

What is Asthma?

Asthma is a lung disease that is defined by clinical and functional parameters. It is recognized clinically by history of wheezing, shortness of breath, and coughing which can be initiated by nonspecific stimuli. Asthma is classified as intrinsic [absence of external triggers], extrinsic [caused by certain antigens], and exercise-induced. Overall, its symptoms are caused by inflammation of the lining of the airways in the lung.

Incidence of Asthma:

According to the National Institute of Allergy and Infectious Disease [1], about 15 to 16 million Americans suffer from bronchial asthma. Its prevalence is about 4% in most populations. Approximately 4,000 asthmatics die from asthma complications each year. Asthma is the number one cause of school absenteeism and the number one cause of pediatric admissions to the hospital.

Causes of Asthma:

Include: allergy, industrial chemical exposures, exercise, infections, inflammation of the blood vessels, to name just a few. Of these, allergy is the most common cause of asthma. People who are less than 30 years of age have a 70% chance that their asthma is related to allergies. Of military importance is that the prevalence of exercise-induced bronchospasm in asthmatics has been reported to vary from 40% to 90% [2]. Besides the difficulty in breathing in a gas-mask, asthma symptoms can be exacerbated by certain drugs such as Pyridostigmine which was used extensively during Operation Desert Storm for prophylaxis against the effect of nerve agents [3]. Complications of asthma include: increased incidence of bacterial pneumonia, other lung infections, plugging of central airways with mucus and lung collapse.

What is the best test to rule out asthma?

If the diagnosis of asthma is in doubt, it is advisable to obtain bronchoprovocation challenge test from an expert pulmonary[lung] physician because there are other medical reasons, besides asthma, for wheezing and coughing.

References:

1. Nat Inst of Allergy and Inf dis Pamphlet, page 22, 1990.
2. Cabral, A.L. et al Am J Respir Crit Care Med 159:1819, 1999.
3. Gouge, S.F. et al Mil Med 159:108, 1994.