Muscular Dystrophies in Children

Muscular dystrophy (MD) is a genetic disease caused by a change or mutation in 1 of the genes located on the chromosomes (DNA) in human cells. Muscular dystrophy causes muscle weakness and a decrease in muscle mass over time.

Nine types of dystrophies have been identified, and many types have variations or subtypes, resulting in more than 30 different forms. Many dystrophies also cause contractures (shortening due to tightness) of joints, curvature of the spine, respiratory (breathing), cardiac (heart) problems, and other symptoms.

Signs and Symptoms

Several types of dystrophies affect children, and symptoms of the disease might begin to show in children at any time from birth to the teen years.

Any delay in motor milestones—the ability of the child to learn how to sit up, crawl, walk, and run at typical ages—should be investigated to determine the cause of the delay. The Gowers sign, a medical term describing the way a child gets up to stand by pushing with hands on the thighs, is often the first indication of pelvic muscle weakness. This sign is highly associated with Duchenne MD.

Research has suggested that any child who continues to turn onto his stomach before getting up from the floor after 3½ years of age, should be examined for weakness.

HOW A PHYSICAL THERAPIST CAN HELP

While no cure exists for any of the dystrophies, many treatments, including physical therapy can help maintain function by managing complications of disease progression, such as weakness and contractures. Each child with MD has unique needs based on age, the type of dystrophy, and the progression of symptoms. Physical therapists will perform an evaluation, and work with the child and family as well as other health professionals to develop an individualized treatment plan to help the child reach full potential. Treatment plans may include:

- Passive and active stretching
- Exercises for maintaining strength
- Exercises for breathing
- Improving developmental skills
- Tips for fostering physical fitness and activity