Gastroesophageal Reflux and Asthma

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Patients with asthma develop difficulty breathing because of irritated airways that result in shortness of breath, wheezing, and cough. A variety of factors, such as allergies, cold air, exercise, and respiratory infections, can worsen this condition. Another potential trigger for asthma symptoms is acid reflux from the stomach or heartburn.
Although many people have symptoms of heartburn, including burning sensation behind the breast bone, acid taste in the mouth, cough, and sometimes nausea, others do not experience any symptoms, so-called "silent" reflux. The only symptom may be that their asthma is difficult to control with the usual medications. Since between 30 and 90% of adult asthmatics have reflux, this is an important condition to consider in difficult-to-control asthmatics.

Why does reflux aggravate asthma?
There are two possible reasons by which reflux can narrow the airways and worsen asthma. The first is that acid from the stomach can track up the esophagus (feeding tube), particularly when you lie down. Small amounts of acidic fluid can trickle down into the airways causing them to narrow and thereby create shortness of breath and wheezing. Alternatively, acid can reach the lower part of the esophagus and stimulate nerve endings. This can cause the smooth muscle in the airways to contract, which narrows the breathing tubes. The patient perceives this as shortness of breath.

How is reflux-induced asthma diagnosed?
Often the diagnosis is made based on a clinical history and improvement of symptoms with therapy. Symptoms of reflux-induced asthma are listed in Table 1. Remember, it is possible that the only symptom may be difficulty in controlling your asthma on your usual medications.

Table 1: Typical Symptoms of Reflux-induced Asthma

- Asthma symptoms are worse after eating high fat meal, coffee, chocolate or alcohol
- Wheezing, shortness of breath, cough while experiencing heartburn symptoms like burning, acid taste in the mouth
- Persistent cough, particularly if worse when lying down.

Specialized tests are available, such as 24-hour esophageal pH monitoring, which measures the acid content in the esophagus. The patient documents asthma symptoms which are then matched with the esophageal acid events to confirm the diagnosis. It can also be used to monitor the effectiveness of reflux therapy.

What is the treatment?
Standard therapy for asthma, such as inhaled corticosteroids and bronchodilators should be optimized. If symptoms of asthma persist, despite optimal therapy, reflux should be considered as a possible aggravating factor.

There are many non-medical therapies to help improve reflux including:

- weight loss if overweight
- eating a low fat diet
- elevating the head of the bed
- avoiding certain foods which are known to worsen reflux such as coffee, alcohol, and caffeine
- avoid large meals late at night

In addition, there are safe and effective medications which can decrease the amount of acid in the stomach and control symptoms of both reflux and asthma. The two major groups of medications include proton-pump inhibitors (PPI), such as omeprazole, and H-2 blockers such as ranitidine. PPI are more effective at decreasing acid and their side effects are minimal. A final option for the treatment of reflux is surgery, but this is appropriate only in severe cases that have failed all alternative therapies.

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NOTE: This is not intended as a substitute for professional advice.

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