

Asthma Assessment

Asthma is an airway disorder that is characterized by varying degrees of obstruction of the airways by bronchial hyperresponsiveness, production of excess mucous or bronchospasm. The airways of the patient with asthma are identified by a decreased lumen size which decreases the amount of air that can be exchanged.



PLAY PICMONIC

Assessment

Triggers (Cold air, Dander, Dust, Infection, Mold, Pollen, Smoke)

Cold-Dirty-DIMPS Trigger-man

Environmental factors, known as “triggers,” can lead to disease exacerbation for the predisposed patient. Many triggers are patient specific, and could include exacerbants like dust, molds, pollen, cold air, animal dander, smoke or a current or previous upper respiratory infection.

Shortness of Breath (SOB)

S.O.B

A patient may report the feeling of “short of breath,” meaning it may be difficult for the patient to control their breathing, obtain a full breath or may experience anxiety or chest tightness limiting their breath. There may also be objective signs and symptoms of a patient in respiratory distress like wheezing, coughing or tachypnea.

Tachypnea and Tachycardia

Tac-P-lungs and Tac-heart-card

Patients experiencing respiratory distress from an asthma exacerbation may have a fast heart rate (tachycardia) and/or breath rate (tachypnea) in the initial, uncontrolled stages. The feeling of anxiety, dread and discomfort associated with shortness of breath, actual narrowing of the airways contributing to a decreased oxygenation, increasing CO₂ buildup in the bloodstream (“hypercapnia”) and other factors are associated with tachypnea and tachycardia.

Wheezing

Weasel

Wheezing is a high-pitched sound heard with or without auscultation of the lungs during expiration. Though it can occur with asthma, it may or may not be present with every case of asthma.

Diaphoresis

Sweaty-sweatband

Prolonged respiratory distress secondary to an asthma exacerbation taxes the body’s metabolism overtime. Diaphoresis is a sign of the body’s attempt to cool itself during increased metabolic activity.

Accessory Muscles

Accessories Muscle-man

Accessory muscles are present bilaterally and include the sternocleidomastoid, pectoralis major and minor, latissimus dorsi, transverse abdominus, scalene, serratus anterior and trapezius. A person experiencing an asthma exacerbation may recruit and increasingly rely on these muscles to maintain oxygenation, with muscles becoming prominent upon inspection and observation by the nurse or clinician. These people may appear to strain or struggle when attempting to breathe.

Decreased Pulmonary Function Tests

Down-arrow Lungs Function Test

The best and most objective way for assessing, grading and monitoring asthma, including treatment response, over time is with the pulmonary function test with or without a methacholine challenge. Common parameters measured during testing include Forced Expiration Volume over 1 second (FEV₁), Force Vital Capacity (FVC) and an FEV₁/FVC ratio. In obstructive lung diseases, like asthma, these could be decreased (especially FEV₁) in uncontrolled asthma.

This finding could occur with or without a patient presenting with an asthma exacerbation.