

Duchenne Muscular Dystrophy Data Sheet

Text adapted for classroom, was originally from <https://www.duchenne.com/about-duchenne> and <https://rarediseases.info.nih.gov/diseases/6291/duchenne-muscular-dystrophy>.

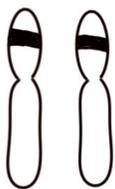
Trait: Duchenne Muscular Dystrophy (DMD)

Duchenne muscular dystrophy, sometimes shortened to DMD or just Duchenne, is a rare genetic disease. It was named for the French doctor who first described it, and it primarily affects males, but, in rare cases can also affect females.

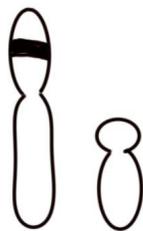
Duchenne causes the muscles in the body to become weak and damaged over time, and is eventually fatal.



Alleles and Inheritance



Typical Female
Both "X"
chromosomes need
to have this location
with the DMD gene.



Typical Male
The one "X"
chromosome needs
to have this location
with the DMD gene.

The DMD gene is located on the "X" chromosome, one of our two types of sex chromosomes.

Typical males have one "X" and "Y" chromosome. This means that they need only one of the alleles for DMD to get the disorder.

Typical females have two "X" chromosomes. This means that they need two of the alleles for DMD to get the disorder. If a female has only one allele for DMD she does not show signs of DMD.

From Genetic Information to the Substances That Cells Produce

The genetic change that causes Duchenne—a mutation in the DMD gene—happens before birth and can be inherited, or new mutations in the gene can occur spontaneously. This mutation prevents the body from producing dystrophin, a protein that muscles need to work properly. The main job of dystrophin in muscle cells is to stabilize and protect muscle fibers. Without dystrophin, muscle cells become damaged and weakened.

Other Important Information

The first signs and symptoms of Duchenne are often noticed around the age of 2 or 3. Children with Duchenne may be slower to sit, stand or walk. Most are unable to run and jump properly due to weakness in the core muscles of the body. Most children with Duchenne use a wheelchair full time by age 13. Heart and breathing problems begin in the teen years and lead to serious, life threatening complications. There is currently no cure for Duchenne. However, there are treatments that can help control the symptoms of this disease, allowing people with Duchenne to live into young adulthood.

