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What You Should Know About Asthma - Reactive Airways

Who gets it?

Asthma affects nearly 20 million people in the U.S. It is the most common chronic disease in children but also affects many adults as well. Children who have wheezing only with infections may outgrow their problem. Those who are allergic to things in their environment may have asthma longer but can be kept comfortable with new medications and sometimes by building up their resistance to their asthma "triggers" with allergy injections.

What is it?

During an asthma episode the small airways of the lungs become inflamed and narrow in response to a variety of stimuli. The patient develops chest tightness or pressure, cough, wheezing, shortness of breath, and excess phlegm or mucus.

What causes it?

Each patient should recognize the *triggers* for their asthma. These include exposure to allergies such as animals, dust mites, pollen, mold spores, exercise, infections, cold air or changes in the weather, smoke, and odors such as perfume or cleaning compounds. Heartburn or acid reflux disease will also aggravate asthma.

How is acute asthma treated?

During *acute episodes* of asthma, the chest tightness from spasm of the airways can be treated with fast acting '*bronchodilator*' sprays such as *albuterol*. Brand names include *Ventolin*, *Proventil* and *Maxair*. These can be repeated in 4 hours if needed but excess use is unwise. *Xoperis* is a similar drug used in a nebulizer.

Occasionally patients notice side effects of nervousness or palpitations.

Atrovent is also quick acting and useful in asthmatics and former smokers especially when coughing or excess mucous production is a frequent symptom. It comes in inhalers and for use in nebulizers.

Serevent and *Foradil* are similar to albuterol but are effective for 12 hours. Both can be used with a quick acting spray like albuterol. *Serevent* however takes an hour to begin working.

How is chronic asthma treated?

Patients having wheezing more than *two times a week or on more than 2 nights* a month have *persistent or chronic asthma*. If untreated, the chronic inflammation can cause "*remodeling*" or a permanent change in the structure of the lungs.

Daily *anti-inflammatory medications* are the treatment of choice to decrease mucus, heal the lungs, and prevent long-term damage that may occur from chronic asthma.

Inhaled steroids are the most powerful group of these medicines and are quite safe when used even in children or in pregnant women. They should be used every day to prevent symptoms. Patients on high doses occasionally develop thrush - white patches in the mouth, or hoarseness, but rinsing the mouth after each dose and using a 'spacer' or breath activated device can prevent these problems.

Brand names include *Beclovent, Vanceril, Azmacort, Pulmicort, Flovent, and Qvar*. *Advair* is a combination of *Flovent* and *Serevent*.

Oral steroids (prednisone) may be required during flare-ups in asthma in patients otherwise well maintained on inhaled steroids. Such short term, low dose use seldom causes side effects.

Brand names include *Medrol, Prelone, and Pediapred*.

High doses taken for more than one week can cause increased appetite, weight gain, fluid retention, mood changes and leg cramps. Patients staying on oral steroids for months can develop slow bone growth, hip fractures, osteoporosis, cataracts, and glaucoma.

Inhaled steroids rarely cause these side effects especially in doses under 800 mcg per day.

Cromolyn medications (*Intal/Tilade*) are milder preventive medications often useful in children or in anyone allergic to animals. They can be used on occasion to prevent exercise induced wheezing. There are no side effects to them. They must be used ahead of activities since they will not relieve wheezing once it starts.

Leukotriene agents (*Singulair, Accolate*) are medications that prevent part of the inflammatory response in chronic asthma. They must be used daily to be effective but have few side effects.

Remember everyone and especially children *should use enough medication to ensure a normal daily life, allow healthy exercise, and normal sleep.*

Daily medications:

For quick relief: albuterol two sprays every 4 hours. Can also be used before exercise.

For prevention used times a day.

Also for prevention used times a day.

Also for prevention used times a day or at bedtime.

When the seasons change or when a patient starts with a "cold," increased use of medication is often needed.

An Action Plan for asthma attacks often starts with repeating two sprays of albuterol 20' after your first doses of albuterol. (Alternately some then use their nebulizers.)

If symptoms continue despite this you should double your dose of inhaled steroids:

Prednisone may be added if your "peak flow" drops to 50% of your best peak flow.

You should also call your doctor.