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[Table of Contents](#)

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[Find Citing Articles](#)

[Email Jumpstart](#)

[Save Article Text](#)

[Email Article Text](#)

[Print Preview](#)

Links

[Complete Reference](#)
[Catalogo Biblioteca ISS](#)

Outline

- [The authors reply:](#)
- [REFERENCES](#)

Recent History

Treatment of Allergic Ast...



[Previous Page](#)

Treatment of Allergic Asthma with Monoclonal Anti-IgE Antibody [Correspondence]

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The authors reply:

To the Editor: We agree with Drs. Salvi and Babu that the exact role of IgE in allergic disease has yet to be fully understood. Yet it is beyond dispute that IgE causes disease, as shown by the classic passive-transfer experiment of Prausnitz and Kustner.

[1] Although the role of IgE may vary in individual patients, it is critical for the development of bronchial hyperresponsiveness, a risk factor for asthma, in children. This heightened bronchoconstrictor response to a variety of stimuli is closely related to serum IgE levels. [2]

Experimental evidence supports the role of anti-IgE antibody in suppressing allergic disease and asthma. Heusser et al. demonstrated that anti-IgE antibody inhibits antigen-induced bronchoconstriction, bronchial hyperresponsiveness, and the infiltration of eosinophils into the lungs in sensitized mice. [3] Fahy et al. reported that the use of anti-IgE monoclonal antibody in subjects with asthma resulted in the attenuation of both early- and late-phase responses to airway challenge with allergen and the reduction of eosinophil counts in induced sputum samples. [4] Casale et al. showed that the improvement in symptoms of seasonal allergic rhinitis with the use of anti-IgE monoclonal antibody is related to the reduction in free IgE concentrations. [5]

Not surprisingly, the results of our study were not uniform; some patients had a striking improvement, and others more modest relief. Still, the entire group of subjects who received anti-IgE monoclonal antibody had significant improvements in asthma symptoms and quality-of-life scores, a reduction in the number of asthma exacerbations, a sustained improvement in the peak expiratory flow rate despite the withdrawal of corticosteroids, and a reduction in the use of inhaled and oral corticosteroids without an increase in the use of rescue medication. The subjects were

already receiving daily corticosteroids (oral, inhaled, or both) and (beta)-agonists as needed.

Our data not only support the value of anti-IgE therapy in patients with asthma but also provide indirect evidence of the role of IgE in the pathogenesis of this heterogeneous disease. [\[6\]](#)

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