

bronchospasm (EIB). These tests should be done under close observation in a qualified laboratory or clinic.

Skin prick testing (SPT) and serological testing (with quantification of sIgE) for allergen-specific immunoglobulin E (sIgE) may be used to identify environmental allergens that trigger asthma ([Sicherer, Wood, and American Academy of Pediatrics Section on Allergy and Immunology, 2012](#)). It is recommended that all patients with year-round asthma symptoms be tested with skin tests or laboratory blood analysis to determine sensitization to perennial allergens (e.g., house dust mites, cats, dogs, cockroaches, molds, and fungus) ([Liu, Covar, Spahn, et al, 2016](#)).

In addition to these tests, other tests may be performed, including laboratory tests (complete blood count with differential) and chest radiographs. The presence of eosinophilia of greater than 500/mm³ suggests the presence of an allergic or inflammatory disorder. Frontal and lateral radiographs may show infiltrates and hyperexpansion of the airways, with the anteroposterior diameter on physical examination indicating an increased diameter (suggestive of barrel chest). Radiography may also assist in ruling out a respiratory tract infection or other conditions, such as aspiration or CF.

Therapeutic Management

The overall goals of asthma management are to maintain normal activity levels, maintain normal pulmonary function, prevent chronic symptoms and recurrent exacerbations, provide optimum drug therapy with minimum or no adverse effects, and assist the child in living as normal and happy a life as possible. This includes facilitating the child's social adjustments in the family, school, and community and normal participation in recreational activities and sports. To accomplish these goals, several treatment principles need to be followed ([Brown, Gallagher, Fowler, et al, 2010](#)):

- Regular visits to the health care provider is necessary to evaluate therapeutic response and revise plan of care if needed.
- Prevention of exacerbations includes avoiding triggers, avoiding allergens, and using medications as needed.
- Therapy includes efforts to reduce underlying inflammation and relieve or prevent symptomatic airway narrowing.