Gillette Children's Specialty Healthcare

Conditions

Becker Muscular Dystrophy

What Is Becker Muscular Dystrophy?

Becker muscular dystrophy (BMD) is a form of muscular dystrophy similar to **Duchenne muscular dystrophy** (DMD). It is a neuromuscular disorder that occurs in three to six of every 100,000 births, and in people of all races. It is less common than DMD.

Becker muscular dystrophy also progresses more slowly than DMD. Children who have Becker muscular dystrophy usually have better skeletal muscle function than those who have Duchenne muscular dystrophy. However, both conditions cause weakness in heart muscles.

What Causes Becker Muscular Dystrophy?

BMD occurs when a gene on the X chromosome changes (mutates) and fails to produce enough of the muscle-protecting protein dystrophin.

Because of the way BMD gets passed down from parent to child, it affects young boys. Every boy inherits an X chromosome from his mother and a Y chromosome from his father. The gene that can carry a change in dystrophin production is on the X chromosome.

BMD usually doesn't affect girls because girls inherit two X chromosomes (one from each parent). When a girl inherits a mutated dystrophin gene from one parent, she also receives a healthy one from her other parent, protecting her from the disease. Because boys don't receive a second dystrophin-producing gene to balance out the mutated one, they are affected by BMD.

Female carriers typically don’t have any symptoms of BMD, however up to 20 percent may show symptoms of cardiomyopathy or other muscle weakness. Sons of women who carry a mutated gene have a 50 percent chance of having BMD. Daughters of female carriers have a 50 percent chance of being BMD carriers.

BMD usually runs in families, but it's possible for a family with no history of the condition to have a son who has the disease or a daughter who’s a carrier. Sometimes new dystrophin gene mutations occur in a mother's egg cells. Once a new mutation passes to a son or daughter, it can be passed to the next generation.

Becker Muscular Dystrophy Symptoms and Effects

Becker muscular dystrophy symptoms and effects develop slowly, with symptoms appearing between ages 5 and 15. Kids usually get diagnosed with the condition after age 7.

Children who have BMD might experience weakness of the lower body that causes:

- Walking difficulty that gets worse over time.
- Frequent falls.
- Loss of balance and coordination.
- Trouble getting up from the floor and climbing stairs.
- Trouble jumping, hopping and running.
- Loss of muscle mass.
- Toe walking.

Other symptoms might include:

- Muscle weakness in the neck, arms or other areas of the body.
- Trouble breathing.
- Cognitive problems.

- Fatigue.

Becker Muscular Dystrophy Diagnosis and Treatment

The following tests are used to diagnose BMD.

- Physical exam: A physical exam tests gross motor abilities.
- Creatine kinase (CK) level: This blood test measures levels of an enzyme called CK, which is produced by damaged muscles. High CK levels can mean that muscles are degenerating due to conditions such as muscular dystrophy.
- **Genetic** testing: This blood test reveals mutations in the gene responsible for BMD. Female relatives of boys who have BMD can get a genetic test to see if they are carriers.
- Muscle biopsy test: If needed, doctors remove a small sample (this is called a biopsy) of muscle tissue. They examine the sample under a microscope, looking for signs of muscle degeneration.

Although there is no cure for BMD, the right care can reduce complications and improve quality of life for your child. Current Becker muscular dystrophy research and treatments focus on slowing, and eventually preventing, the muscle degeneration associated with the disease.

As soon as specialists at Gillette Children's Specialty Healthcare make a diagnosis, our team works with your family to create a custom care plan, including regular checkups.

As your child gets older, you can rely on age-appropriate treatment through **Gillette Lifetime Specialty Healthcare** for teens (16 and older) and adults.

Integrated Care

If your child has Becker muscular dystrophy, our team of internationally recognized specialists will work closely with you to create a treatment plan that fits your unique needs. Through the Muscular Dystrophy Association Care Center at Gillette, your child will receive care from one of the Twin Cities' largest groups of **pediatric neurologists**, **pediatric rehabilitation medicine specialists** and **pediatric orthopedic surgeons**. You might work with experts in **cardiology** and other areas related to muscle disorders, including:

Testing and Diagnostic Services

- Electromyography test.
- Electrocardiogram (EKG) test.
- Functional ability tests.
- Molecular genetic tests.
- Muscle functional and strength tests.

- Respiratory function tests.
- **Seating evaluations**.
- **Sleep studies** (polysomnography).
- **Swallowing studies** (fluoroscopy).
- **X-rays**.

Therapies

- **Nutrition and feeding**.
- **Occupational therapy**.
- **Physical therapy**.
- **Speech and language therapy**.

Family Support

- **Child life** specialists.
- **Neuropalliative** care.
- **Neuropsychologists**.
- **Psychologists**.
- **Social workers**.
- **Therapeutic recreation** specialists.

At Gillette, you won't be left trying to figure out which services are best for your child. We'll help you determine the specialties and services that will be most helpful to your family.

Explore Becker Muscular Dystrophy Resources

- Learn more about neuromuscular diseases and see current research at the **Muscular Dystrophy Association**.
- Understand more about Duchenne muscular dystrophy at **Parent Project Muscular Dystrophy**.

Make An Appointment **651-290-8707**