The Asthmatic Child's Participation in Sports and Physical Education

Asthma is a chronic pulmonary disorder, frequently allergic in nature, and characterized by paroxysms of dyspnea, wheezing, tightness in the chest, and bronchospasm. Asthmatic attacks may be minor and short in duration with little discomfort, or very severe and of long duration, producing the characteristic picture of intractability. During symptomatic periods, it is usually possible to demonstrate change in certain aspects of pulmonary function, notably expiratory flow rate and forced expiratory volume. With mild symptoms or between the episodes of severe asthma, the individual may be at little or no disadvantage in most activities. Continuous exercise for five to eight minutes in cold air often causes dyspnea, wheezing, and bronchospasm (exercise-induced asthma) in an asymptomatic individual who may or may not have a history of having had asthma or hay fever. When symptoms of pulmonary distress become severe or prolonged, they may lead to interruption of the child's daily routine, including school attendance. Occasionally, such children may become home or hospital bound for periods of time.

Between the two extremes of no symptoms and severe asthma, there is a spectrum of respiratory or pulmonary disability—the nature and severity of which require that each child receive individual consideration and evaluation in the matter of his daily activity. Control of asthma in children has significantly improved during the past decade. However, asthma may contribute to inefficiency in schoolwork because of associated chronic fatigue, irritability, decreased attention span, and emotional factors.

Physical activities are useful to asthmatic children. The majority of asthmatic children can participate in physical activities at school and in sports with minimal difficulty, provided the asthma is under satisfactory control. All sports and physical education should be encouraged but should be evaluated on an individual basis for each asthmatic child, depending on tolerance for duration and intensity of effort. Fatigue and emotional upheaval in competitive athletic contests appear to be predisposing factors in precipitating asthmatic attacks in some instances. This may depend to some extent on the duration and severity of the disease. Exercise-induced asthma can be detected by history of dyspnea and bronchospasm following continuous exercise in cold air, previous asthma or hay fever, or by response to simple pulmonary function tests following exercise (measurement of peak expiratory flow rate by flowmeter or forced expiratory volume by spirometer). Appropriate prophylactic treatment by β-adrenergic agents administered by aerosol or orally prior to exercise will usually permit full participation in strenuous exertion. As a general rule, every effort should be made to minimize restrictions and to invoke them only when the condition of the child makes it necessary.

Periodic review of the health status of the asthmatic child should be made. Written records of annual and other periodic health evaluations by the pediatrician managing the asthma should be on file in the office of the school nurse or physician and, for athletes, with the team physician or athletic trainer. Physicians who assume the responsibility for the medical care of asthmatic children can be of greater usefulness to their patients if they become familiar with the character of the physical education and athletic programs in the schools.

In children with asthma, and in children with many other chronic conditions, it is important that the patient and his family recognize early during the course of the disease that certain adjustments in the daily routine may be necessary. However, one must attain a balance between the needs of the child to participate in activities with as little restriction and distress as possible and the necessary limitations to living a full life.
The Committee on Children with Disabilities and the Committee on Sports Medicine therefore recommend that any decision to modify a school's physical education or athletic program for a child with asthma must be the joint responsibility of physician, child, parent, and school principal and/or advisor. Recommendations should be individualized. Efforts should be made to enhance the child's feelings of self-worth and avoid feelings of being different from other children.

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SUGGESTED READING
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