

**LIMBITROL®** (Chlorthalidone) **Tranquillizer-Antidepressant**  
 Before prescribing, please consult complete product information: a summary of which follows.  
**Indications:** Relief of moderate to severe depression associated with moderate to severe anxiety.  
**Contraindications:** Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use, then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.  
**Warnings:** Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).  
**Usage in Pregnancy:** Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Since physical and psychological dependence to chlorthalidone have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage, withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline, symptoms [including convulsions] similar to those of barbiturates withdrawal for chlorthalidone).

**Precautions:** Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs. Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated, sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.

**Adverse Reactions:** Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.

The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs: Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.

Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.

Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.

Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.

Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.

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

Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.

Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.

Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

**Overdosage:** Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. IV administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

**Dosage:** Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single h.s. dose may suffice for some patients. Lower dosages are recommended for the elderly. Limbitrol DS (double strength) Tablets, initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol Tablets, initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses.

**How Supplied:** Double strength (DS) Tablets, white, film-coated, each containing 10 mg chlorthalidone and 25 mg amitriptyline (as the hydrochloride salt). And Tablets, blue, film-coated, each containing 5 mg chlorthalidone and 12.5 mg amitriptyline (as the hydrochloride salt). Available in bottles of 100 and 500, Tel-E-Dose® packages of 100, Prescription Paks of 50.



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**Motion sickness can be minimized by having a patient sit away from engine vibrations, recline, avoid visual stimulation, and sip a carbonated beverage.**

**Table 4. Safety measures for persons with chronic obstructive pulmonary disease (COPD) traveling by air**

Supplemental O<sub>2</sub> if routine arterial blood gas on room air reveals Po<sub>2</sub> < 55 mm Hg  
 Supplemental O<sub>2</sub> if routine arterial blood gas on room air reveals Po<sub>2</sub> > 55 mm Hg but Po<sub>2</sub> on hypoxia air mixture test (HAMT)\* < 55 mm Hg  
 Seating in nonsmoking section near lavatory  
 Adequate hydration  
 Isometric exercise during flight  
 Ready access to medical help  
 Avoidance of alcohol and sedatives  
 Wheelchair for ground transportation

\* Patient with COPD not severe enough to warrant continuous-flow oxygen at home may desaturate at lower cabin pressures in flight. Arterial blood gas, unless drawn shortly before flight (within hours), will not accurately reflect alveolar-arterial gradient at altitude. Giving HAMT (having patient breathe hypoxic air mixture using formula below to calculate amount of O<sub>2</sub> to be mixed with N<sub>2</sub> in laboratory balloon) more accurately predicts which COPD patients should receive continuous O<sub>2</sub> during flight.

$$F_{IO_2} \text{ mixture} = 0.21 \times (P_c - 47/P_g - 47)$$

where F<sub>IO<sub>2</sub></sub> stands for fraction of inspired oxygen, P<sub>c</sub> for cabin pressure, and P<sub>g</sub> for ground pressure, and where P<sub>c</sub> at 5,000 ft = 620 mm Hg and at 8,000 ft = 575 mm Hg.

Based on data from Schwartz et al.<sup>3</sup>

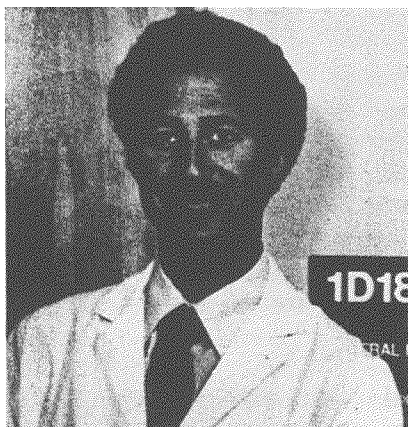
potential cerebrovascular accident in evolution; the aircraft should be diverted immediately, oxygen should be administered, and the patient should be placed in the coma position (modified lateral decubitus) across a row of seats (with arm rests retracted) or on the floor.

Confusion responding completely to oxygen administration in a patient with a history or habitus suggestive of chronic obstructive pulmonary disease is probably hypoxemic in origin. Close observation for the remain-

der of the flight is indicated.

The unresponsive individual should be placed in the coma position already described. In the presence of irregular or labored breathing, an oral airway should be inserted. If an unresponsive victim is not breathing, an oral airway should be inserted and artificial respirations administered, with the rescuer taking breaths from an oxygen mask. A victim who is pulseless to palpation and chest auscultation should be placed on the floor of the aircraft for cardiac compress-

*continued*



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sions. During cardiopulmonary resuscitation, injection of 0.5 to 1 ml of epinephrine 1:1,000 every five minutes into a distended vein, the sublingual venous plexus, or less desirably, intramuscularly into the deltoid would be reasonable.

The patient in seizure should be restrained only enough to prevent physical injury; oxygen should be administered and a history obtained from companions. Recurrent or persistent generalized convulsions mandate immediate diversion of the aircraft.

Motion sickness can be minimized by having a patient sit away from engine vibrations,

recline, avoid visual stimulation, and sip a carbonated beverage. Protracted episodes of emesis may respond to diphenhydramine given intramuscularly (25 to 50 mg in an adult).

Severe pain in the ears or face during descent is likely due to the contraction of trapped gas within the middle ear (barotitis) or the paranasal sinuses (barosinusitis). Swallowing, yawning, and gentle Valsalva maneuvers may relieve symptoms. Nasal decongestants, available in some airline first aid kits, may be helpful.

#### **Good samaritans in the sky**

Most states have enacted "good samaritan" laws to protect volunteering physicians from the threat of lawsuit. These laws usually require that (1) no fee for service was anticipated and (2) the medical aid rendered was of a standard compatible with the physician's training. It is possible, but not certain, that state laws will afford protection for in-flight emergencies occurring over their territory. While there exists no federal good samaritan law, Congress is considering such legislation. The situation is less clear for travel outside the United States, especially aboard foreign carriers (some of which carry resuscitation kits even more sophisticated than those now required in this country).

#### **Conclusion**

**The new, expanded emergency kits now required on US airliners offer the potential for greatly enhanced in-flight diagnosis and treatment, which may in many cases eliminate the need to divert the aircraft. Careful auditing of in-flight emergencies over the next two years will enable the Federal Aviation Administration (FAA) to determine whether the inclusion of defibrillators, parenteral narcotics, sedatives, and antiarrhythmic drugs is warranted. While the status of "good samaritan" legal protection is unclear, the FAA expects that, in the event of an emergency, qualified medical personnel will voluntarily come forward to provide assistance. RGM**

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#### **References**

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