

## Myasthenia Gravis Assessment

The condition is an autoimmune disorder that affects muscles innervated by the cranial nerves, as well as in skeletal and respiratory muscles. It is characterized by exacerbations and remissions.



PLAY PICMONIC

### Weakness with Muscle Use

#### Progressively Weaker with Muscle Flexing

A characteristic feature of myasthenia gravis is muscle weakness that worsens with use. Muscle weakness is often more profound at the end of the day.

### Diplopia

#### Double-vision of eyes

Patients often report double vision because of weakness of the oculomotor muscles that control the eye. Specifically, this weakness causes an inability of the eyes to focus on objects at the same time, which causes the double vision.

### Ptosis

#### Toast-eyes

Often the first sign of myasthenia gravis is drooping eyelids. This is due to weakness of the oculomotor muscles of the eyelids.

### Dysphagia

#### Dice-fajita

The muscles of mastication and swallowing are often affected which causes difficulty swallowing. It is important to feed these patients first thing in the morning or during the peak effect of medications to decrease the risk of choking. Be sure the patients are positioned in a sitting position while eating and do not allow them to lay supine for up to 30 minutes after feeding.

### Difficulty Speaking

#### Broken Speech-bubble

The muscles of the face cause difficulty speaking or expressive aphasia. This aphasia may be more severe as the day progresses and may present with facial muscle weakness such as slurred speech, drooling, or difficulty articulating words.

### Fatigue

#### Sleepy-guy

Extreme tiredness is often experienced by patients especially later in the day or in later stages of the disease, as less acetylcholine receptors are available for muscle use. Be sure to assess the level of fatigue the patient is experiencing by simply asking them.

## Complications

## **Cholinergic Crisis**

### **Cola Crying**

Cholinergic crisis is easy to remember because there are "too many cholinergics" or over medication. This presents also as serious muscle weakness and symptoms DO NOT improve with the administration of the Tensilon test, in fact the patients may get worse.

## **Overmedicated**

### **Overflowing Med-bottle**

Overdose with cholinesterase inhibitors (anticholinesterase drugs), such as pyridostigmine (Mestinon) may result in increased ACh at the receptor sites causing a cholinergic crisis.

## **Myasthenic Crisis**

### **Mouse-thin-eye Crying**

Myasthenic crisis is a life-threatening event caused by stress, surgery, infection or simply because the patient isn't receiving enough cholinesterase inhibitor medication. In a myasthenic crisis muscle strength IMPROVES with the Tensilon test, which is the administration of the short acting anticholinesterase medication, edrophonium.

## **Not Enough Medication**

### **Empty Med-bottle**

Lack of medication or under medication may cause a myasthenic crisis. This scenario improves with the Tensilon test, because the short acting anticholinesterase medication, edrophonium, blocks acetylcholinesterase and leads to the accumulation of acetylcholine at the neuromuscular junction.

## **Respiratory Muscle Paralysis**

### **Lungs in Wheelchair**

A lack of medication may cause serious exacerbations of the disease such as respiratory muscle paralysis. This may require assisted ventilation.