What is Myasthenia Gravis?

Myasthenia gravis is a chronic autoimmune disorder that causes muscles to weaken and tire easily. Most people affected by myasthenia gravis develop “ocular myasthenia” first, where the muscles that control eye and eyelid movement are affected, causing eyelid drooping, blurry vision or double vision.

Most of those with the ocular form of this neuromuscular disease eventually develop weakness in other muscles throughout the body (systemic myasthenia gravis) within one or two years. Systemic myasthenia gravis affects the muscles of the face, eyes, arms, and legs, as well as the muscles used for chewing, swallowing, and talking. When the muscles necessary for breathing are affected, a patient is said to be in myasthenic crisis — a life-threatening situation.

Typically, people with myasthenia gravis will experience periods of muscle weakness followed by periods of few to no symptoms.

Myasthenia Gravis Causes, Symptoms and Risk

Myasthenis gravis is caused by an autoimmune condition that damages the muscles’ receptors. These receptors normally receive chemicals from nerve endings, which allows the muscles to work properly. With myasthenia gravis, the autoimmune system produces antibodies that interfere with the receptors, blocking the chemicals that normally travel from nerve endings. Without the chemicals they need to work properly, the muscles become weak.

Myasthenia Gravis Symptoms

The first symptoms of myasthenia gravis often involve the eyes. Often the most common sign is ptosis, or drooping eyelids. This may affect only one eye, but the ptosis may shift from one eye to the other or involve both eyes. If you have myasthenia gravis, you may also feel a fatigue that worsens through the day. Other myasthenia gravis symptoms include:

- Double vision;
- Weakness in the arms or legs; and
- Difficulty breathing, talking, chewing, or swallowing.

Who Is At Risk for Myasthenia Gravis?

There are no known risk factors for myasthenia gravis. Women are more likely to develop myasthenia gravis between the ages of 20 and 40. Men are more likely to develop the condition after the age of 60. However, myasthenia gravis can occur at any age. People who have a family history of myasthenia gravis may be at greater risk for developing the disease.

Myasthenia gravis can worsen with stress, illness and fatigue. Check with your doctor before taking any new prescription or over-the-counter medications, which can also contribute to worsening myasthenia gravis symptoms.

Myasthenia Gravis Diagnosis

To diagnose myasthenia gravis, your ophthalmologist (Eye M.D.) can conduct a number of tests, including:

- A blood test to look for abnormal antibodies;
- Neurological examination of your physical condition and mental skills;
- Repetitive nerve stimulation, which tests the electrical activity in your muscles; and
- Edrophonium injection testing, where a nerve stimulant called edrophonium chloride is administered to see if there is any temporary improvement in your muscle strength.

Myasthenia Gravis Treatment

A neurologist will help determine the most appropriate treatment option depending on a number of factors, including which muscles are affected and how weak the muscles are.

Physical therapy and learning new coping skills may help to improve daily life.

Myasthenia gravis treatment may include one or more of the following therapies:

- Medications that help improve neuromuscular transmission and increase muscle strength;
- Drugs that improve muscle strength by suppressing the production of abnormal antibodies;
- Thymectomy, the surgical removal of the thymus gland (which is sometimes abnormal in myasthenia gravis patients);
- Plasmapheresis, where abnormal antibodies are removed from the blood while cells are replaced;
- Immune globulin delivered intravenously, which affects the immune system by adding antibodies from donated blood.