
DISULFIRAM (Antabuse) Fact Sheet [G]

Bottom Line:

Disulfiram is an aversive treatment, causing a buildup of ethanol's metabolite acetaldehyde in the serum, which in turn causes symptoms such as flushing, dizziness, nausea, and vomiting. Since disulfiram does not reduce cravings and any alcohol ingestion could result in a reaction, noncompliance can be common. Its use should be reserved for selective, highly motivated patients in conjunction with supportive and psychotherapeutic treatment.

FDA Indications:

Alcohol dependence.

Dosage Forms:

Tablets (G): 250 mg, 500 mg.

Dosage Guidance:

Start 125 mg QPM (must be abstinent from alcohol >12 hours); increase to 250 mg QPM after several days. Maintenance is usually 250–500 mg QPM, but some patients can drink alcohol without a reaction at the 250 mg/day dose.

Monitoring: LFTs if liver disease is suspected.

Cost: \$

Side Effects:

- Most common: Skin eruptions (eg, acne, allergic dermatitis), drowsiness, fatigue, impotence, headache, metallic taste.
- Serious but rare: Severe (very rarely fatal) hepatitis or hepatic failure reported and may occur in patients with or without prior history of abnormal hepatic function. Rare psychotic episodes have been reported. Rarely may cause peripheral neuropathy or optic neuritis.
- Pregnancy/breastfeeding: Not recommended.

Mechanism, Pharmacokinetics, and Drug Interactions:

- Aldehyde dehydrogenase inhibitor.
- Metabolized primarily through CYP450; $t_{1/2}$ is not defined, but elimination from body is slow, and effects may persist for one or two weeks after last dose.
- While taking disulfiram, and for one to two weeks after stopping, avoid concomitant use of any medications containing alcohol (including topicals), metronidazole, or "disguised" forms of ethanol (cough syrup, some mouthwashes, oral solutions or liquid concentrates containing alcohol such as sertraline). Any medicinal solution labeled as "elixir" is dissolved in alcohol and must be avoided. Avoid vinegars, cider, extracts, and foods containing ethanol.
- Some medications can cause a disulfiram-like reaction with alcohol, including metronidazole and sulfonylurea diabetic medications such as chlorpropamide and tolbutamide.

Clinical Pearls:

- Disulfiram inhibits the enzyme aldehyde dehydrogenase; when taken with alcohol, acetaldehyde levels are increased by five- to 10-fold, causing unpleasant symptoms that include flushing, nausea, vomiting, palpitations, chest pain, vertigo, hypotension, and (in rare instances) cardiovascular collapse and death. This is the basis for its use as aversion therapy. Common advice to patients: "You'll wish you were dead, but it likely won't kill you."
- Reaction may last from 30–60 minutes to several hours or as long as alcohol remains in the bloodstream.
- Advise patients to carry an identification card or a medical alert bracelet that states they are taking the medication and lists the symptoms of the reaction and clinician contact information.
- Therapy lasts until the patient is fully recovered and a basis for permanent self-control has been established; maintenance therapy may be required for months or even years.

Fun Fact:

Disulfiram's anti-protozoal activity may be effective in *Giardia* and *Trichomonas* infections.