Muscular dystrophy disease: definition, diagnosis, types, symptoms

Health & Medicine, Disease

Muscular Dystrophy is a number of disorders that decrease the function of the muscles andothers that control the internal organs. The meaning of muscular dystrophy means that the nourishment for the muscles is defective (Abramovitz 15-29). All muscular dystrophy diseases have three things in common: they are all hereditary, they are all progressive; and each have characteristics and continue weakness. The word dystrophy comes from the Greek words “ dys,” meaning abnormal, and “ trophe,” which means nourishment (Abramovitz 15-29). Many of these diseases are very critical to a person’s ability to be mobile. Muscular Dystrophy is caused by gene mutations and is first shown at birth or later in childhood. Many doctors are trying to find the treatment and cure for muscular dystrophy by doing research.

How the body works is with two different types of muscles. The types of muscles are voluntary, smooth, and heart muscles. The human body contains 434 voluntary muscles, alsoknown as skeletal muscles (Abramovitz 15-29). How we move our muscles is by moving orrelaxing them. Our others muscles on the other hand such as smooth and heart muscles, do not have to constantly control them. This disease only has to consist with voluntary muscles, but you can also end up having heart and smooth muscle problems. When a person has a disease like muscular dystrophy, their muscles lose the ability to contract and relax and begin to get weak (Abramovitz 15-29).

Diagnosis of any type of Muscular Dystrophy can sometimes be difficult because many of them resemble each other (Abramovitz, 15-29). Muscular Dystrophy was first described in 1830 by a Scottish surgeon Sir Charles Bell

(Abramovitz 15-29). When a doctor tries to figure out what kind of muscular dystrophy, he or she will send you to what is called neurologists. Aneurologist is a specialist in the nerves and muscle diseases (Abramovitz 15-29). If you have asmaller aged child your doctor may tell you to go to a pediatrician who specializes in these kinds of disorders in children. The doctor may also tell you that you will have heart weakness and breathing problems so you would have to get more medical care for your disease. Your doctormay also take your information on medical history in your family to see if MD runs in yourfamily. Your doctor may also perform a number of EMG tests that measures electrical activity in the muscles (Abramovitz, Melissa). Muscular Dystrophy is diagnosed by a physical exam, family history, and tests. This may also include a muscle biopsy, DNA testing, blood enzymetesting, or nerve conduction tests (Web MD, 2011). If your doctor suspects you have Duchenne or Becker Muscular Dystrophy, the muscle biopsy will show whether dystrophin protein ismissing or abnormal. Genetic testing is also used for some forms of muscle dystrophy (Web MD, 2011). There is no cure for Muscular Dystrophy, but therapy and medication slows the process of the disease. Studies for gene therapy are being researched as we speak. For instance, scientistsare researching ways to insert a working dystrophin gene into muscles of boys with Duchenne and Becker muscular dystrophies.

There are many different types of Muscular Dystrophy. One of the common kinds is Duchenne Muscular Dystrophy Disease. DMD is one of the 10 muscular dystrophies that mainly affect boys (Children’s Hospital of Boston).

In DMD, the combination of not enough dystrophin and inflammatory reactions causes the muscles to weaken and waste over time. This type ofMuscular Dystrophy is very fatal towards boys and young men and is dependent towards a wheelchair and decline in cardiac and respiratory function (Children’s Hospital of Boston). Oneteam at Harvard medical school came up with a model for a cure for this type of Muscular Dystrophy. Using a zebra fish model of DMD, Dr. Kunkel and his team set out to screen 1, 200 chemicals already approved for human use for any that might restore muscle tissue (Children’s Hospital of Boston). For this experiment, students tested 1, 200 chemicals and only seven had the restoration affect for a cure for DMD. DMD is characterized by severe pain, loss in ability to b emobile, and possibly death. This affliction affects one and 3500 males, making it most prevalent of Muscular Dystrophies (Children’s Hospital of Boston). The cause of this type of MD is amutation in the gene in the person’s chromosomes. Most affected boys do not survive beyond their teens or early adulthood (Abramovitz 15-29). In older boys the first symptoms are falling, having trouble running, and simple things such as getting up the stairs. Your child’s calf muscles might eventually be enlarged because of the replacement of muscle tissue. Soon, the boy will walk on his toes with the abdomen pushed forward because of the pelvic muscle weakness (Abramovitz 15-29). Eventually the boy’s shoulders may be pushed back due to weakness process of the disease.

When you go to the doctor, your doctor asks you what your symptoms for your sickness are. Symptoms in Muscular Dystrophy may be muscle

weakness, apparent lack of coordination, and progressive crippling resulting in fixations (Mayo Clinic Staff). Symptoms vary with different types of Muscular Dystrophy. Each type of Muscular Dystrophy is different in age. Symptoms for Muscular Dystrophy is frequent falls, large calf muscles, difficulty getting up, weakness of the lower legs, waddling gait, and mild retardation in some cases (Mayo Clinic Staff). In the late stages in this disease, fat and muscle tissue often replace with muscle fibers (Mayo Clinic Staff). Before you go to the doctor, make a list of family history. Muscular Dystrophy may run in your family, which may have caused your child to have this disease. Muscular Dystrophy is noticed at birth but the symptoms aren't present until the ages 3-5 years old (University of Maryland Medical Center). If you are having suspicions about your child having MD, please call your doctor right away to find out the results.

Doctors have been trying to find a way to develop new treatments for Muscular Dystrophy. Today there is not much for MD. Once a doctor has diagnosed a patient with MD, he or she will provide a treatment plan to the patients needs (Abramovitz 30-44). The conventional methods include exercise, drugs that slow down or eliminate muscle wasting, anabolic steroids and supplementation (Muscular dystrophy. N. P., 2007). This process is to help slow down the disease or to reduce the symptoms. Researchers are trying to create gene therapies to treat MD. Symptoms can be reduced by exercise, physical therapy, respiratory care, surgery and rehabilitative devices (Muscular Dystrophy. N. p, 2007). When you go to the doctor for treatment, he or she will try to prevent you from having joint or spinal

deformities. Another person that your doctor might send you to is a physical therapist. A physical therapist that specializes in designing appropriate exercise programs for people with disabilities (Abramovitz 30-44).

Living with Muscular Dystrophy is difficult in so many ways. When your child gets diagnosed with MD, you might think to yourselves what I could have to done to prevent this or you justblame yourselves. Psychologists encourage patients and families to talk about their feelings andthoughts at each stage of the coping process in order to gain acceptance of the situation (Abramovitz 60-74). Your psychologists help you to cope with your child having this diseaseand finds ways to help to overcome the grief. One of the difficult decisions to make for example to whether or not to have surgery or not to have surgery or to just let your child have a curved spine for the rest of his or her life. The surgery has the potential to make the child more comfortable and to preserve lung function by removing pressure on the lungs exerted by a curvedspine (Abramovitz 60-74). Another obstacle parents may face is whether or not to tell their child a lot about the disease they have. The best way to tell your child about this disease is to tell information a little at a time so it is not too much to handle at once. Many parents who have a child who has this disease they may treat their child different than a normal kid. Adolescents with MD face many of the same educational and social challenges as affected children do, but during the teen years these challenges intensify as the individuals struggle to become adults while dealing with the day to day burden of a severe medical condition (Abramovitz 60-74). If you are a parent with a child with MD, do not

treat them like they are different because then your child may think he or she is an outcast.

In conclusion, Muscular Dystrophy is a very harmful disease that is not only deadly but also is very challenging at times. Muscular Dystrophy is a group of disorders that weaken muscles in the body, including those that make the body move and others that control certain internal organs (Abramovitz 15-29). Kids who have MD struggle to be able to walk and normal like other kids. The meaning of Muscular Dystrophy means that the nourishment for the muscles is defective (Muscular Dystrophy 15-29). Today doctors have been trying to find a cure for MD, but we can fight against this disease.