Myasthenia Gravis (MG)

What is myasthenia gravis (MG)?
Myasthenia gravis (MG) is a disease causing some muscles to become weak. The name myasthenia gravis comes from Greek and Latin words meaning grave muscle weakness. The muscles that become weak are the skeletal or voluntary muscles. These muscles help us move our eyeballs, eyelids, arms, and legs. It also affects our ability to take a deep breath, smile, swallow, remove a jar lid, shrug our shoulders, and more.

MG is a neuromuscular disease. The word neuromuscular comes from the words nerve and muscle. Nerves cause muscles to move. Chemicals are made and released where the nerves and muscles meet (junction). In MG there are not enough chemicals.

The cause of MG is not known. However, we do know that the body's immune system attacks the point where the nerves and muscles meet, called the acetylcholine receptor. The thymus gland, part of the immune system, is responsible for the immune system attack.

What are the signs of MG?
• **Weakness is the most important sign.** Weakness happens while doing simple activities such as combing your hair, talking, walking, and chewing. The weakness gets better after resting. Other signs include:
  ➤ Feeling tired (fatigue)
  ➤ Double vision, droopy eyelids, unusual eye movements
  ➤ Neck weakness (hard to hold head up)
  ➤ Weak voice, slurred speech, sleepy expression
  ➤ Weakness of arms, legs, shoulders

More on next page ➔

Learn more about your health care.
• **Severe signs need attention right away.** Any feeling of weak breathing, not getting enough air, or problems with swallowing must be reported to your doctor without delay. If paralysis of respiratory muscles occurs, the stage of weakness is referred to as crisis.
  ▶ Difficulty chewing or swallowing
  ▶ Shallow breathing

**How is MG diagnosed?**

In addition to a history and physical exam, tests which your doctor may do include:

• Edrophonium test: A medicine called Endrophonium (Tensilon) is given into a vein to see if your muscle strength improves.

• Repetitive nerve stimulation: This test stimulates your nerve to determine if muscles rapidly fatigue.

• Electromyography: This test stimulates muscle fibers instead of nerved with electronic impulses. People with MG often have a lower response to the test than people who have normal muscle function.

• Blood tests: Antibodies to the acetylcholine receptor are checked in the blood.

• CT scan or MRI: A computer tomography scan or magnetic resonance imaging test may be used to check the thymus.

• Pulmonary function tests (PFTs): These tests determine your capacity to breathe.

**How is MG treated?**

• Medicines – ask for information about the medicines you are given

• Plasmapheresis or plasma exchange – ask for the handout, **Therapeutic Plasma Exchange**

• Surgery to remove the thymus gland called thymectomy may be considered
What can I do to stay healthy?

- Rest often and do not become too tired. Avoid too much exercise.
- Learn about your treatments.
- Take only medicines your doctor orders, prescribes or knows that you are taking, including over the counter medicines, herbals, vitamins and other supplements.
- Tell any doctor, dentist, pharmacist, or nurse caring for you what medicines you are taking.
- Consider wearing a Medic Alert bracelet.
- Avoid:
  - Too much heat such as from hot tubs or sun bathing
  - Infections such as colds or bronchitis
  - Alcohol

For More Information

- **American Autoimmune Related Diseases Association**
  22100 Gratiot Ave.
  East Detroit, MI 48021
  (586) 776-3900
  [www.aarda.org](http://www.aarda.org)

- **Muscular Dystrophy Association**
  500 West Wilson Bridge Road, # 105
  Worthington, OH 43085
  (614)841-1014
  Email: columbus@mdausa.org
  [www.mda.org](http://www.mda.org)

- **Myasthenia Gravis Foundation of America, Ohio Chapter**
  126 Gnau Ave SW Unit B
  Massillon, OH 44646
  (330) 834-9066
  Email: ohio@myasthenia.org
  [www.ohiochaptermgf.org](http://www.ohiochaptermgf.org) or [www.myasthenia.org](http://www.myasthenia.org)
• National Institute of Neurological Disorders and Stroke (NINDS)

NIH Neurological Institute
P.O. Box 5801
Bethesda, MD 20824
1-800-352-9424
TTY: (301) 468-5981
www.ninds.nih.gov

Talk to your doctor or others on your health care team if you have questions. You may request more written information from the Library for Health Information at (614) 293-3707 or email: health-info@osu.edu.