

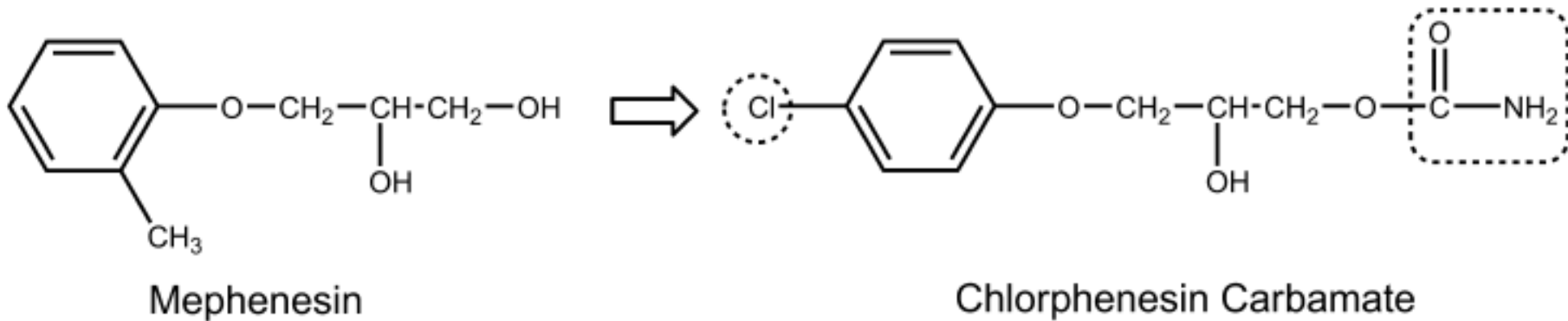
Central Nervous System Depressants with Skeletal Muscle Relaxant Properties

- Used in muscle sprains and muscle strains that may produce acute muscle spasm.
- They have interneuronal-blocking properties at the level of the spinal cord.
- General CNS depressant properties .
- Dihydric compounds and their carbamate derivatives are prominent members of the group.



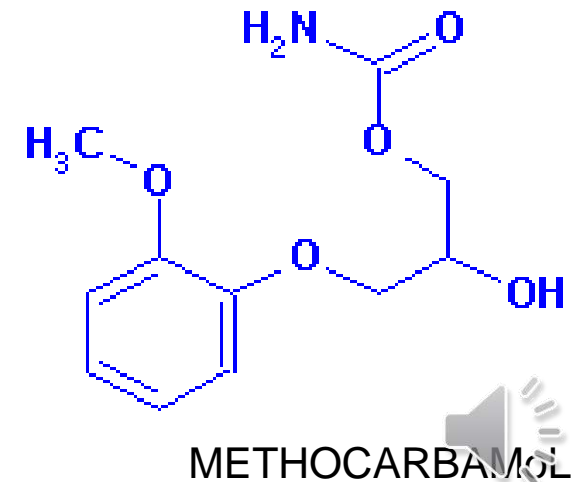
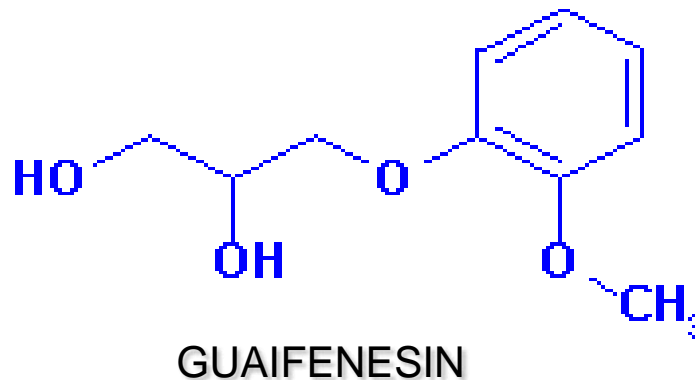
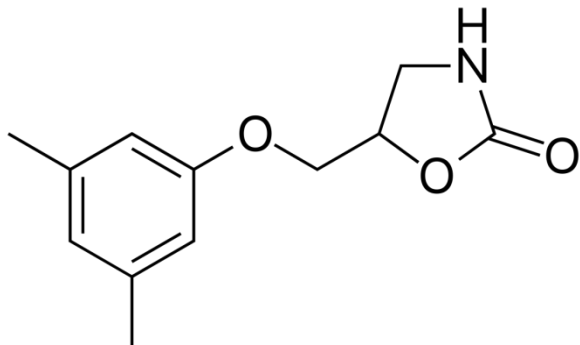
Methocarbamol

- More sustained effect than mephenesin. The dihydric parent compound, guaifenesin, is used as an expectorant.



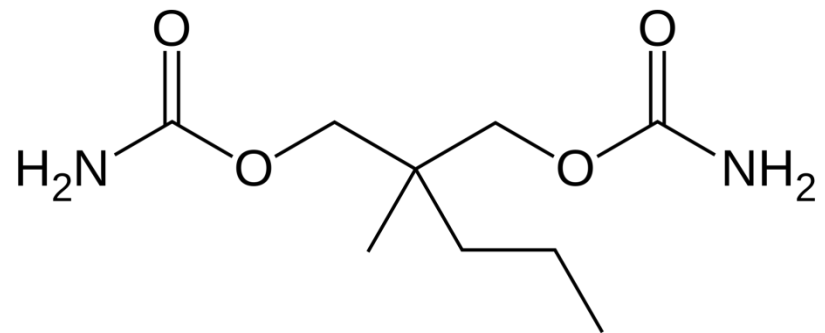
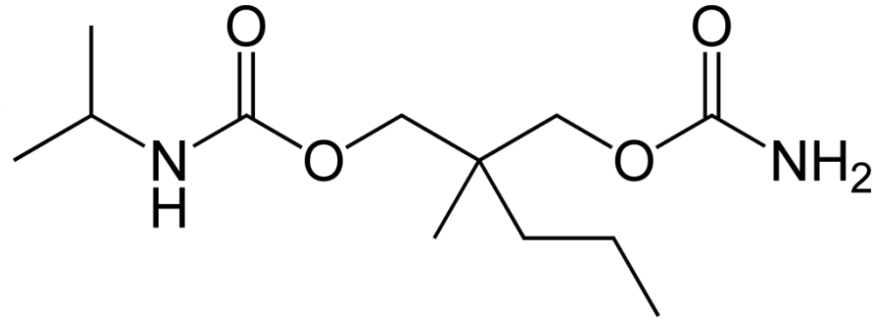
Selectivity depressed polysynaptic spinal cord reflexes (interneuronal blocking muscle relaxant)

Metaxalone



Carisoprodol

- It is indicated in acute skeletomuscular conditions characterized by pain , stiffness, and spasm.
- A major side effect of the drug is drowsiness.
- Meprobamate is used as antianxiety agent, and sedative hypnotic. It also has skeletal muscle relaxation properties.



Meprobamate

They have interneuronal blocking properties at the level of the spinal cord, which are said to be partly responsible for skeletal muscle relaxation



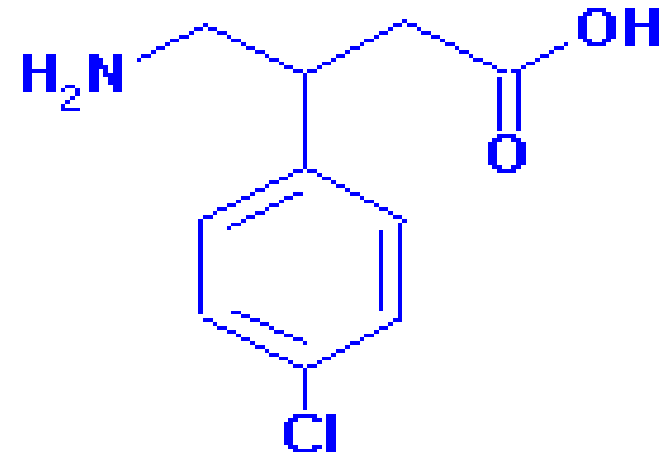
Drugs Used in Spasticity

- Several drugs benefit in the spasticity associated with diseases such as multiple sclerosis and cerebral palsy.
- Notable compounds are the centrally acting diazepam, baclofen, and the peripherally acting agent dantrolene.



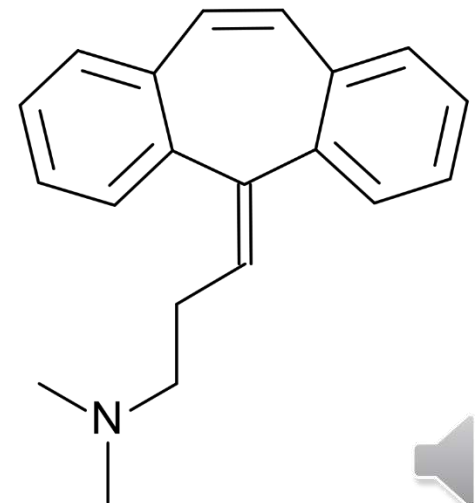
Baclofen

- A substituted GABA analogue.
- Useful in spasticity involving diseases of the spinal cord.
- It depresses monosynaptic and polysynaptic transmission.



GABA_B receptor agonist

- **Cyclobenzaprine** is a centrally acting muscle relaxant. Cyclobenzaprine is a 5HT₂ receptor antagonist; action on the central nervous system at the brain stem,



Dantrolene Sodium

- Dantrolene decreases the release of calcium from the sarcoplasmic reticulum and thereby blocks contraction of skeletal muscle.
- Acting peripherally.
- Useful in cerebral palsy and multiple sclerosis. and malignant hyperthermia.

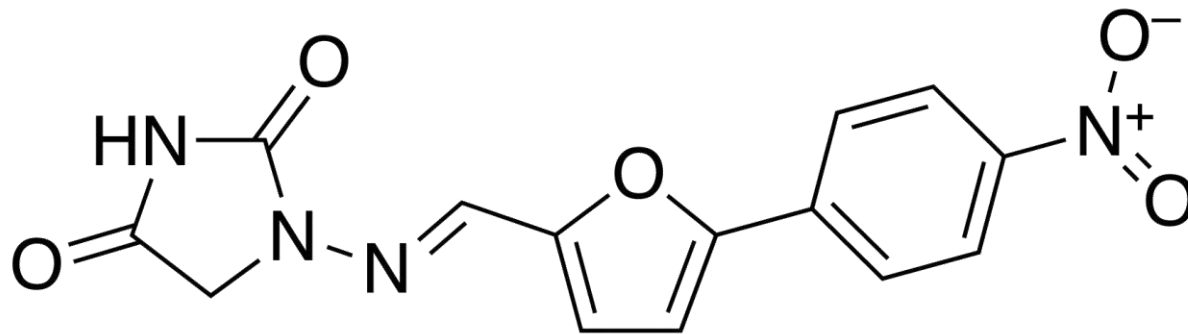


TABLE 13.2 Skeletal Muscle Relaxants

Class and Generic Name **Trade Name** **Chemical Structure**

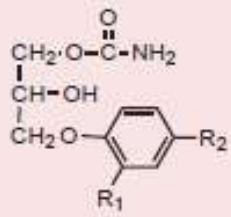
Glycerol monoethers and derivatives

Mephenesin



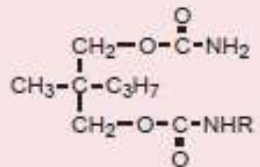
Chlorphenesin carbamate Maolate
(R₁ = H, R₂ = Cl)

Methocarbamol Robaxin
(R₁ = OCH₃, R₂ = H)



Substituted alkanediols and derivatives

Meprobamate Equanil
Miltown
(R = H)



Carisoprodol Rela
Soma
(R = CH(CH₃)₂)

Metaxalone Skelaxin



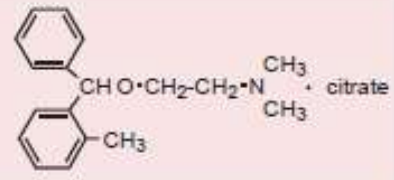
Benzazole

Chlorzoxazone Paraflex



Miscellaneous

Orphenadrine citrate Norflex



Cyclobenzaprine Flexaril

