

Asthma in Emergency Care

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Asthma is a chronic condition that affects the airways. It causes wheezing and breathing difficulties. There are different types, such as childhood, adult-onset, seasonal, and workplace-related asthma.

Asthma causes the inside walls of the airways, or the bronchial tubes, to become swollen and inflamed [1].

Asthma is a Heterogeneous Disease with Several Subtypes Based on its Etiology, Clinical Presentation, and Response to Treatment. Here are the main types:

- **Allergic (Extrinsic) Asthma:** Triggered by allergens such as pollen, dust mites, pet dander, or mold. It is commonly associated with other atopic conditions like eczema or allergic rhinitis.
- **Non-Allergic (Intrinsic) Asthma:** Not related to allergens. Triggers may include respiratory infections, cold air, exercise, stress, or irritants like smoke and pollution. It often begins in adulthood and can be more severe.
- **Exercise-Induced Asthma:** Triggered by physical exertion. Symptoms typically occur during or after exercise and may improve with proper management and use of medication before exercise.
- **Occupational Asthma:** Caused by exposure to allergens or irritants in the workplace. Symptoms are often related to specific job-related exposures and improve when away from the workplace.
- **Cough-Variant Asthma:** Characterized primarily by a chronic cough without the typical wheezing or shortness of breath. It can be challenging to diagnose and may require specific testing.
- **Aspirin-Induced Asthma:** Also known as aspirin-sensitive asthma, it occurs in some people who develop asthma symptoms after taking aspirin or other nonsteroidal anti-inflammatory drugs (NSAIDs). This type is often associated with a condition called Samter's triad (aspirin sensitivity, asthma, and nasal polyps).

- **Severe Asthma:** A classification rather than a distinct type, it refers to asthma that remains uncontrolled despite high-dose inhaled corticosteroids and additional medications. It often requires more intensive management strategies.

Each Type of Asthma may require a Tailored Approach to Management and Treatment.

For a critical care perspective on asthma, you will want to focus on topics such as:

- **Management of Severe Asthma Exacerbations:** Articles often discuss advanced therapeutic strategies, including high-dose corticosteroids, bronchodilators, and adjunctive treatments like magnesium sulfate or heliox.
- **Mechanical Ventilation:** Research in this area explores strategies for managing asthmatic patients on mechanical ventilation, such as permissive hypercapnia and specific ventilatory settings to minimize airway pressures.
- **Intensive Monitoring:** Investigations into how intensive monitoring, including arterial blood gases and peak expiratory flow measurements, informs the management of severe asthma.
- **Pharmacological Interventions:** Studies on novel or advanced pharmacological treatments for asthma, including biologics and their role in severe asthma.
- **Outcomes and Prognosis:** Articles that analyze outcomes and prognostic factors in patients with severe asthma who require intensive care, including long-term management and follow-up.

You can access relevant studies through databases like PubMed, Google Scholar, or specific journals focused on critical care or respiratory medicine. If you need access to specific articles or papers, I can help guide you on where to find them or how to access them.

References

1. <https://www.medicalnewstoday.com/articles/323523#:~:text=Asthma%20is%20a%20chronic%20condition,to%20become%20swollen%20and%20inflamed.>



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