

Sedatives or hypnotics

Sedative drugs

Alcohol

Benzodiazepines

(eg. Diazepam, lorazepam))

Barbiturates

(eg. pentobarbital, phenobarbital, secobarbital)

Barbiturate-like

(eg. glutethimide, chloral hydrate, ethchlorvynol)

GHB

(Gamma hydroxybutyrate)

Benzodiazepines

Benzodiazepines are, when used properly helpful in the treatment of certain acute psychiatric conditions. Benzodiazepines should as a rule never be prescribed for a longer time than 2-3 weeks because of the abuse potential.

Mechanisms of Action

Like Alcohol, Benzodiazepines bind to sites on GABA-A receptors and increases the effects of GABA, the major inhibitory neurotransmitter in the brain.

Benzodiazepines: Dosage Conversion Table

Benzodiazepines	Dosages (mg)	Half-life* hrs
Alprazolam (Xanax)	1	6-10
Chlordiazepoxide (Librium)	25	5-100+
Clonazepam (Klonopin)	.5	18-50
Diazepam (Valium)	10	30-100+
Lorazepam (Ativan)	2	10-20
Zolpidem (Ambien)	20	2.5

*Includes metabolites - in hours

*Half-life might differ base on different books

Therapeutic use

Sedative-hypnotic in anesthesia

Anxiolytic

Panic disorder

Generalized anxiety disorder

Muscle relaxants

Anticonvulsants

Alcohol withdrawal

Premenstrual syndrome

Psychoses

Adjunct in mania of bipolar disorder

Benzodiazepine Abuse

Patterns of abuse:

- caution-therapeutic use - long-term drug-taking inconsistent with accepted medical practice, doctor shopping
- multiple substance abusers
- recreational abuse (non-medical use to get high)

Adverse Effects

Diminished psychomotor performance

Impaired reaction time

Loss of coordination, decreased attention

Ataxia

Falls

Excessive daytime drowsiness

Confusion

Amnesia

Increase of existing depressed mood

Overdose rarely fatal

Also seen: insomnia, fatigue, headache, muscle twitching, tremor, sweating, dizziness, tinnitus difficulty concentrating, nausea, depression, abnormal perception of movement, irritability

Overdose - Treatment

Airway assessment and maintenance

Ventilatory support if necessary

NG suction - activated charcoal

Flumazenil - competitive antagonist

May need to repeat Q30-60 minutes

Can induce withdrawal seizures in dependent pts as alcohol withdrawal.

➤ **Benzodiazepine Withdrawal**

Can occur even with therapeutic doses when given for two months or more

Onset 1-2 days (short acting), 2-4 days (long-acting)

Peak at 5-7 days

May last several weeks

May be subacute, prolonged withdrawal

Abrupt cessation of doses above 50 mg diazepam/day or the equivalent can result in seizures, psychosis, or delirium

Predictors of severe withdrawal

High-potency-quickly eliminated

(e.g. alprazolam, lorazepam, triazolam)

High daily doses

Rapid tapering down (especially last 50%)

Diagnosis of panic disorder (not GAD)

High pretaper levels of anxiety and depression

Alcohol or other substance dependence/abuse

Personality pathology -e.g. neurotic or dependent

Not motivated to discontinue use/addicted

Benzodiazepine Withdrawal

Two groups of symptoms:

✂ Anxiety-related symptoms (irritability, insomnia, panic attacks, poor concentration)

✂ Neurologic (ringing in ears, blurry vision, distorted perceptions, depersonalization)

Note: Suicidal ideation can occur in patients with mixed anxiety and depression

Medications used to treat withdrawal

Long-acting eg. diazepam: smoother withdrawal

But can be addicting

Not safe in elderly

Alternatives eg clonazepam may be as good or better
especially for alprazolam, triazolam

Other agents: Mood stabilizers (carbamazepine), antidepressants

Outpatient Treatment

Is risky in patients who are buying benzodiazepines from the street or do doctor shopping

Those peoples use alcohol

Best with patients receiving benzodiazepines from only one doctor

Convert to equivalent dose of diazepam (maximum 80 mg/day) in divided doses

Tapering

Taper over 6-12 weeks by 2-5 mg diazepam per week (or 5 mg per 3-4 days at doses above 50 mg)

Adjust initial dose and rate of taper according to symptoms

May need to slow taper at doses below 20 mg

Inpatient Diazepam Tapering

Daily use over past 2 months is equivalent to diazepam 80-100 mg or more

Heavy use of barbiturates, alcohol, other drugs

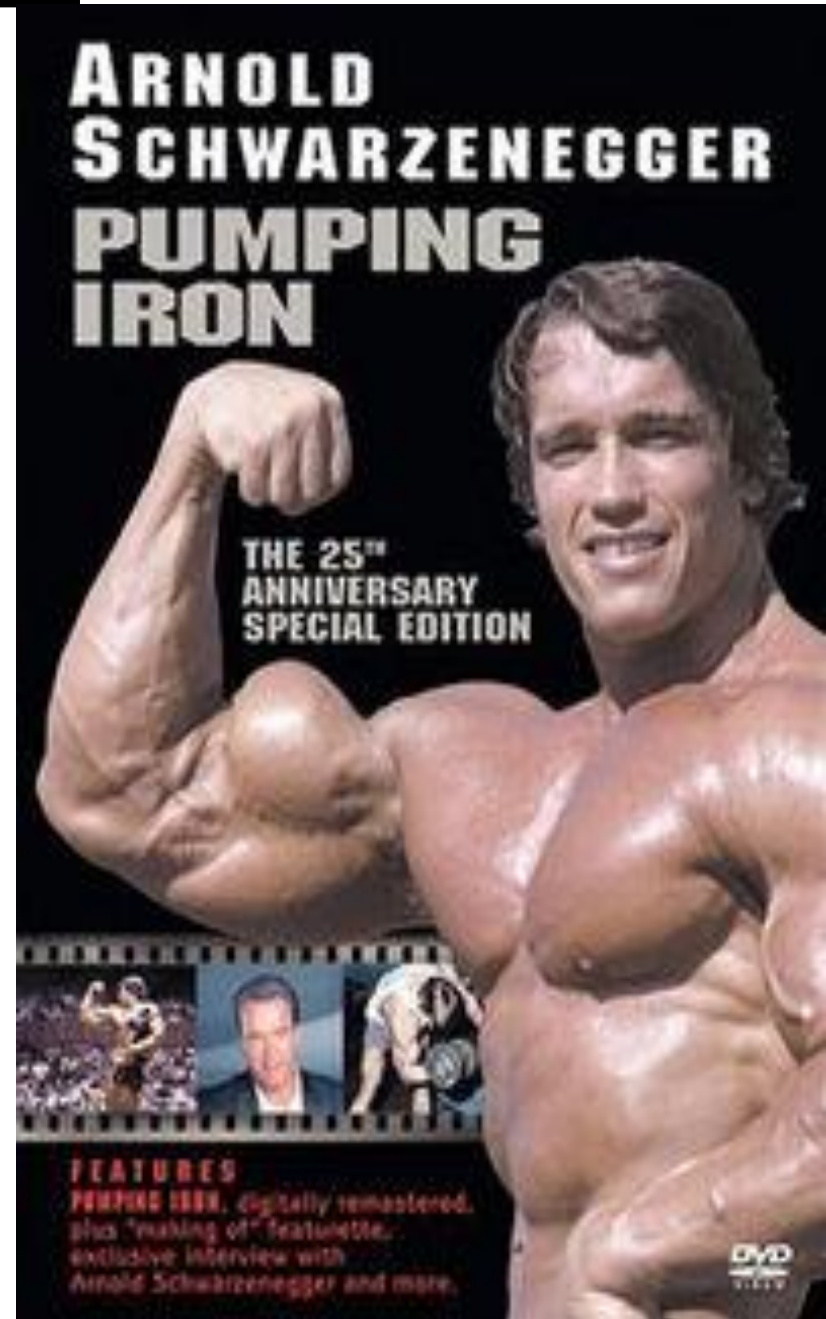
Elderly patients

Patients with illnesses that may make tapering more dangerous, e.g. serious heart disease

GHB = Gammahydroxybutyrate

GHB is a central nervous system depressant

GHB also has anabolic effects (it stimulates protein synthesis) and has been used by bodybuilders to aid in fat reduction and muscle building.



GHB withdrawal

Similar to alcohol withdrawal but longer and more severe Lasts
5-15 days

Tremor, sweating, seizures

Paranoia, delusions, psychosis, delirium

Treatment: Phenobarbital

STAY SAFE AND HOME