician how immunotherapy might help to prevent allergy symptoms.

2. **Take your medications as prescribed.** Asthma medicines are usually inhaled through a machine called a nebulizer, through a small device called a metered dose inhaler (also called an inhaler, puffer, or MDI) or through a dry powder inhaler (DPI). For inhalers to work well, you must use them correctly. But over half of all people who use inhalers don't use them properly. Ask your doctor or nurse to watch you and check your technique. If it is still difficult to use, you have two choices. Ask them to recommend a spacer or holding chamber. This device attaches to the inhaler to make it easier to use and to help more medicine reach the lungs. Or, ask about using a “breath-actuated” inhaler, which automatically releases medicine when you inhale.

Unless your asthma is very mild, chances are you have prescriptions for at least two different medicines. That can be confusing. The more you understand about what those medicines do and why they help, the more likely you are to use them correctly. Although there are some potential adverse effects from taking asthma medications, the benefit of successfully controlling your asthma outweighs this risk. It is important to discuss each of your asthma medications with your physician to learn more about their effects.

3. **Monitor your asthma and recognize early signs that it may be worsening.** Asthma episodes almost never occur without warning. Some people feel early symptoms, including: coughing, chest tightness, feeling very tired. But because airways to the lungs narrow slowly, you may not feel symptoms until your airways are badly blocked. The key to controlling your asthma is taking your medicine at the earliest possible sign of worsening.

There is a simple, pocket-sized device called a peak flow meter that can detect narrowing in your airways hours, or even days, before you feel symptoms. You simply blow into it, as instructed in your doctor's office, to monitor your airways the same way you might use a blood pressure cuff to measure high blood pressure or a thermometer to take your temperature. Peak flow meters come in many shapes and styles. Ask your doctor which is right for you. Your doctor may divide your peak flow numbers into zones (**green** = safe; **yellow** = caution; **red** = emergency) and develop a plan with you. Your peak flow number will help you know:

- o Which medicine to take
- o How much to take
- o When to take it
- o When to call your doctor
- o When to seek emergency care

The good news is that using your peak flow meter should mean fewer symptoms, fewer calls to the doctor, and fewer hospital visits!

4. **Know what to do when your asthma is worsening.** If you understand your asthma management plan and follow it, you will know exactly what to do in case of an asthma episode or an emergency. If you have any questions at all, ask your doctor.



Quick Reliever Medications

Quick relief medicines (inhaled and pills) are used to ease the wheezing, coughing, and tightness of the chest that occurs during asthma episodes.

- **Short-acting bronchodilators** (inhaled) are one type of quick relief medicines. They open airways by relaxing muscles that tighten in and around the airways during asthma episodes. **Example: ProAir (Albuterol)**

- **Short-acting beta agonists** (inhaled) relieve asthma symptoms quickly and some prevent asthma caused by exercise. If you use one of these medicines every day, or if you use it more than three times in a single day, your asthma may be getting worse, or you may not be using your inhaler correctly. Talk with your doctor right away about adding or increasing a medication, and about your inhaler technique.
- **Oral beta agonists** (syrup, tablets and long-acting tablets) syrup may be used for children, while long-acting tablets may be used for nighttime asthma. Oral preparations generally cause more side effects than the inhaled form.
- **Theophylline** (oral, slow-acting) can be used for persistently symptomatic asthma, and especially to prevent nighttime asthma. Theophylline must remain at a constant level in the blood stream to be effective. Too high a level can be dangerous. Your doctor will do regular blood tests. Sustained release theophylline is not the preferred primary long term control treatment but it is effective when added to other anti-inflammatory medicines to control nighttime symptoms.



Long-Term Controller Medications

Long term control medications help you keep control of your asthma. The NHLBI Guidelines state that you probably need a long term control medicine if you have symptoms more than twice a week. ***You will need to take this medicine every day.***

The *anti-inflammatory group* of controller medicines is the most important group of long term controllers which prevent or reverse inflammation in the airways. This makes the airways less sensitive, and keeps them from reacting as easily to triggers. In short, they actually prevent asthma episodes.

- **Cromolyn Sodium** and **Nedocromil Sodium** (inhaled) prevent airways from swelling when they come in contact with an asthma trigger. These non-steroids can also be used to prevent asthma caused by exercise.
- **Inhaled Corticosteroids** (inhaled) prevent and reduce airway swelling and decrease the amount of mucus in the lungs. These are generally safe when taken as directed. They are not the same as anabolic steroids, which some athletes take illegally to build muscles. If you are taking an inhaled anti-inflammatory medicine and you feel your asthma symptoms getting worse, talk with your doctor about continuing or increasing the medicine which you are already taking. You may also need to add an oral corticosteroid or a short-acting beta agonist (bronchodilator) for relief. After taking your steroid inhaler, you should rinse your mouth out with water to prevent developing a fungal infection called oral candidiasis **Example: Flovent**
- **Oral Corticosteroids** (pills, tablets, liquids) are used as short-term treatment for severe asthma episodes or as long-term therapy for some people with severe asthma. Again, these are not the

same as anabolic steroids. After taking your steroid inhaler, you should rinse your mouth out with water to prevent developing a fungal infection called oral candidiasis.

- **Leukotriene modifiers** (tablets) are a new type of long-term control medication. They prevent airway inflammation and swelling, decrease the amount of mucus in the lungs, and open the airways. **Example: Singular**

The *long-acting bronchodilator group* is another type of the long term controller medicines which help open the airways over a long period of time. They are taken in addition to anti-inflammatory medicines.

- **Long-acting beta agonists** (inhaled) can be taken with or without an anti-inflammatory medicine to help control daily symptoms, including nighttime asthma. This type of medicine can also prevent asthma triggered by exercise. Because long-acting beta agonists cannot relieve symptoms quickly, they should not be used for an acute attack. You also need a short-acting, inhaled beta agonist for acute symptoms. Long-acting, inhaled beta agonists are not a substitute for anti-inflammatory medicine. You should not decrease or stop taking your anti-inflammatory medicine without talking to your doctor, even if you feel better.
- **Combined therapy medicine** (inhaled) contains both a controller and reliever medicine. This combination of a long-acting bronchodilator and corticosteroid is used for long-term control. **Example: Advair**
- **Anti-IgE therapy** (injected) is a new treatment for people with moderate or severe allergic asthma. For people with allergic asthma, anti IgE therapy works by helping to reduce the production and diffusion of Immunoglobulin E (IgE), a primary trigger of allergic inflammation in the lungs. It attempts to stop allergic asthma at its root cause instead of just treating asthma symptoms. This drug is not inhaled, but rather injected by your doctor on a regular basis. It does not eliminate your need for other asthma medications, but it can help to reduce your use of them. Due to its significant cost, this form of therapy is currently reserved for moderate to severe cases requiring multiple medications.

*Information retrieved from Asthma & Allergy Foundation of America, http://www.aafa-md.org/asthma_basics.htm#longterm