

Your Health Reference Sheet

Topic: Asthma

By Carol Ritberger, PhD, Medical Intuitive

Asthma, according to evolutionary biologists and immunologists, is simply an adaptive, biological response that has gone bad. They refer to it this way because the response associated with an asthma attack is actually intended to protect the body against parasitic organisms and is designed to expel toxins from the body via sneezing and coughing. However, in its adaptation, rather than providing protection only when toxins or organisms are present, asthma has evolved into a chronic, hypersensitive immunological response, leading to inflammation and bronchoconstriction. While asthma is fairly simple to diagnose, it can be confused with other diseases such as chronic bronchitis and emphysema, so proper testing is needed to get a definitive diagnosis. Although asthma is seldom fatal, it is serious, so you should seek the help of a doctor or an alternative practitioner at the first signs you may have it.

Asthma is increasingly becoming a problem in the United States. In the last decade, the number of diagnosed cases of asthma has increased 50 percent with some 20 million people now affected, 2.5 million of whom need emergency treatment annually. Asthma is the leading serious, chronic illness among children under ten; and once considered a rare disease in the elderly, it's now being diagnosed in record numbers. Asthma has now become such a prevalent condition that it costs over \$14 billion annually to treat.

General Description

Asthma is a Greek word that means "difficult breathing." It's a chronic, inflammatory disorder of the bronchial tubes characterized by episodes of shortness of breath, chest tightness, racing heart, flared nostrils, mucus production, wheezing, and coughing. In asthma, the lung airways become red, swollen, and full of mucus. Bronchial spasms constrict airways making breathing difficult. Asthma isn't a problem of breathing in, but of breathing out because the lung's tiny airways become narrowed due to inflammation and clogged with excess mucus.

Asthma is closely tied to the immune system, particularly the part of the immune system called *humoral*. Humoral immunity is controlled by cell-signaling chemicals called cytokines, which turn on and turn off the activity of various cells such as mast cells, basophils, eosinophils, and B cells. Allergic antigens bind to mast cells and basophils. The result is an immune system response in the form of inflammation, which, in asthma, causes bronchoconstriction.