

## Myasthenia Gravis

This is a disease due to antibodies formed against acetylcholine receptors. It manifests as ptosis and diplopia and muscle weakness. It is associated with thymic hyperplasia and thymoma.



PLAY PICMONIC

### Mechanism

#### Antibodies to Acetylcholine Receptor

[Ant-tie-bodies attacking A-seagull-cola Receptor](#)

These antibodies lead to loss of function of acetylcholine receptors.

### Symptoms

#### Ptosis

[Toast-eyes](#)

Patients usually present initially with extraocular muscle weakness that manifests as drooping eyelids (ptosis) and double vision (diplopia).

#### Diplopia

[Double-vision of eyes](#)

Patients usually present initially with extraocular muscle weakness that manifests as drooping eyelids (ptosis) and double vision (diplopia).

#### Weakness with Muscle Use

[Progressively Weaker with Muscle-flexing](#)

Patients experience fluctuating weakness that worsens as the day progresses. Weakness worsens also with activity and heat.

#### Respiratory Death

[Dead Lungs](#)

Patients experiencing myasthenic crisis are at risk of dying due to respiratory failure.

#### Thymus Associated

[Thigh-mouse](#)

Myasthenia Gravis is associated with thymic hyperplasia and thymoma.

### Treatment

## **Acetylcholinesterase Inhibitors**

[A-seagull-cola-nest with Inhibiting-chains](#)

Pyridostigmine is the most commonly used drug although neostigmine is sometimes used. It inhibits acetylcholinesterase thus increasing the amount of acetylcholine available for binding to receptors on the postsynaptic membrane. Some sort of immunotherapy (eg. glucocorticoids, azathioprine etc) is often added to the therapeutic regimen as well.

## **Plasmapheresis**

[Plasma-fairy](#)

This removes acetylcholine receptor antibodies from the circulation and is used in cases of myasthenia crisis and prior to thymectomy.

## **Thymectomy**

[Thigh removed by Scalpel](#)

It is believed that the thymus has something to do with the development of myasthenia gravis. Thus, thymectomy is often indicated in patients with MG.