

SPECIMEN

A dose of 2.5 mg/kg/day should not be exceeded in childhood. ECG changes of unknown significance have been reported in pediatric patients with doses twice this amount.

Geriatric Use

In the literature, there were four well-controlled, randomized, double-blind, parallel group comparison clinical studies done with Tofranil in the elderly population. There was a total number of 651 subjects included in these studies. These studies did not provide a comparison to younger subjects. There were no additional adverse experiences identified in the elderly.

Clinical studies of Tofranil in the original application did not include sufficient numbers of subjects aged 65 and over to determine whether they respond differently from younger subjects. Pharmacokinetic studies in elderly patients have indicated that doses between the elderly and younger subjects in general do not differ. Therefore, the elderly should be cautious, usually starting at the low end of the dosing range, reflecting greater frequency of decreased hepatic, renal, or cardiac function, and of concomitant disease or other drug therapy.

(See also DOSAGE AND ADMINISTRATION, Adolescent and Geriatric Patients.)

ADVERSE REACTIONS

Note - Although the activity of Tofranil includes a few adverse reactions which have not been reported with this specific drug, pharmacological similarities among the tricyclic antidepressant drugs require that each of the reactions be considered when Tofranil is administered.

Cardiovascular: Orthostatic hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias, heart block, ECG changes, precipitation of congestive heart failure, stroke.

Psychiatric: Confusional states (especially in the elderly) with hallucinations, disorientation, delusions; anxiety, restlessness, agitation; insomnia and nightmares; hypomania, exacerbation of psychosis.

Neurologic: Numbness; tingling, paresthesias of extremities; incoordination, ataxia, tremors; peripheral neuropathy; extrapyramidal symptoms; seizures; alterations in EEG patterns; tinnitus.

Anticholinergic: Dry mouth, and, rarely, associated sublingual edema; blurred vision; disturbances of accommodation, mydriasis; constipation; urinary retention, delayed micturition, dilation of the urinary tract.

Allergic: Skin rash, urticaria, urticarial photosensitization; edema; angioedema of face and tongue; drug fever; cross sensitivity with desipramine.

Hematologic: Bone marrow depression including agranulocytosis; eosinophilia; purpura; thrombocytopenia.

Gastrointestinal: Nausea and vomiting, anorexia, epigastric distress, flatulence, peptic ulcers, stomatitis, abdominal cramps, black tongue.

Endocrine: Gynecomastia in the male breast enlargement and calcification in the female; increased or decreased blood sugar levels; testicular swelling; elevation or depression of blood sugar levels; inappropriate antidiuretic hormone (ADH) secretion syndrome.

Other: Jaundice (simulating obstructive); altered liver function; weight gain or loss; perspiration; flushing; urinary frequency; drowsiness, dizziness, weakness and fatigue; headache; parotid swelling; alopecia; pruritus; itching.

Withdrawal Symptoms: Though not indicative of addiction, abrupt cessation of treatment after prolonged therapy may produce nausea, headache, and malaise.

Note - In enuretic children treated with Tofranil the most common adverse reactions have been nervousness, sleep disorders, drowsiness, and mild gastrointestinal disturbances. These usually disappear during continued drug administration or when dosage is reduced. Allergic reactions, such as rash, pruritus, urticaria, and hives, and hypomania, anxiety, emotional lability, vertigo, and collapse. All of the adverse effects reported with adult use should be considered.

OVERDOSEAGE

Deaths may occur from overdose with this class of drugs. Multiple overdoses have been reported with Tofranil. The usual deliberate tricyclic overdose. As the management is complex and changing, it is recommended that the physician contact a poison control center for current information on treatment. Signs and symptoms of toxicity develop rapidly after tricyclic overdose. Therefore, hospital monitoring is required as soon as possible.

Children have been reported to be more sensitive than adults to an acute overdose of imipramine hydrochloride. An acute overdose of any amount in infants or young children, especially, should be considered serious and potentially fatal.

Manifestations

These may vary in severity depending upon factors such as the amount of drug absorbed, the age of the patient, and the interval between drug ingestion and the start of treatment. Critical manifestations of overdose include cardiac arrhythmias, severe hypotension, convulsions, and CNS depression including coma. Other signs of overdose include: dry mouth, dry eyes, and orthostatic hypotension. Other CNS manifestations may include drowsiness, stupor, ataxia, restlessness, agitation, hyperactive reflexes, muscle rigidity, abnormal and choreiform movements.

Cardiac arrhythmias may include tachycardia and signs of congestive failure. Respiratory depression, syncope, shock, vomiting, hyperpyrexia, mydriasis, and diaphoresis may also be present.

Management

Obtain an ECG and immediately initiate cardiac monitoring. Protect the patient's airway, establish an intravenous line and initiate gastric decontamination. A minimum of 6 hours of observation with cardiac monitoring and observation for signs of CNS or respiratory depression, hypotension, cardiac arrhythmias and/or conduction blocks, and seizures is necessary. Signs of toxicity occur at anytime after ingestion. Reports of patients succumbing to fatal dysrhythmias late after overdose: these patients had clinical evidence of significant poisoning prior to death and most received inadequate gastrointestinal decontamination. Monitoring of plasma drug levels should not guide management of the patient.

Gastrointestinal Decontamination - All patients suspected of tricyclic overdose should receive gastrointestinal decontamination. This should include large volume gastric lavage followed by activated charcoal. If consciousness is impaired, the airway should be secured prior to lavage. Emesis is contraindicated.

Cardiovascular - A maximal limb-lead QRS duration of 120 to 150 ms may be the best indication of the severity of the poisoning. The serum pH should be maintained between 7.35 and 7.45 to maintain the serum pH in the range of 7.45 to 7.55. If the pH response is inadequate, hyperventilation may also be used. Concomitant use of hyperventilation and sodium bicarbonate should be done with extreme caution, with frequent monitoring. A pH >7.60 or a PCO₂ <20 mmHg is undesirable. Dysrhythmias unresponsive to sodium bicarbonate therapy/hyperventilation may respond to lidocaine, bretylium, or phenytoin. Type 1A and type 1B antiarrhythmics, such as quinidine, procainamide, disopyramide, and procainamide.

In rare instances, hypotension may be beneficial in acute poisoning. However, hypotension should be treated with fluids. However, hemodialysis, peritoneal dialysis, exchange transfusions, and forced diuresis generally have been reported as ineffective in tricyclic poisoning.

CNS - In patients with CNS depression, early intubation is advised because of the potential for abrupt deterioration. Seizures should be controlled with benzodiazepines, or if these are ineffective, other anticonvulsants (e.g., phenobarbital, phenytoin). Physostigmine is not recommended except to treat life-threatening symptoms that have been unresponsive to other therapies, and then only in consultation with a poison control center.

Psychiatric Follow-up - Since overdose is often deliberate, patients may attempt suicide by other means during the recovery phase. Psychiatric follow-up may be appropriate.

Pediatric Management - The principles of management of child overdoses are similar to those for adults. It is recommended that the physician contact the local poison control center for specific pediatric treatment.

DOSAGE AND ADMINISTRATION

Lower dosages are recommended for elderly patients and adolescents. Lower dosages are also recommended for patients with hepatic or renal impairment. Dosage should be initiated at a low level and increased gradually, noting carefully the clinical response and any evidence of intolerance. Following remission, maintenance medication may be required for a longer period of time, at the lowest dose that will maintain remission.

Usual Adult Dose

Hospitalized Patients - Initially, 100 mg/day in divided doses gradually increased to 250 to 300 mg/day.

Outpatients - Initially, 75 mg/day, increased to 150 mg/day. Dosages over 200 mg/day are not recommended. Maintenance, 50 to 150 mg/day.

Adolescent and Geriatric Patients - Initially, 30 to 40 mg/day; it is generally not necessary to exceed 100 mg/day.

Childhood Onset


Initially an oral dose of 25 mg/day should be tried in children aged 6 and older. Medication should be given one hour before bedtime. If a satisfactory response does not occur within one week, increase the dose to 50 mg nightly in children under 12 years; children over 12 may receive up to 75 mg nightly. A daily dose greater than 75 mg does not enhance efficacy and tends to increase side effects. Episodes of insomnia in early night awakenings, the drug effects, and irritability should be noted. Consideration should be given to instituting a drug free period following an adequate therapeutic trial with a favorable response. Dosage should be tapered off gradually rather than abruptly discontinued; this may reduce the tendency to relapse. Children who relapse when the drug is discontinued do not always respond to a subsequent course of treatment.

A dose of 2.5 mg/kg/day should not be exceeded. ECG changes of unknown significance have been reported in pediatric patients with doses twice this amount.


The safety and effectiveness of Tofranil as temporary adjunctive therapy for nocturnal enuresis in children less than 6 years of age has not been established.

HOW SUPPLIED


The three strengths of Tofranil® (imipramine hydrochloride USP) are available as follows:

Tablets 10 mg - triangular, biconvex, coral-red/brown, sugar-coated tablet, imprinted with  on one side and "10" on the other side in black.

Bottles of 30 NDC 0406-9920-03
Bottles of 100 NDC 0406-9920-01

Tablets 25 mg - round, biconvex, coral-red/brown, sugar-coated tablet, imprinted with  on one side and "25" on the other side in black.

Bottles of 30 NDC 0406-9921-01
Bottles of 100 NDC 0406-9921-03

Tablets 50 mg - round, biconvex, coral-red/brown, sugar-coated tablet, imprinted with  on one side and "50" on the other side in black.

Bottles of 30 NDC 0406-9922-03
Bottles of 100 NDC 0406-9922-01

Store at 20° to 25°C (68° to 77°F) [see USP Controlled Room Temperature].
Dispense in light container (USP) within child-resistant closure.

ANIMAL PHARMACOLOGY & TOXICOLOGY

A. Acute Oral LD₅₀ ranges are as follows:

Rat 335 to 682 mg/kg
Dog 100 to 215 mg/kg

Depending on the dosage in both species, toxic signs proceeded progressively from depression, irregular respiration and ataxia to convulsions and death.

B. Reproduction/Reproductive: The overall evaluation may be summed up in the following manner:
Oral independent studies in these species (rat, mouse and rabbit) revealed that when Tofranil is administered orally in doses up to approximately 2.1/2 times the maximum human dose in the first 3 species and up to 25 times the maximum human dose in the third species, the drug is essentially free from teratogenic potential. In the three species studied, only one instance of fetal abnormality occurred in the rabbit and in that study there was likewise an abnormality in the control group. However, embryonic mortality was observed in the rat and mouse and embryonic potential is demonstrable. This is manifested by reduced litter size, a slight increase in the stillborn rate, and a reduction in the mean birth weight.

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LIN 525

Manufactured for: Mallinckrodt Inc. Hazelwood, MO 63042, USA

Medication Guide - Tofranil™
imipramine hydrochloride tablets USP
Antidepressant Medicines, Depression and other Serious Mental Illnesses, and Suicidal Thoughts or Actions

Read the Medication Guide that comes with you or your family member's antidepressant medicine. This Medication Guide is only about the risk of suicidal thoughts and actions with antidepressant medicines. **Talk to you, or your family member's, healthcare provider about:**

- all risks and benefits of treatment with antidepressant medicines
- all treatment choices for depression or other serious mental illness

Who should not take Tofranil?
Do not take Tofranil if you:

- take a monoamine oxidase inhibitor (your healthcare provider or pharmacist if you are not sure if you take an MAOI antibiotic like lizolol).
- Do not take an MAOI within 2 weeks of stopping Tofranil unless directed by your physician.
- Do not start Tofranil if you are taking an MAOI in the last 2 weeks unless directed by your physician.

What else do I need to know about antidepressant medicines?

- **Never stop an antidepressant medicine without first talking to a healthcare provider.** Stopping an antidepressant medicine suddenly can cause other symptoms.
- **Visual problems:** Only some people are at risk for these problems. You may receive preventative treatment if you have visual problems.
- **Antidepressants are medicines used to treat depression and other illnesses.** To discuss all the risks of treatment, also the risks of not treating it, P talk to your doctor or healthcare provider.

How can I watch for and try to prevent suicidal thoughts and actions in myself or my family member?

- Pay close attention to any changes, especially sudden changes, in mood, behaviors, thoughts, or feelings. This is very important when an antidepressant medicine is started or when the dose is changed.
- Call the healthcare provider right away to report new or sudden changes in mood, behavior, thoughts, or feelings.
- Keep all follow-up visits with the healthcare provider as scheduled. Call the healthcare provider between visits as needed, especially if you have concerns about symptoms.

Call a healthcare provider right away if you or your family member has any of the following symptoms, especially if they are new, worse, or worry you:

- thoughts about suicide or dying
- attempts to commit suicide
- new or worse depression
- new or worse anxiety
- feeling very agitated or restless
- panic attacks
- trouble sleeping (insomnia)
- new or worse irritability
- acting aggressive, being angry, or violent
- acting on dangerous impulses
- an extreme increase in activity and talking (mania)

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Read the Medication Guide that comes with you or your family member's antidepressant medicine. This Medication Guide is only about the risk of suicidal thoughts and actions with antidepressant medicines. **Talk to your, or your family member's, healthcare provider about:**

- all risks and benefits of treatment with antidepressant medicines
- all treatment choices for depression or other serious mental illness

What is the most important information I should know about antidepressant medicines, depression and other serious mental illnesses, and suicidal thoughts or actions?

- 1. Antidepressant medicines may increase suicidal thoughts or actions in some children, teenagers, and young adults within the first few months of treatment.**
- 2. Depression and other serious mental illnesses are the most important causes of suicidal thoughts and actions. Some people may have a particularly high risk of having suicidal thoughts or actions.** These include people who have (or have a family history of) bipolar illness (also called manic-depressive illness) or suicidal thoughts or actions.
- 3. How can I watch for and try to prevent suicidal thoughts and actions in myself or a family member?**
 - Pay close attention to any changes, especially sudden changes, in mood, behaviors, thoughts, or feelings. This is very important when an antidepressant medicine is started or when the dose is changed.
 - Call the healthcare provider right away to report new or sudden changes in mood, behavior, thoughts, or feelings.
 - Keep all follow-up visits with the healthcare provider as scheduled. Call the healthcare provider between visits as needed, especially if you have concerns about symptoms.

Call a healthcare provider right away if you or your family member has any of the following symptoms, especially if they are new, worse, or worry you:

- thoughts about suicide or dying
- attempts to commit suicide
- new or worse depression
- new or worse anxiety
- feeling very agitated or restless
- panic attacks
- trouble sleeping (insomnia)
- new or worse irritability
- acting aggressive, being angry, or violent
- acting on dangerous impulses
- an extreme increase in activity and talking (mania)
- other unusual changes in behavior or mood

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- **Visual problems:** eye pain, changes in vision, swelling or redness in or around the eye

Who should not take Tofranil?

Do not take Tofranil if you:

- take a monoamine oxidase inhibitor (MAOI). Ask your healthcare provider or pharmacist if you are not sure if you take an MAOI, including the antibiotic linezolid.
 - Do not take an MAOI within 2 weeks of stopping Tofranil unless directed to do so by your physician.
 - Do not start Tofranil if you stopped taking an MAOI in the last 2 weeks unless directed to do so by your physician.

What else do I need to know about antidepressant medicines?

- **Never stop an antidepressant medicine without first talking to a healthcare provider.** Stopping an antidepressant medicine suddenly can cause other symptoms.
- **Visual problems:** Only some people are at risk for these problems. You may want to undergo an eye examination to see if you are at risk and receive preventative treatment if you are.
- **Antidepressants are medicines used to treat depression and other illnesses.** It is important to discuss all the risks of treating depression and also the risks of not treating it. Patients and their families or other caregivers should discuss all treatment choices with the healthcare provider, not just the use of antidepressants.
- **Antidepressant medicines have other side effects.** Talk to the healthcare provider about the side effects of the medicine prescribed for you or your family member.
- **Antidepressant medicines can interact with other medicines.** Know all of the medicines that you or your family member takes. Keep a list of all medicines to show the healthcare provider. Do not start new medicines without first checking with your healthcare provider.
- **Not all antidepressant medicines prescribed for children are FDA approved for use in children.** Talk to your child's healthcare provider for more information.

Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

This Medication Guide has been approved by the U.S. Food and Drug Administration.

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