

A feeling of restricted mobility often caused by the overuse of a muscle

A sudden, involuntary contraction of a muscle or group of muscles.



- A muscle relaxant is a drug which affects skeletal muscle function and decreases the muscle tone
- Drugs which act peripherally at the neuromuscular junction to reduce muscle tone.
- Drugs which may act at the level of the cortex, brain stem or spinal cord, or all three areas to reduce muscle tone
- They are also known as centrally acting muscle relaxants

- The term "muscle relaxant" is used to refer to two major therapeutic groups:

  Neuromuscular blockers and spasmolytics

Spasmolytics

Also known as centrally acting muscle relaxants.

Classification

Mephenesin group group

- Mephenesin
- Carisoprodol
- Chlorsoxazone
- Methocarbamol

Benzodiazepines

- Diazepam

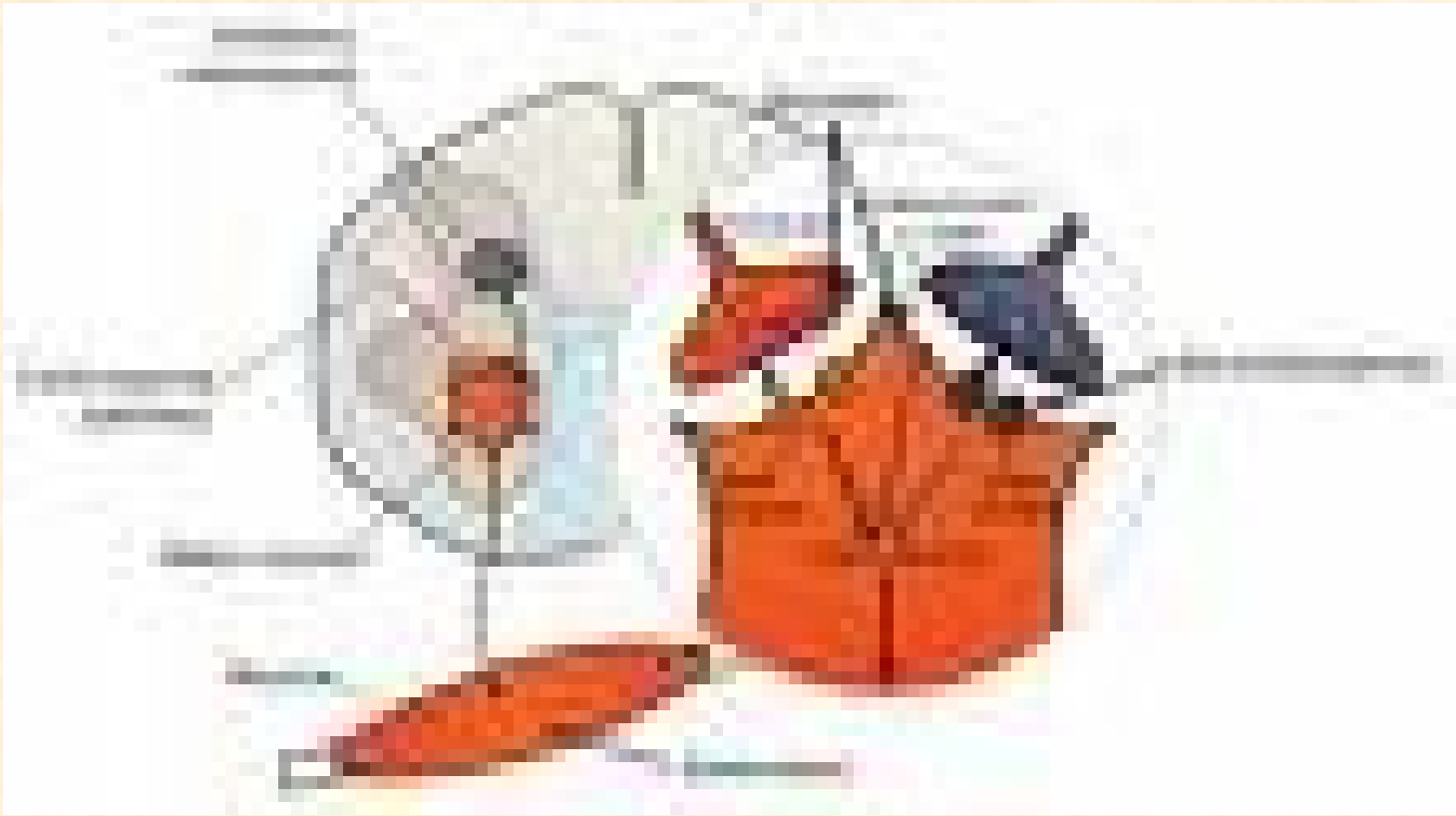
GABA derivative agonist

- Balcofen

Central alpha

- Tizanidine

Mechanism of Action



Mechanism of Action

- These drugs reduce skeletal muscle tone by selective action in cerebrospinal axis
- They do not alter consciousness
- Depress spinal and supra spinal polysynaptic reflexes
- They have mild sedative action

Mephensin

- Site of depressant action is said to be mid-brain, brain stem at the level of thalamus and in the spinal cord in the interneuronal neurons
- Used in counter irritant ointments

Carisoprodol

- Favourable muscle relaxant
- It has weak analgesic, antipyretic and analgesic action
- Used in musculoskeletal disorders

Methocarbamal

- Used in reflex muscle spasms and
- Chronic neurological disorders
- No risk of thrombophlebitis and haemolysis

Diazepam

- Prototype of benzodiazepines
- Action is by enhancing GABA ergic transmission

Baclofen

- Analogue of inhibitory transmitter GABA
- Acts as selective GABA receptor agonist

Tizanidine

- Recently introduced
- Efficacy similar to baclofen

Therapeutic uses of central Muscle relaxants

In the treatment of

- Acute muscle spasms
- Torticollis
- Neuralgias
- Lumbago
- Anxiety
- Spastic neurological disorders
- Tetanus
- Electroconvulsive therapy
- Orthopedic manipulations

Adverse Effects

Side effects

- Gastric irritation
- Drowsiness
- Mental confusion
- Hallucination
- Tachycardia

Toxic effects

- Thrombophlebitis
- Haemolysis