Is Exercise Harmful or Beneficial in People with Duchenne's Muscular Dystrophy (DMD)?

The role of exercise, and particularly strength training, is controversial in people with DMD. Supporters of active exercise believe that it is very important to a person's health, feelings of wellbeing and development of motor skills. Additionally, weight-bearing exercises help build strong bones. Strong bones are especially important in people with DMD that take steroids as a treatment because steroids can cause bones to become less dense and more prone to breaking. Also, muscles deteriorate if they are not used regularly. There is a study called "No Use is Disuse" that says that when muscles are not used regularly, they break down. So, the question is, do the benefits of exercise in patients with DMD outweigh the risks if DMD is a degenerative disorder?

In the early years of a diagnosis, it is important for children with DMD to participate in a wide range of activities that help support physical, emotional and social skills. Activities such as bike riding and swinging encourage the development of balance and coordination. It is important, however, to make sure the child does not push too hard and become exhausted in such activities.

Studies show that some forms of exercise are more likely to cause damage to muscle fibers than others. Activities that include running, walking on slopes or stairs are much more demanding on muscle fibers. Also, many physical therapists believe that any kind of weight lifting/strength training should not be included in the treatment of a person with Duchenne's as these types of exercise can increase stress on muscle and increase muscle degeneration (break down.)

Swimming is recommended for children with DMD. With the weight of gravity minimized, children and get the cardiovascular benefits of exercise (and the fun) while minimizing the strain on muscles. Bike riding is also a possibility for children with DMD as it is less demanding on muscles. Studies have shown that bicycle training may decline muscle deterioration due to disuse.

Sources: http://www.parentprojectmd.org/site/PageServer?pagename=Care_physical_therapy_early#active and http://www.ncbi.nlm.nih.gov/pubmed/23884013