

## disulfiram (di-sul-fir-am)

Antabuse

### Classification

*Therapeutic:* alcohol abuse therapy adjuncts

*Pharmacologic:* enzyme inhibitors

### Pregnancy Category C

### Indications

Management of chronic alcoholism in patients who require or desire an enforced state of sobriety, which may allow for additional supportive and psychotherapeutic treatment.

### Action

Inhibits the enzyme aldehyde dehydrogenase, this results in toxic accumulation of acetaldehyde one of the initial breakdown products of alcohol. The alcohol-disulfiram reaction is unpleasant and discourages alcohol ingestion. **Therapeutic Effects:** Alcohol abstinence.

### Pharmacokinetics

**Absorption:** Slowly absorbed from the GI tract.

**Distribution:** Unknown.

**Metabolism and Excretion:** Rapidly and extensively metabolized; some hepatic metabolism. Metabolites a slowly eliminated by the kidneys.

**Half-life:** Unknown.

#### TIME/ACTION PROFILE

ROUTE	ONSET	PEAK	DURATION
PO	slow	8–10 hr	24 hr

### Contraindications/Precautions

**Contraindicated in:** Hypersensitivity to disulfiram or other thiamins (including those used in rubber vulcanization and pesticides); Significant cardiovascular disease; Psychosis; Concurrent or recent use of metronidazole, paraldehyde, alcohol or alcohol-containing products; **Lactation:** Lactation.

**Use Cautiously in:** Diabetes; Hyperthyroidism; Epilepsy; Cerebral damage; Hepatic or renal impairment; **OB, Pedi:** Pregnancy or children (safety not established).

### Adverse Reactions/Side Effects

**CNS:** drowsiness, fatigue, headache, psychoses. **EENT:** optic neuritis. **GI:** HEPATOTOXICITY, metallic/garlic-like taste. **GI:** erectile dysfunction. **Derm:** acneiform eruptions, allergic dermatitis. **Neuro:** peripheral neuritis/neuropathy, polyneuritis.

### Interactions

**Drug-Drug:** The alcohol-disulfiram interaction is the mainstay of therapy; concurrent use results in severe alcohol intolerance resulting in flushing, ↑ respiration, pulse and cardiac output. Concurrent use with **isoniazid** may result in unsteady gait and behavior changes (↓ disulfiram dose or discontinue). Concurrent use with **metronidazole** ↑ risk of psychoses or confusion (one or both drugs may need to be discontinued). ↓ metabolism and may ↑ CNS depression from some **benzodiazepines**; use those which are metabolized by other pathways (temazepam, oxazepam, lorazepam). ↓ metabolism and may ↑ CNS depression from **chlorzoxazone** (dose ↓ may be necessary). May ↑ CNS and cardiac stimulation from **caffeine**. May ↑ risk of adverse cardiac reactions from **cocaine**. May ↑ levels and risk of toxicity from **phenytoin** and **theophylline**; monitoring is recommended. May ↑ levels and risk of organic brain syndrome from **tricyclic antidepressants**.

### Route/Dosage

**PO (Adults):** 500 mg/day for 1–2 wk, then 250 mg/day (up to 500 mg/day).

### NURSING IMPLICATIONS

#### Assessment

- Assess patient for recent alcohol use. Do not administer to patients for 12 hr following alcohol ingestion. If a severe disulfiram reaction occurs administer oxygen, monitor ECG and serum potassium levels, and provide supportive measures.
- **Lab Test Considerations:** Monitor liver function tests at baseline, after 10–14 days of therapy, and periodically thereafter.
- Monitor CBC and blood chemistry every 6 mo during therapy.
- May cause ↑ serum cholesterol concentrations.
- May cause ↓ urine VMA concentrations.

### Potential Nursing Diagnoses

Ineffective coping (Indications)

✳ = Canadian drug name.

⊞ = Genetic Implication.

CAPITALS indicate life-threatening, underlines indicate most frequent.

~~Strikethrough~~ = Discontinued.

### Implementation

- **PO:** Administer once daily. May be administered at bedtime to reduce daytime drowsiness.

### Patient/Family Teaching

- Inform patient of purpose of disulfiram and the consequences of drinking alcohol during therapy.
- May cause drowsiness. Caution patient to avoid driving and other activities requiring alertness until response to medication is known.
- Caution patient not to take alcohol or any medication containing alcohol during therapy or for 14 days following therapy; may cause a disulfiram-reaction (blurred vision, chest pain, confusion, dizziness or fainting, fast or pounding heartbeat, flushed or redness of face, increase sweating, nausea, vomiting, throbbing headache, trouble breathing, severe weakness, seizures, unconsciousness, heart attack death). Reaction may persist from 30 min to several hours. Advise patient to check all medications for the presence of alcohol.
- Advise patient to consult health care professional prior to taking other CNS depressants.
- **Advise patient to notify health care professional of signs of hepatotoxicity (yellow eyes or skin, darkening or urine, light-gray colored stools, severe stomach pain).**

### Evaluation/Desired Outcomes

- Maintenance of sobriety in chronic alcoholism.

### Why was this drug prescribed for your patient?