

Biological Treatments for Severe Asthma: A Comprehensive Review

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ABSTRACT

Severe asthma is a chronic condition marked by persistent symptoms and frequent exacerbations, often despite high-dose inhaled corticosteroids and other standard therapies. This condition, affecting about 5-10% of asthma patients, significantly contributes to healthcare costs and reduced quality of life. Severe asthma disproportionately impacts certain populations and necessitates systemic corticosteroids, which can cause serious adverse effects. Advances in biologic therapies offer targeted treatments for severe asthma, improving disease management by addressing specific inflammatory pathways. These biologics, such as omalizumab, mepolizumab, benralizumab, reslizumab, dupilumab, and tezepelumab, have shown efficacy in reducing exacerbations, improving asthma control, and reducing corticosteroid dependency. Selection of appropriate biologic therapy depends on clinical characteristics, biomarkers, and comorbidities. The potential for spacing or discontinuing biologic treatments after achieving control is a critical area for future research. These treatments have revolutionized severe asthma management, enhancing patient outcomes and quality of life.

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