disulfiram (dye-sul-fir-am)

**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 alcohol 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 slowly eliminated by the kidneys.
- **Half-life**: Unknown.

**Contraindications/Precautions**
- Hypersensitivity to disulfiram or other thiurams (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**: HEPATO-TOXICITY, 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, tinnitus, palor and cardiac output. Concurrent use with isoniazid may result in unsteady gait and behavior changes (disulfiram dose or discontinue). Concurrent use with non-isoniazid-like risks of psychosis 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 (oxazepam, eszopiclone, zolpidem); methadone and may ↑ CNS depression from chlordiazepoxide (low dose may be necessary). May ↑ CNS and cardiac stimulation from caffeine. May ↑ risks of adverse cardiac reactions from cocaine. May ↑ levels and risk of seizures from phenytoin and theophylline; monitoring is recommended. May ↑ levels and risk of organic brain syndromes from non-steroidal antiinflammatory agents.

**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 care.
  - **Lab Test Considerations**: Monitor liver function tests at baseline, after 10–14 days of therapy, and periodically thereafter.
  - Monitor GI and blood chemistry every 6 mo during therapy.
  - **Nursing Considerations**: Monitor liver function tests at baseline, after 10–14 days of therapy, and periodically thereafter.

**Potential Nursing Diagnoses**
- Ineffective coping (Indications).
Implementation
- PO: Administer once daily. May be administered at bedtime to reduce daytime drowsiness.

Patient/Family Teaching
- Instruct 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 (flushed face, shortness of breath, dizziness or fainting, fast or pounding heartbeat, blurred vision, confusion, stomach pain, nausea, vomiting, flushing, headache). 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 OTC decongestants.
- 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 alcoholics.

Why was this drug prescribed for your patient?