

**Generic:** deutetrabenazine (FDA approved 04/03/2017)

**Company:** Teva

**Agent for:** Chorea

**Indications:** Treatment of chorea associated with Huntington's Disease (HD). Austedo is currently under FDA review for treatment of tardive dyskinesia.

**Mechanism of Action:** Austedo is a reversible vesicular monoamine transporter 2 (VMAT2) inhibitor. The precise mechanism is unknown but is believed to be related to the decreased uptake of monoamines in synaptic vesicles and depleted monoamine stores.

**COMPARABLE DRUG:** Tetrabenazine (Xenazine). Most widely used treatments are neuroleptics such as clozapine. Dopamine-depleting agents, such as reserpine, are another option. Gabaergic drugs such as clonazepam can be used as adjunctive therapy.

#### COST PER MONTH (WAC)

AUSTEDO 12 MG = \$10,001

TETRABENAZINE 25 MG = \$7,981

#### ADVANTAGES:

- First deuterated product approved by the FDA and only the second product approved in HD.
- Lower doses of deutetrabenazine are needed compared to tetrabenazine.

#### DISADVANTAGES:

- If switching from reserpine, must wait 20 days before starting Austedo.
- Should not be used in combination with MAOIs or within 14 days of discontinuing therapy with a MAOI.

**MOST IMPORTANT RISKS/ADVERSE EVENTS:** Increased risk for depression and suicidal thoughts and actions. May cause Neuroleptic Malignant Syndrome or irregular heartbeat (prolonged QT interval).

**MOST COMMON ADVERSE EVENTS:** Sedation and somnolence were common side effects. Patients should not drive or operate heavy machinery until they know how the drug affects them. May increase risk of agitation, restlessness, tiredness, dry mouth, and diarrhea.

**USUAL DOSAGE:** The starting dose is 6 mg once daily. If switching from tetrabenazine, recommended initial dose is based on current tetrabenazine dosage. Table is provided in prescribing information. Doses may be increased at weekly intervals by 6 mg per day to a tolerable dose that reduces chorea. The maximum recommended dose is 48mg (24 mg twice daily). Doses 12 mg or higher should be divided into two doses. Needs to be taken with food.

**PRODUCT:** White to slightly yellow crystalline powder. Packaged as round tablets that contain 6 mg, 9 mg, or 12 mg of deutetrabenazine. The tablets are purple coated, blue coated, or beige coated with "SD" over "6", "9", or "12" printed in black ink for the 6 mg, 9 mg, and 12 mg tablets, respectively. Tablets are intended for oral administration. Should be swallowed whole, do not chew crush or break. Should be stored at 77°F (25°C).

**COMMENTS:** Chorea is the most visible feature of HD. It is characterized by involuntary movements. According to Teva, a key benefit of deuterated product is the improvement of the pharmacokinetic profile with the intent to improve tolerability and reduce dosage. The switch from hydrogen to deuterium atoms increases the time it takes the product to circulate in the body by allowing for a slower drug breakdown. It is the second drug approved by the FDA for chorea, following Xenazine in 2008. In studies, the Total Maximal Chorea score was evaluated and patients receiving Austedo improved by 4.4 points compared to patients on placebo with 1.9 points. 51% of patients reported that HD symptoms were much improved and 42% of doctors observed much improved HD symptoms at the end of trial.