

([Sarnat, 2016b](#)). Prenatal diagnosis is also possible as early as 12 weeks of gestation. Serum enzyme measurement, muscle biopsy, and EMG may also be used in establishing the diagnosis. Serum creatine kinase levels are extremely high in the first 2 years of life before the onset of clinical weakness. If the child demonstrates the usual characteristics, has a positive family history for DMD, and the PCR result is positive, the muscle biopsy may be deferred.

Therapeutic Management

No curative treatment exists for childhood MD. The use of the corticosteroids prednisone and deflazacort has been evaluated as a treatment for DMD. Several clinical trials demonstrated increased muscle strength and improved performance and pulmonary function, with significant decrease in the progression of weakness, when prednisone was administered for 6 months to 2 years ([Manzur, Kuntzer, Pike, et al, 2008](#)). The American Academy of Neurology has published a practice parameter for the administration of corticosteroids in the treatment of DMD ([Moxley, Ashwal, Pandya, et al, 2005](#)). Major side effects in these studies included weight gain and a cushingoid facial appearance.

Maintaining optimal function in all muscles for as long as possible is the primary goal; secondary is the prevention of contractures. Children with DMD who remain as active as possible are able to avoid wheelchair confinement for a longer time. Maintenance of function often involves stretching exercises, strength and muscle training, breathing exercises to increase and maintain vital lung capacity, range-of-motion exercises, surgery to release contracture deformities, bracing, and performance of ADLs.

Parents should always be involved in making decisions about the child's care, and teaching regarding home safety and prevention of falls is important as well. Parents should also be encouraged to have the child keep follow-up appointments for medical care and physical and occupational therapy. Because respiratory tract infections are most troublesome in these children, influenza and pneumococcal vaccines are encouraged, and contact with persons with respiratory tract infections should be avoided. Action plans for prompt treatment of respiratory illness are important.

Eventually, respiratory and cardiac problems become the central focus of the debilitating illness. Children with neuromuscular