hours of exercise per week than the control subjects, which might explain their lower level of physical fitness. Diminished exercise capacity did not seem to be a result of impaired lung function or limited ventilation. We might want to encourage all children who were born prematurely to participate in more physical activity and sports at an early age, because this might possibly improve the exercise performance of those in this group.

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Irreversible Lung Function Deficits in Young Adults With a History of Childhood Asthma

PURPOSE OF THE STUDY. Asthma is traditionally characterized as reversible airway obstruction. Yet, it is readily apparent that some individuals develop varying degrees of fixed obstruction associated with structural changes in the airway and that such a course is often marked early in life. These investigators sought to study the frequency, severity, and reversibility of pulmonary deficits in adults with a history of previously well-characterized moderate-to-severe childhood allergic asthma.

STUDY POPULATION. Subjects (N = 121) previously enrolled onto a randomized trial of immunotherapy for childhood asthma were recalled. This original group, aged 5 to 12 years at randomization between 1984 and 1994, had physician-diagnosed asthma and required daily medications for at least 1 year before enrollment. The original study evaluations included daily symptom diaries, home visits, allergy skin testing, and methacholine challenges with associated spirometry. The primary outcome variable was daily medication-useage score as a measure of severity. No differences between the placebo and active-immunotherapy groups were appreciated over the course of the study; both groups saw decreases in medication use and methacholine sensitivity.

METHODS. With the current study, an attempt was made to contact all 121 original study subjects, now aged 18 to 31 years. Subjects underwent spirometry and allergy skin testing, and interim medical histories were taken. Individuals with postbronchodilator forced expiratory volume in 1 second (FEV1), forced vital capacity (FVC), or FEV1/FVC of ≤5th percentile or at least 2 of these parameters at <10th percentile were categorized as abnormal. These subjects were prescribed 1 mg/kg per day prednisone for 1 week before follow-up pulmonary-function testing, physical examination, and a chest radiograph to assess steroid responsiveness of lung deficits.

RESULTS. Of the 84 subjects reevaluated, 40 (48%) had ≥1 abnormal spirometric index (P < .0001). Of these 40 subjects, 28 were reassessed after prednisone, and 21 (75%) did not improve. Adult and childhood spirometric results were positively correlated. Abnormal adult spirometric results were associated with a longer duration of asthma at enrollment in the original trial, increased childhood methacholine sensitivity, and birth prematurity. Childhood immunotherapy status was unrelated to adult lung function.

CONCLUSIONS. Many adults with a history of moderate-to-severe allergic asthma in childhood have irreversible lung-function deficits. Childhood parameters that might identify such individuals at a young age include spirometry, duration of asthma, methacholine sensitivity, and birth prematurity.

Allergy Skin Test Responses During Experimental Infection With Respiratory Syncytial Virus

PURPOSE OF THE STUDY. To determine if a viral upper respiratory infection affects allergy skin-test responsiveness.

STUDY POPULATION. Sixteen adults experimentally exposed to respiratory syncytial virus (RSV).

METHODS. Subjects without concurrent upper or lower airway disease were cloistered and inoculated with 10⁶ plaque-forming units of RSV type B. Daily physical examination and symptom scores were recorded. Nasal lavages were performed and stored at −70°C for RSV-antigen assay and culture. Blood samples were obtained for immunoglobulin E (IgE) measurement on days 0, 2, 4, 6, 8, 10, and 21. Skin-prick testing was performed for 17 locally relevant aeroallergens and controls on days 0, 3, 6, and 21.

RESULTS. Eight patients had ≥1 positive skin-test result at baseline and were considered atopic. Eleven (5 atopic, 6 nonatopic) had evidence of postinoculation RSV infection. Atopic patients had a higher IgE level at baseline as
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