

PHB



Dr. Arvind Kumar Gupta
(M.Pharm, PDCR, PGDMM & Ph.D)
GATE 2003 Qualified with 97.2 percentile
Dr. S. N. Dev College of Pharmacy
Shamli (U.P.)

OFFICE: BUILDING No. 3/314, OFFICE-1, GAUSHALA ROAD, SHAMLI DISTRICT SHAMLI (U.P.) – 247776

Mobile: +91-9719638415

Email: arindrkgit@gmail.com

Course Name : D. Pharm
Year : Second Year
Subject Name : Pharmacology
Topic Name : Anti-anxiety Drugs

Antianxiety drugs, also known as anxiolytics, are medications used to alleviate symptoms of anxiety disorders, including generalized anxiety disorder (GAD), panic disorder, and social anxiety disorder. They work by targeting neurotransmitter systems in the brain to reduce feelings of anxiety and promote relaxation.

Classification: Antianxiety drugs can be classified into several categories based on their mechanism of action and chemical structure:

- Benzodiazepines
 - Selective serotonin reuptake inhibitors (SSRIs)
 - Serotonin-norepinephrine reuptake inhibitors (SNRIs)
 - Buspirone (a non-benzodiazepine anxiolytic)
 - Antidepressants (tricyclic antidepressants, monoamine oxidase inhibitors)
- 1. Benzodiazepines: e.g.** Diazepam, Chlordiazepoxide, Lorazepam, Alprazolam, Flurazepam
 - 2. Azapirones: e.g.** Buspirone, Gepirone, Ipsapirone
 - 3. SSRIs: e.g.** Sertraline, Escitalopram, Paroxetine
 - 4. SNRIs: e.g.** Venlafaxine, Duloxetine
 - 5. Sedative Antihistaminic: e.g.** Hydroxyzine
 - 6. Beta blockers: e.g.** Propranolol
 - 7. Tricyclic antidepressants: e.g.** Imipramine, Amitriptyline
 - 8. Monoamine oxidase inhibitors (MAOIs): e.g.** Phenelzine, Isocarboxazid

Mechanism of Action:

- **Benzodiazepines:** Enhance the inhibitory effects of gamma-aminobutyric acid (GABA), a neurotransmitter that reduces neuronal excitability and promotes relaxation.
- **SSRIs and SNRIs:** Increase the levels of serotonin and/or norepinephrine in the brain by inhibiting their reuptake, leading to improved mood and reduced anxiety.
- **Buspirone:** Acts as a partial agonist at serotonin 5-HT_{1A} receptors, resulting in anxiolytic effects without sedation or dependence.

- **Tricyclic antidepressants and MAOIs:** Modulate the levels of various neurotransmitters, including serotonin, norepinephrine, and dopamine, to alleviate symptoms of anxiety and depression.

Dose:

- The dosage of antianxiety drugs varies depending on the specific medication, formulation, severity of anxiety, and individual patient factors.
- Dosages are typically started at low levels and titrated upward based on the patient's response and tolerance to the medication.

Uses:

- **Management of anxiety disorders:** Antianxiety drugs are used to treat various anxiety disorders, including GAD, panic disorder, social anxiety disorder, and specific phobias.
- **Short-term relief of acute anxiety symptoms:** Benzodiazepines may be used for rapid relief of acute anxiety symptoms or panic attacks.
- **Adjunctive treatment:** Antianxiety drugs may be used as adjuncts to psychotherapy or other interventions in the management of anxiety disorders.

Contraindications:

- ❖ Hypersensitivity or allergy to the drug or its components.
- ❖ History of substance abuse or dependence, particularly with benzodiazepines due to their potential for abuse and addiction.
- ❖ Pregnancy and breastfeeding: Some antianxiety drugs may pose risks to the fetus or newborn and should be used with caution or avoided during pregnancy and lactation.
- ❖ Certain medical conditions, such as respiratory depression, hepatic impairment, or narrow-angle glaucoma, may contraindicate the use of specific antianxiety medications.