desipramine (dess-ip-ra-meen)

Nonprescription

Classification

Therapeutic: antidepressants
Pharmacologic: tricyclic antidepressants

Pregnancy Category C

Indications

Depression. Unlabeled Use: Chronic pain syndromes, Anxiety, Anomnia.

Action

Potentiates the effect of serotonin and norepinephrine in the CNS. Has significant anticholinergic properties. Therapeutic Effects: Antidepressant action (may develop only over several weeks).

Pharmacokinetics

Well absorbed from the GI tract. Widely distributed. Mostly metabolized by the liver (CYP2D6 isoenzyme; CYP2D6 enzyme system exhibits genetic polymorphism; 7% of population may be poor metabolizers (PMs) and may have significantly

Metabolism and Excretion:

Protein Binding: 90–92%.

Distribution:

Widely distributed.

Absorption:

Well absorbed from the GI tract.

TIME/ACTION PROFILE (antidepressant effect)

12–27 hr. Peak

Half-life:

90–92%.

Therapeutic Effects:

Antidepressants

Therapeutic:

Chronic pain syndromes. Anxiety. Insomnia.

Antidepressant action (may develop only over several weeks).

Unlabeled Use:

May cause hypotension, tachycardia, and potentially fatal reactions when used with MAO inhibitors (avoid concurrent use—discontinue 2 wk prior to). Concurrent use with SSRIs may result in QTc prolongation. History of suicide attempt/ideation especially during early treatment or dose adjustment; risk may be greater in children or adolescents. Use during pregnancy only if potential maternal benefit outweighs risks to fetus; use desipramine may result in maternal
dependent, infant withdrawal syndrome. Infants—Premature births, low birth weight, and chronic lung disease risk may be higher with use of desipramine in pregnancy.

Contraindications/Precautions

Contraindicated in: Hypersensitivity to desipramine.

Use Cautiously in: Recent MI, heart failure, known history of QTc prolongation. Pregnancy (use only when maternal benefit outweighs risk to fetus).

Adverse Reactions/Side Effects

CNS: q nervousness, confusion, anxiety, dizziness, drowsiness, euphoria, insomnia, irritability, p sexual dysfunction, tremor. CV: q palpitations. EENT: q blurred vision. Resp: q dry mouth. Hemat: q eosinophilia. Metab: q weight gain in some. MS: q hunger, weight gain. Derm: q dry skin, rash, sweating. Misc: q hyperactivity, urinary retention; seizures may precede the development of cardiac arrhythmias or death; May cause hypotension, tachycardia, and potentially fatal reactions when used with MAO inhibitors (avoid concurrent use—discontinue 2 wk prior to). Concurrent use with SSRIs may result in QTc prolongation. History of suicide attempt/ideation especially during early treatment or dose adjustment; risk may be greater in children or adolescents. Use during pregnancy only if potential maternal benefit outweighs risks to fetus; use desipramine may result in maternal dependence, infant withdrawal syndrome. Infants—Premature births, low birth weight, and chronic lung disease risk may be higher with use of desipramine in pregnancy.

Drug Interactions

Drug-Drug: Concurrent use of desipramine in the liver by the cytochrome P450 2D6 enzyme and its activity may be affected by drugs which compete for metabolism by or alter the activity of this enzyme including other antidepressants, phenothiazines, barbiturates, propoxyphene, and tricyclic antidepressants. Concurrent use with one or the other of these classes of drugs may result in delayed/interference to effects. Small amounts enter breast milk.

Drug-Natural Products:

Concomitant use of herbal products containing St John’s wort, kava-kava, valerian, or chamomile may result in delayed/interference to effects. May cause hypotension, tachycardia, and potentially fatal reactions when used with MAO inhibitors (avoid concurrent use—discontinue 2 wk prior to). Concurrent use with SSRIs may result in QTc prolongation. History of suicide attempt/ideation especially during early treatment or dose adjustment; risk may be greater in children or adolescents. Use during pregnancy only if potential maternal benefit outweighs risks to fetus; use desipramine may result in maternal dependence, infant withdrawal syndrome. Infants—Premature births, low birth weight, and chronic lung disease risk may be higher with use of desipramine in pregnancy.

Other: Concurrent use with other drugs that inhibit the activity of the enzyme, including other antidepressants, phenothiazines, barbiturates, propoxyphene, and tricyclic antidepressants may result in delayed/interference to effects. May cause hypotension, tachycardia, and potentially fatal reactions when used with MAO inhibitors (avoid concurrent use—discontinue 2 wk prior to). Concurrent use with SSRIs may result in QTc prolongation. History of suicide attempt/ideation especially during early treatment or dose adjustment; risk may be greater in children or adolescents. Use during pregnancy only if potential maternal benefit outweighs risks to fetus; use desipramine may result in maternal dependence, infant withdrawal syndrome. Infants—Premature births, low birth weight, and chronic lung disease risk may be higher with use of desipramine in pregnancy.

Drug Classifications
Route/Dosage
PO (Adults): 100–200 mg/day as a single dose or divided doses (up to 300 mg/day).
PO (Geriatric Patients): 25–50 mg/day in divided doses (up to 150 mg/day).
PO (Children 12 yr): 25–50 mg/day in divided doses, may q2–3 as needed up to 100 mg/day.
PO (Children 6–12 yr): 10–30 mg/day (1–5 mg/kg/day) in divided doses.

NURSING IMPLICATIONS
Assessment
- Obtain weight and BMI initially and periodically throughout therapy.
- Assess Ht and blood levels for overweight/obese individuals.
- Monitor for appropriate nutrition/maintenance and medical management.
- Monitor BP and pulse prior to and during initial therapy. Notify physician or other health care professional of dyspnea in BP (10–20 mm Hg) or sudden increase in pulse rate. Patients taking high doses or with a history of cardiovascular disease should have ECG monitored prior to and periodically during therapy.
- Depression: Monitor mental status (orientation, mood, behavior) frequently. Assess for suicidal ideations, especially during early therapy. Restrict amount of drug available to patient.
- Assess mental status and mood changes, especially during initial few months of therapy and during dose changes. Risk may be increased in children, adolescents, and adults ≥12 yrs. Inform health care professional if patient demonstrates significant increase in signs of depression (depressed mood, loss of interest in usual activities, significant change in weight and/or appetite, insomnia or hypersomnia, psychomotor agitation or retardation, increased agitation, feelings of guilt or worthlessness, slowed thinking or impaired concentration, suicidal attempt or suicidal ideation). Restrict amount of drug available to patient.
- Pain: Assess intensity, quality, and location of pain periodically throughout therapy. Use pain scale to monitor effectiveness of medication.
- Lab Test Considerations: Serum levels may be monitored in patients who fail to respond to usual therapeutic dose.

Potential Nursing Diagnoses
- Ineffective coping (indications)
- Risk for injury (Side Effects)
- Chronic pain (indications)

Implementation
- Do not confuse desipramine with desipramine.
- Dose increases should be made at bedtime because of sedation. Dose titration is a slow process; may take weeks to months. May give entire dose at bedtime.
- Taper to avoid withdrawal effects. Reduce dose by half for 3 days then reduce again by half 1 day, then discontinue.
- PO: Administer medication with or immediately after a meal to minimize gastric upset. Tablets may be crushed and given with food or fluids.

Patient/Family Teaching
- Instruct patient to take medication as directed. Take missed doses as soon as possible unless almost time for next dose; if regimen is a single dose at bedtime, do not take in the morning because of side effects. Advise patient that drug effects may not be seen for at least 2 wk. Abrupt discontinuation may cause nausea, vomiting, diarrhea, headache, trouble sleeping, with viral dementia, and irritability. Instruct patient to read the Medication Guide prior to starting and with each Rx refill in case of changes.
- Pain: Caution patient to avoid driving and other activities requiring alertness until response to drug is known.
- Orthostatic hypotension, sedation, and confusion are common during early therapy, especially in the elderly. Inform patient from falls. Institute fall precautions. Advise patient to make position changes slowly.
- Advise patient to avoid alcohol or other CNS depressant drugs during and for 3–7 days after therapy has been discontinued.
- Advise patient, family, and caregivers to look for suicidality, especially during early therapy or dose changes. Notify health care professional immediately if thoughts about suicide or dying, attempting to commit suicide, new or worse depression or anxiety, agitation or restlessness, panic attacks, insomnia, new or worse irritability, aggressiveness, acting on dangerous impulses, mania, or other changes in mood or behavior occur.
**CONTINUED**

**desipramine**

- Instruct patient to notify health care professional if urinary retention, dry mouth, or constipation persists. Sugarless candy or gum may diminish dry mouth, and an increase in fluids or bulk may prevent constipation. If symptoms persist, dose reduction or discontinuation may be necessary. Consult health care professional if dry mouth persists for more than 2 wk.
- Caution patient to use sunscreen and protective clothing to prevent photosensitivity reactions.
- Instruct patient of need to monitor dietary intake. Increase in appetite may lead to undesired weight gain.
- Alert patient that medication may turn urine blue-green in color.
- Advise patient to notify health care professional of medication regimen prior to treatment or surgery.
- Advise female patients to notify health care professional if pregnancy is planned or suspected.
- Therapy for depression is usually prolonged. Emphasize the importance of follow-up exams to monitor effectiveness and side effects and to improve coping skills.

**Evaluation/Desired Outcomes**

- Increased sense of well-being.
- Renewed interest in surroundings.
- Increased appetite.
- Improved energy level.
- Improved sleep.
- Decrease in chronic pain symptoms.
- Full therapeutic effects may be seen 2–6 wk after initiating therapy.

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