

# SEDATIVE - HYPNOTICS

These drugs make excited patient calm and cool with and without causing sleep. They differ only in concentration

## Classification- KD Tripathi

### SEDATIVE

Sedative are those drugs which make patient calm and relax without causing sleep, although patient may feel dizziness and may loss alertness or responsiveness.

E Mail- solutionpharmacy@gmail.com  
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D T F N A  
दिमाग ठंडा रखने से फटाफट नींद आती है  
L O D A C  
लो डराने आ गया क्लासिफिकेशन  
C C D L  
चलो चले दवाई लेने एंटी कनवलसन का

### HYPNOTICS

Hypnotics are the drugs which make person calm but also induce sleep. This is extension of sedative dose of any drugs. Sedative in large dose act as hypnotics

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#### Barbiturate

#### Benzodiazepine

#### Newer Non BZD Hypnotics

Zopiclone, Zolpidem, Zaleplon

Sedation – Sleep – Anaesthesia

#### Long Acting

Phenobarbitone

#### Short Acting

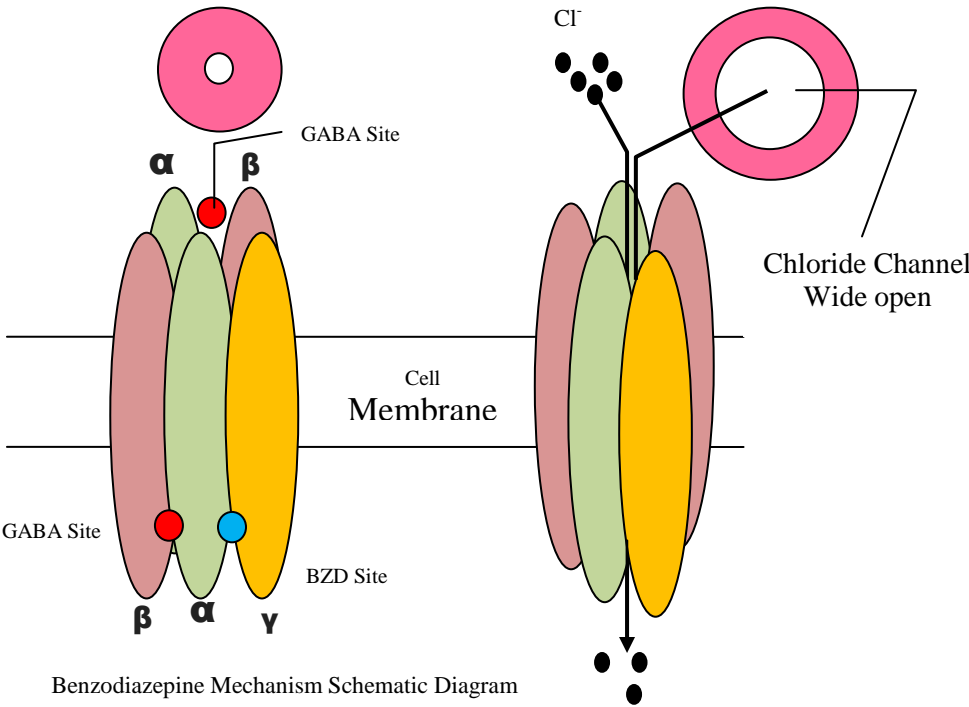
Butobarbitone  
Phenobarbitone

#### Ultra Short Acting

Thiopentone  
Methohexitone

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Hypnotic	Antianxiety	Anticonvulsant
Diazepam	Lorazepam	Clonazepam
Temazepam	Oxazepam	Clobazam
Flurazepam	Diazepam	Diazepam
Nitrazepam	Alprazolam	Lorazepam
Alprazolam	Chlordiazepoxide	चलो चलें दवाई लेने एंटी CONVULSION का
दिमाग ठंडा रखने से फटाफट नींद आती है	लो डराने आ गया क्लासिफिकेशन	



Benzodiazepine Mechanism Schematic Diagram

## Mechanism of Action

Target of Benzodiazepine are on **GABA receptor**, because GABA is major inhibitory neurotransmitter in CNS. GABA is consisting of five- alpha, beta, gamma subunits that span the postsynaptic membrane. The influx of chloride Ions cause hyper polarization of the neuron and decrease neurotransmitter by inhibiting the formation of action potentials.

Empty receptor is inactive and coupled chloride channel is closed

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Binding of GABA open the chloride channel cause hyper polarization

Mechanism of Action in various steps

Entries of chloride hyper polarize cells, make them difficult to depolarize and reduce neural excitability

Binding of GABA is enhanced by benzodiazepine; result in more entry of negative chloride ions.

Stage – 0

**Awake**

Constitute 1 – 2%

Stage – 01

**Dozing**

Constitute 3 – 6%

Stage – 02

**Unequivocal Sleep**

Constitute 40 – 50%

Stage – 03

**Deep sleep transition**

Constitute 5 – 8%

Stage – 04

**Cerebral Sleep**

Constitute 10 – 20%

REM sleep

**Paradoxical Sleep**

Constitute 20 – 30%

Different stages of Sleep pattern

#### Pharmacological Action

Reduction of Anxiety

Sedative-Hypnotics

Anterograde Amnesia

Muscle Relaxant

By Targeting GABA receptor