

Myasthenia Gravis

Myasthenia gravis (MG) is an autoimmune neuromuscular disorder characterized by fluctuating weakness and fatigue of voluntary muscle groups. The most commonly affected muscle groups include those for the eyes and face, chewing and swallowing, and muscles of the shoulder and pelvic girdles. Muscles that are required for breathing may also be affected.

MG signs and symptoms may include:

- Droopy eyelids
- Double vision
- Slurred speech
- Swallowing problems
- Chewing problems
- Choking
- Arm &/or leg weakness
- Neck weakness
- Difficulty with breathing

Medical emergencies (“crisis”) are rare, but may occur when the muscles required for respiration become weak. Breathing may be affected to the point of respiratory insufficiency or arrest. Intubation may be required at that point.

www.myasthenia.org
800.541.5454

The MGFA mission is to facilitate the timely diagnosis and optimal care of individuals affected by myasthenia gravis and closely related disorders and to improve their lives through programs of patient services, public information, medical research, professional education, advocacy and patient care.

This publication is intended to provide the reader with general information to be used solely for educational purposes. As such, it does not address individual patient needs, and should not be used as a basis for decision making concerning diagnosis, care, or treatment of any condition. Instead, such decisions should be based upon the advice of a physician or health care professional who is directly familiar with the patient. The information contained in this publication reflects the views of the authors, but not necessarily those of the Myasthenia Gravis Foundation of America (MGFA). Any reference to a particular product, source, or use does not constitute an endorsement. MGFA, its agents, employees, directors, volunteers, its Medical/Scientific Advisory Board, and its Nurses Advisory Board or their members make no warranty concerning the information contained in this publication. They specifically disclaim any warranty of merchantability, fitness for any particular purpose, or reliability regarding the information contained herein, and assume no responsibility for any damage or liability resulting from the use of such information.

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Approved by the MGFA Medical/Scientific and Nurses Advisory Boards



355 Lexington Avenue, 15th Floor
New York, NY 10017-6603

(800) 541-5454
(212) 297-2156 • (212) 370-9047 fax

mgfa@myasthenia.org • www.myasthenia.org

Emergency Management I

M G

**Important Information
for Medical Personnel**

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Clinical manifestations of MG

- MG weakness and fatigue occurs in specific muscles and muscle groups.
- Muscle weakness and fatigue may fluctuate over time and throughout the course of the day.
- Individuals with MG are usually stronger in the morning, or after a brief rest.
- Prolonged or repeated use of affected muscles may increase MG weakness and fatigue.
- MG symptoms may worsen due to other illnesses, fever, stress, emotional upset, surgery, menses, pregnancy, thyroid dysfunction, electrolyte abnormalities, medications that can affect neurotransmission, or when starting new medications.

Crisis

- “Myasthenic crisis” is triggered by factors such as those stated above that exacerbate weakness associated with MG.
- “Crisis” occurs when MG patients are unable to breathe or swallow adequately.
- “Cholinergic crisis” is the result of anticholinesterase (e.g., Mestinon (pyridostigmine)) overdose.
- Do not give anticholinesterase if unable to distinguish myasthenic from cholinergic crisis.

General Treatment Guidelines

- Be watchful of breathing and swallowing problems.
- Avoid sedation, including narcotics, which may worsen MG symptoms.
- Lengthy questioning may fatigue MG patients.

FAILURE TO TREAT SYMPTOMS PROMPTLY MAY RESULT IN DIFFICULTY BREATHING THAT COULD RESULT IN RESPIRATORY ARREST.

Severe Respiratory Difficulty

- Subjective complaints may include shortness of breath at rest, difficulty speaking except in short sentences, anxiety, restlessness, air hunger, fatigue, and inability to lie flat.

Evaluate

- Airway patency
- Strength of cough
- Respiratory rate and effort
- Cardiac status
- Skin & nailbed color and temperature
- Mental status

Physical examination may reveal accessory muscle use, orthopnea, pale to cyanotic skin and nailbeds, cool and moist skin, weak cough, tachycardia, hypertension, rapid/shallow respirations, confusion, and lethargy.

First Responder Management

- Maintain open airway.
- Suction pooled oral secretions.
- Support respirations if needed (breathing difficulty in MG is related to diaphragmatic weakness.) O₂ is not helpful and may be harmful. Supporting respirations with an ambu bag or noninvasive ventilation (if available) may be necessary.
- Elevate head and shoulders.

Severe Swallowing Difficulty

- Subjective complaints may include choking, gagging, inability to swallow food or medications, anxiety and restlessness.

Evaluate

- Airway patency
- Pooled oral secretions or retained food
- Strength of cough
- Respiratory rate and effort
- Cardiac status
- Speech effort and quality

Physical examination may reveal retained food in the mouth, weak cough, absent speech, nasal speech, and nasal regurgitation, pooled secretions, drooling, and rattling in the throat or chest.

First Responder Management

- If actively choking open mouth and remove any visible food particles.
- Perform Heimlich maneuver (J-thrust) if foreign body (including food) airway obstruction is suspected.
- Maintain open airway.
- Suction pooled oral secretions.
- Keep a calm and peaceful atmosphere.
- Sit patient upright if alert.