HYDROXYZINE

**THERAPEUTICS**

**Brands**
- Atarax
- Marax
- Vistaril

*see index for additional brand names*

**Generic?** Yes

**Class**
- Neuroscience-based Nomenclature: histamine receptor antagonist (H-RAn)
- Antihistamine (anxiolytic, hypnotic, antiemetic)

**Commonly Prescribed for** (bold for FDA approved)
- Anxiety and tension associated with psychoneurosis
- Adjunct in organic disease states in which anxiety is manifested
- Pruritus due to allergic conditions
- Histamine-mediated pruritus
- Premedication sedation
- Sedation following general anesthesia
- Acute disturbance/hysteria (injection)
- Anxiety withdrawal symptoms in alcoholics or patients with delirium tremens (injection)
- Adjunct in pre/postoperative and pre/postpartum patients to allay anxiety, control emesis, and reduce narcotic dose (injection)
- Nausea and vomiting (injection)
- Insomnia

**How the Drug Works**
- Blocks histamine 1 receptors

**How Long Until It Works**
- 15–20 minutes (oral administration)
- Some immediate relief with first dosing is common; can take several weeks with daily dosing for maximal therapeutic benefit in chronic conditions

**If It Works**
- For short-term symptoms of anxiety – after a few weeks, discontinue use or use on an “as-needed” basis
- For chronic anxiety disorders, the goal of treatment is complete remission of symptoms as well as prevention of future relapses

**SIDE EFFECTS**

**How Drug Causes Side Effects**
- Blocking histamine 1 receptors can cause sedation

**Notable Side Effects**
- Dry mouth, sedation, tremor

**Life-Threatening or Dangerous Side Effects**
- Rare convulsions (generally at high doses)
- Rare cardiac arrest, death (intramuscular formulation combined with CNS depressants)
- Bronchodilation
- Respiratory depression

**If It Doesn’t Work**
- Consider switching to another agent or adding an appropriate augmenting agent

**Best Augmenting Combos for Partial Response or Treatment Resistance**
- Hydroxyzine can be used as an adjunct to SSRIs or SNRIs in treating anxiety disorders

**Tests**
- None for healthy individuals
- Hydroxyzine may cause falsely elevated urinary concentrations of 17-hydroxycorticosteroids in certain lab tests (e.g., Porter-Silber reaction, Glenn-Nelson method)
Weight Gain

- Reported but not expected

Sedation

- Many experience and/or can be significant in amount
- Sedation is usually transient

What to Do About Side Effects

- Wait
- Wait
- Switch to another agent

Best Augmenting Agents for Side Effects

- Many side effects cannot be improved with an augmenting agent

**DOSING AND USE**

**Usual Dosage Range**

- Anxiety: 50–100 mg 4 times a day
- Sedative: 50–100 mg oral, 25–100 mg intramuscular injection
- Pruritus: 75 mg/day divided into 3–4 doses

**Dosage Forms**

- Tablet 10 mg, 25 mg, 50 mg, 100 mg
- Capsule 25 mg, 50 mg, 100 mg
- Oral liquid 10 mg/5 mL, 25 mg/5 mL
- Intramuscular 25 mg/mL, 50 mg/mL, 100 mg/2 mL

**How to Dose**

- Oral dosing does not require titration
- Emergency intramuscular injection: initial 50–100 mg, repeat every 4–6 hours as needed
- Hydroxyzine intramuscular injection should not be given in the lower or mid-third of the arm and should only be given in the deltoid area if it is well-developed
- In adults, hydroxyzine intramuscular injections may be given in the upper outer quadrant of the buttock or in the mid-lateral thigh

**Dosing Tips**

- Hydroxyzine may be administered intramuscularly initially, but should be changed to oral administration as soon as possible
- Tolerance usually develops to sedation, allowing higher dosing over time

**Overdose**

- Sedation, hypotension, possible QTc prolongation

**Long-Term Use**

- Evidence of efficacy for up to 16 weeks

**Habit Forming**

- No

**How to Stop**

- Taper generally not necessary

**Pharmacokinetics**

- Rapidly absorbed from gastrointestinal tract
- Mean elimination half-life approximately 20 hours

**Drug Interactions**

- If hydroxyzine is taken in conjunction with another CNS depressant, the dose of the CNS depressant should be reduced by half
- If hydroxyzine is used pre- or post-operatively, the dose of narcotic can be reduced
- If anticholinergic agents are used with hydroxyzine, the anticholinergic effects may be enhanced
- Hydroxyzine may reverse the vasopressor effect of epinephrine; patients requiring a vasopressor agent should use norepinephrine or metaraminol instead

**Other Warnings/Precautions**

- Hydroxyzine should not be administered subcutaneously, intra-arterially, or intravenously

**Do Not Use**

- If patient is in early stages of pregnancy
- If there is a proven allergy to hydroxyzine
HYDROXYZINE

SPECIAL POPULATIONS

Renal Impairment
• Dosage adjustment may not be necessary

Hepatic Impairment
• Dosage adjustment may not be necessary

Cardiac Impairment
• Hydroxyzine may be used to treat anxiety associated with cardiac impairment

Elderly
• Some patients may tolerate lower doses better
• Elderly patients may be more sensitive to sedative and anticholinergic effects
• Should be avoided in elderly patients with dementia

Children and Adolescents
• Anxiety, pruritus (6 and older): 50–100 mg/day in divided doses
• Anxiety, pruritus (under 6): 50 mg/day in divided doses
• Sedative: 0.6 mg/kg oral, 0.5 mg/lb intramuscular injection
• Small children should not receive hydroxyzine by intramuscular injection in the periphery of the upper quadrant of the buttock unless absolutely necessary because of risk of damage to the sciatic nerve
• Hyperactive children should be monitored for paradoxical effects

Pregnancy
• Hydroxyzine is contraindicated in early pregnancy
• Effective June 30, 2015, the US FDA requires changes to the content and format of pregnancy and lactation information in prescription drug labels, including the elimination of the pregnancy letter categories; the Pregnancy and Lactation Labeling Rule (PLLR or final rule) applies only to prescription drugs and will be phased in gradually for drugs approved on or after June 30, 2001
• Hydroxyzine intramuscular injection can be used prepartum, reducing narcotic requirements by up to 50%

Breast Feeding
• Unknown if hydroxyzine is secreted in human breast milk, but all psychotropics assumed to be secreted in breast milk
• Recommended either to discontinue drug or bottle feed

THE ART OF PSYCHOPHARMACOLOGY

Potential Advantages
• Has multiple formulations, including oral capsules, tablets, and liquid, as well as injectable
• No abuse liability, dependence, or withdrawal

Potential Disadvantages
• Patients with severe anxiety disorders
• Elderly patients
• Dementia patients

Primary Target Symptoms
• Anxiety
• Skeletal muscle tension
• Itching
• Nausea, vomiting

Pearls
• A preferred anxiolytic for patients with dermatitis or skin symptoms such as pruritis
• Anxiolytic actions may be proportional to sedating actions
• Hydroxyzine tablets are made with 1,1,1-trichloroethane, which destroys ozone
• Hydroxyzine by intramuscular injection may be used to treat agitation during alcohol withdrawal
• Hydroxyzine may not be as effective as benzodiazepines or newer agents in the management of anxiety
Suggested Reading


