
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 craving is not reduced by disulfiram and any alcohol ingestion could result in a reaction, nonadherence can be common. Its use should be reserved for selective, highly motivated, and thoroughly informed patients in conjunction with supportive and psychotherapeutic treatment.

PEDIATRIC FDA INDICATIONS:

None.

ADULT FDA INDICATIONS:

Alcohol dependence.

OFF-LABEL USES:

None.

DOSAGE FORMS:

Tablets (G): 250 mg, 500 mg.

DOSAGE GUIDANCE (ADULTS):

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.

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 has been 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.

MECHANISM, PHARMACOKINETICS, AND DRUG INTERACTIONS:

- Aldehyde dehydrogenase inhibitor.
- Metabolized primarily through CYP450; $t_{1/2}$: 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). Avoid vinegars, cider, extracts, and foods containing ethanol.

EVIDENCE AND CLINICAL PEARLS:

- Disulfiram has been studied and benefit has been shown in adolescents. Use in adolescents may be even riskier than in adults given adolescents' impulsivity and risk-taking behaviors, somewhat limiting disulfiram's appropriateness in this population.
- 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.
- Duration of therapy is 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 antiprotozoal activity may be effective in *Giardia* and *Trichomonas* infections.