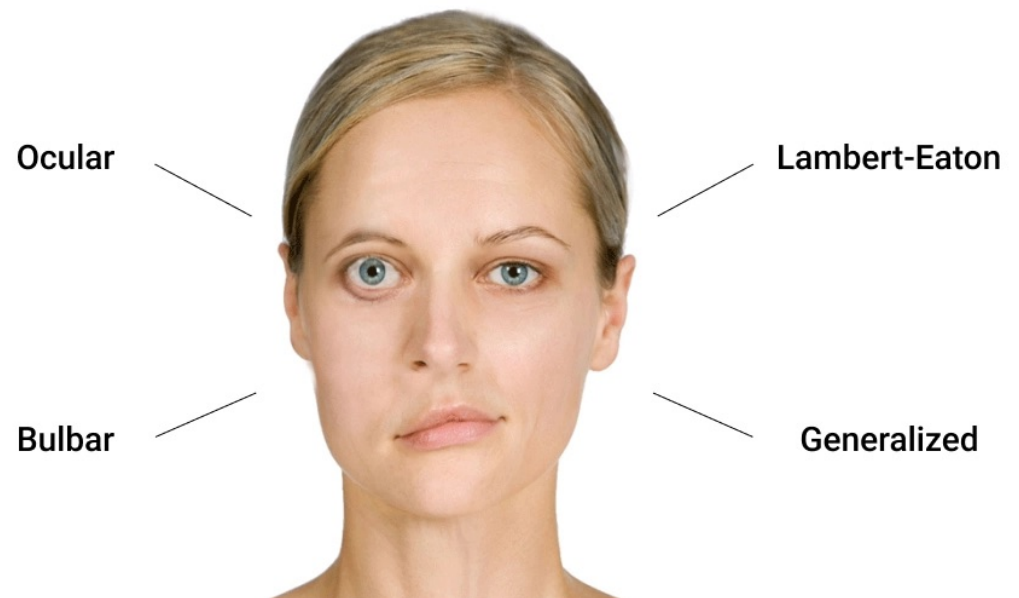
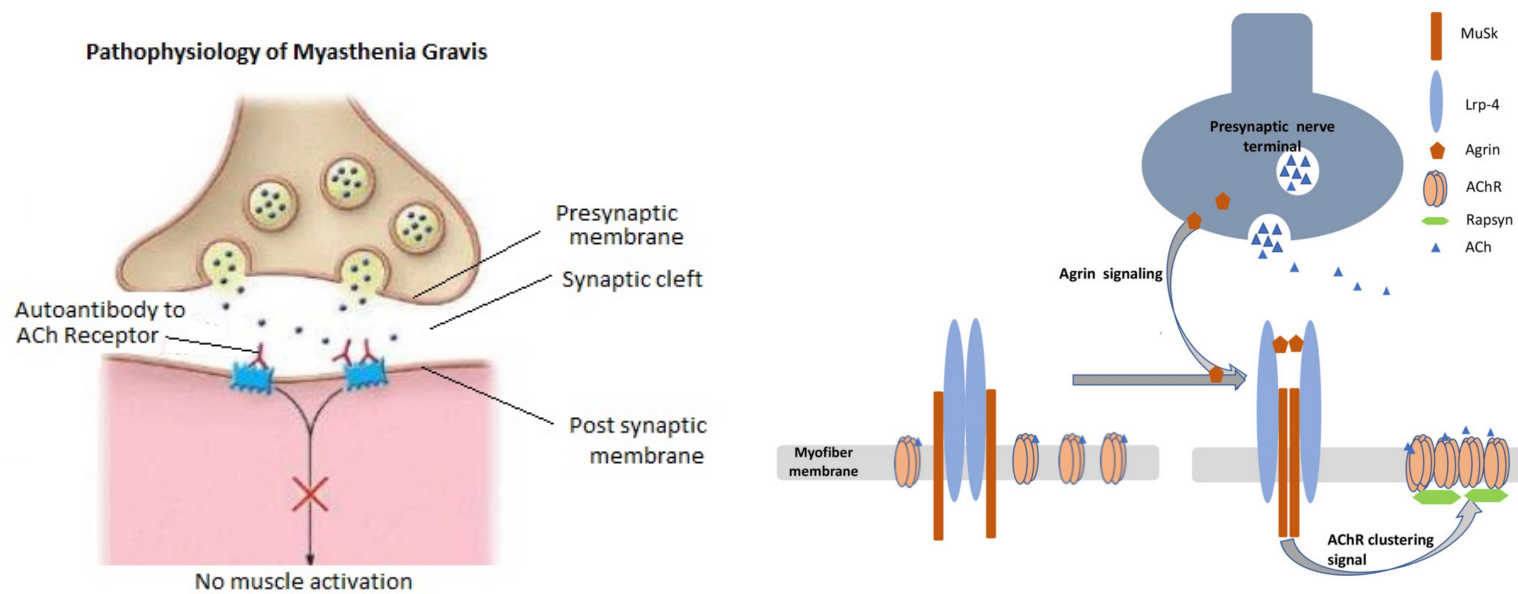


Myasthenia Gravis



- Autoimmune disorder with Significant skeletal muscle weakness.
- Decreased acetylcholine receptor function
↓
Worsen with Muscle use.
- Type II Hypersensitivity Rxn.
- Post-junctional defect.





- The Anti - AChR antibody affects NM transmission by:
 - ① Blockade of Alpha subunit of Receptors
 - ② There would be an increase in the turnover of the receptors as well thus time for acetylcholine to activate receptor is reduced.
 - ③ Physical damage to Post synaptic muscle memb.

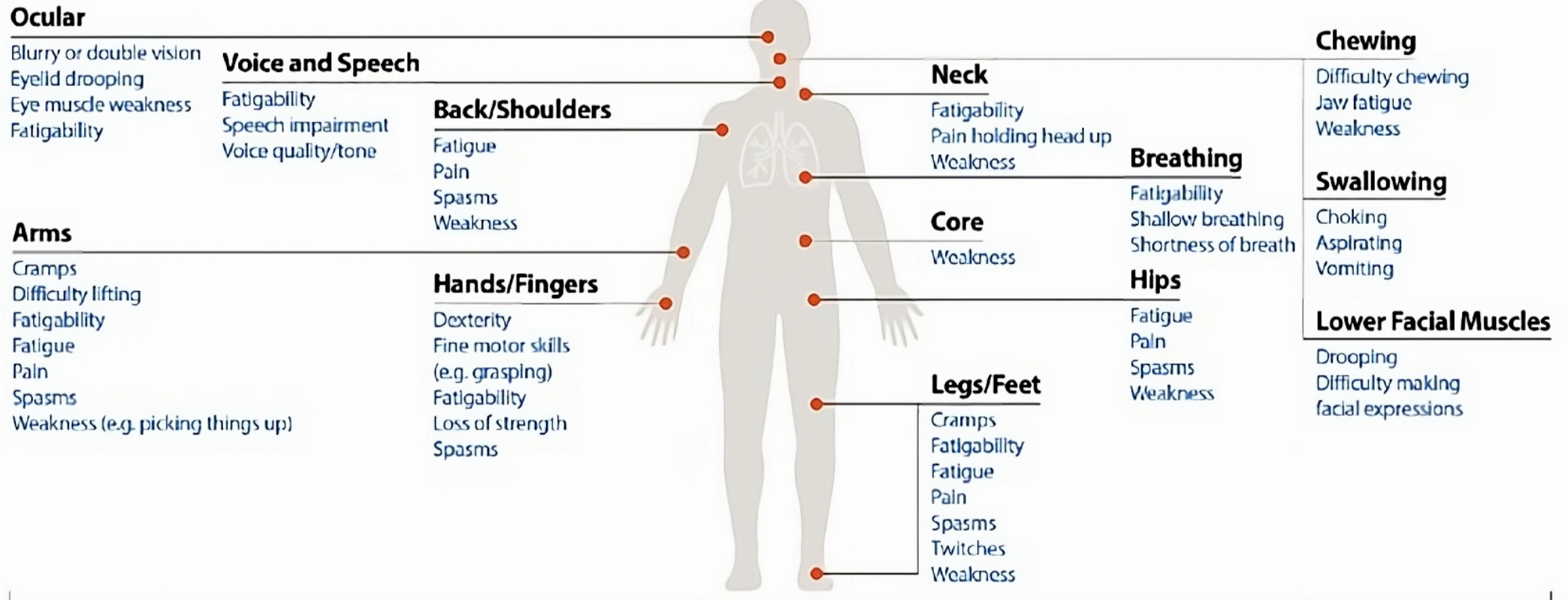
Causes:

- (i) Thymic hyperplasia (65%)
- (ii) Thymoma (10%)

Antibodies:

- (i) Anti acetylcholine receptor antibody (in 85% patients)
- (ii) Anti MUSK antibody (10% patients)
- (iii) Anti LRP4 antibody
- (iv) Anti Netrin 1 Receptor antibody
- (v) Anti caspr-2
- (vi) Anti striated muscle antibody.

Clinical Features:



Overall Symptoms

(location unspecified, or described as a general experience)

Cognitive impairment (difficulty focusing, memory), fatigability (worsening of impairment), mental fatigue (too exhausted to think or mentally motivate), pain (general muscle soreness or achiness), physical fatigue (lack of energy, a feeling of depletion, or lethargy), weakness (overall strength)

Diagnosis :

(i) CT scan - Chest scan to detect Thymic abnormalities

(ii) Serologic Test -

Anti AchR Antibody

Anti MUSK Antibody

Anti LRP4

(iii) Electrophysiologic studies

(Repetitive nerve stimulation studies)

• Single fibre electromyography.

(iv) Tensilon Test

- Edrophonium: acetylcholinesterase inhibitor with rapid onset, short acting duration
- Prolongs acetylcholine presence in neuromuscular junction → marked improvement
- Easy to perform/limited utility; high false-positive rate, possible complications from muscarinic effects

(v) PFTs - Periodical Fvc monitoring ; Fvc ↓

(vi) Ice Pack test

(vii) CT/MRI Head

(viii) Antibody testing for
Hashimoto / Grave /
SLE / RA

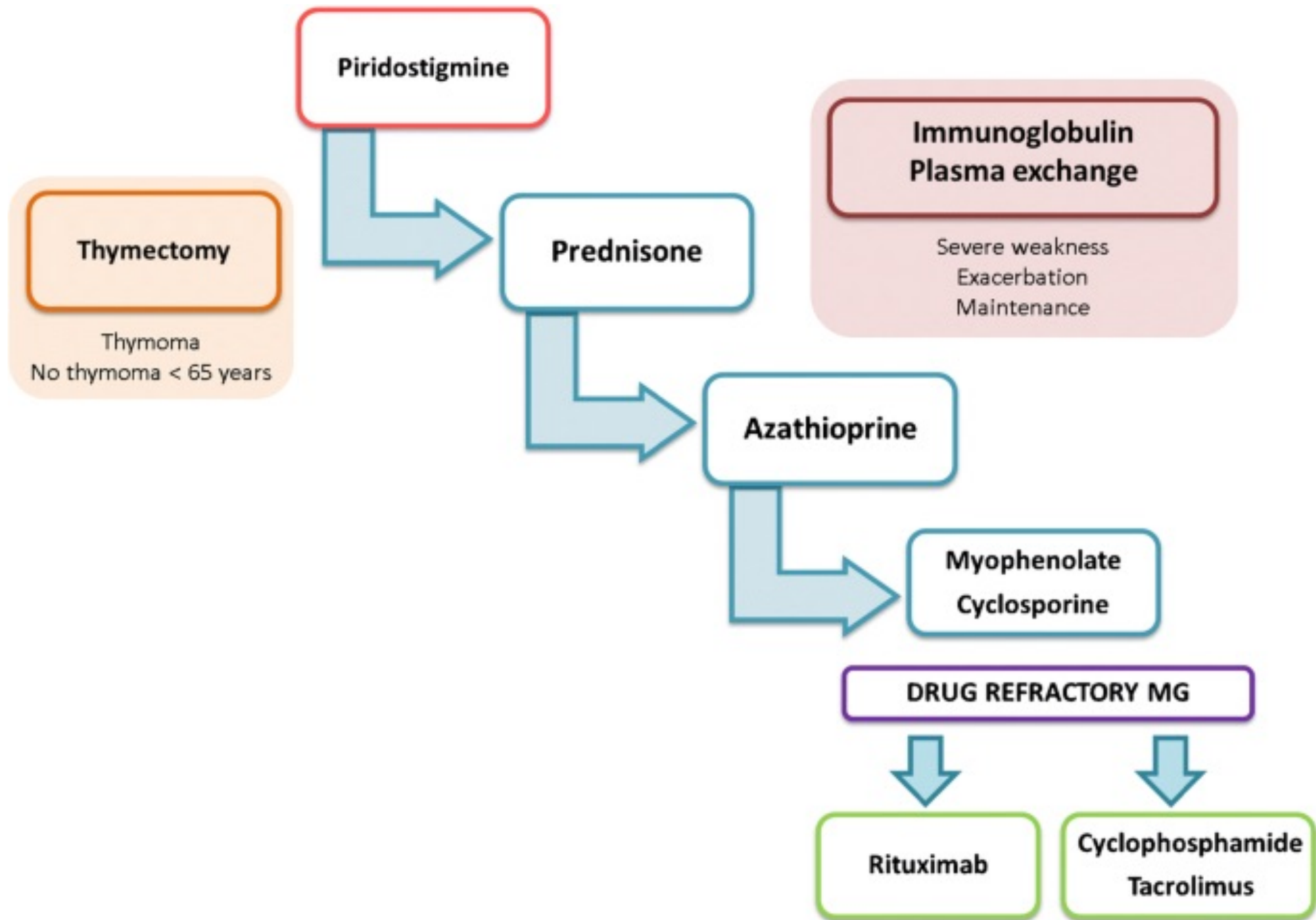
ICE Pack Test

It is performed by keeping Icepacks over eyes for 2-5 minutes & looking at improvement in Ptosis



Cooling improves Neuromuscular Transmission-

Treatment:



Surgery :

- Thymectomy, especially for thymoma; myasthenia often improves/disappears
- Rapidly worsening myasthenia/myasthenic crisis
 - Intubation
 - Plasmapheresis/intravenous immunoglobulin (IVIg)
 - Long-acting immunotherapy (e.g., corticosteroids, azathioprine)

Edrophonium vs. pyridostigmine

e**D**rophonium for **D**iagnosis
py**R**IDostigmine is to get **R**ID
of symptoms



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