

HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use DULOXETINE DELAYED-RELEASE CAPSULES safely and effectively. See full prescribing information for DULOXETINE DELAYED-RELEASE CAPSULES.

DULOXETINE DELAYED-RELEASE CAPSULES USP for oral use.

Initial U.S. Approval: 2004

- WARNING: SUICIDAL THOUGHTS AND BEHAVIORS**
See full prescribing information for complete boxed warning.
- Increased risk of suicidal thinking and behavior in children, adolescents, and young adults taking antidepressants (5.1)
 - Monitor for worsening and emergence of suicidal thoughts and behaviors (5.1)

- RECENT MAJOR CHANGES**
- Boxed Warning: Suicidal Thoughts and Behaviors (1) 10/2014
- Indications and Usage (1) 10/2014
- Dosage and Administration: Dosage for Treatment of Generalized Anxiety Disorder (2.2) 10/2014
- Contraindications: Uncontrolled Narrow-Angle Glaucoma (4.2) Removed 07/2014
- Warnings and Precautions: Orthostatic Hypotension, Falls and Syncope (5.3) 11/2014
- Angle-Closure Glaucoma (5.9) 07/2014

- INDICATIONS AND USAGE**
- Duloxetine delayed-release capsules are a serotonin and norepinephrine reuptake inhibitor (SNRI) indicated for:
- Major Depressive Disorder (MDD) (1)
 - Generalized Anxiety Disorder (GAD) (1)
 - Diabetic Peripheral Neuropathic Pain (DPNP) (1)
 - Chronic Musculoskeletal Pain (1)

- DOSAGE AND ADMINISTRATION**
- Take duloxetine delayed-release capsules once daily, with or without food. Swallow duloxetine delayed-release capsules whole; do not crush or chew. Do not open capsule. Take a missed dose as soon as it is remembered. Do not take two doses of duloxetine delayed-release capsules at the same time. (2)

Indication	Starting Dose	Target Dose	Maximum Dose
		Adult Treatment: 40 mg/day (20 mg twice daily) to 60 mg/day (once daily) or as 30 mg twice daily	120 mg/day
MDD (2.1)	40 mg/day to 60 mg/day	60 mg/day (once daily) to 60 mg/day (once daily) or as 30 mg twice daily	120 mg/day

GAD (2.2)	ADPN (2.3)	Chronic Musculoskeletal Pain (2.5)
Adults	Adults	
60 mg/day	60 mg/day	30 mg/day
60 mg/day (once daily)	60 mg/day (once daily)	60 mg/day (once daily)

- Some patients may benefit from starting at 30 mg once daily (2)
- There is no evidence that doses greater than 60 mg/day confers additional benefit, while some adverse reactions were observed to be dose-dependent (2)
- Discontinuing duloxetine delayed-release capsules: Gradually reduce dosage to avoid discontinuation symptoms (2.1, 5.7)
- Hepatic Impairment: Avoid use in patients with chronic liver disease or cirrhosis (5.14)
- Renal Impairment: Avoid use in patients with severe renal impairment, GFR <30 mL/min (5.14)

- DOSAGE FORMS AND STRENGTHS**
- 20 mg, 30 mg, and 60 mg delayed-release capsules (3)

- CONTRAINDICATIONS**
- Serotonin Syndrome and MAOIs: Do not use MAOIs intended to treat psychiatric disorders with duloxetine delayed-release capsules or within 5 days of stopping treatment with duloxetine delayed-release capsules. Do not use duloxetine delayed-release capsules within 14 days of stopping an MAOI intended to treat

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psychiatric disorders. In addition, do not start duloxetine delayed-release capsules in a patient who is being treated with linezolid or intravenous methylene blue (4)

WARNINGS AND PRECAUTIONS

Hepatotoxicity: Hepatic failure, sometimes fatal, has been reported in patients treated with duloxetine delayed-release capsules. Duloxetine delayed-release capsules should be discontinued in patients who develop jaundice or other evidence of clinically significant liver dysfunction and should not be resumed unless another cause can be established. Duloxetine delayed-release capsules should not be prescribed to patients with substantial alcohol use or evidence of chronic liver disease (5.2)

Orthostatic Hypotension, Falls and Syncope: Cases have been reported with duloxetine delayed-release capsules therapy (5.3)

Serotonin Syndrome: Serotonin syndrome has been reported with SSRIs and SNRIs, including with duloxetine delayed-release capsules, both when taken alone, but especially when coadministered with other serotonergic agents (including triptans, tricyclic antidepressants, fenfluramine, lithium, tramadol, typhlophob, buspirone and St. John's Wort). If such symptoms occur, discontinue duloxetine delayed-release capsules and initiate supportive treatment. If concomitant use of duloxetine delayed-release capsules with other serotonergic drugs is clinically warranted, patients should be made aware of a potential increased risk for serotonin syndrome, particularly during treatment with duloxetine delayed-release capsules (5.7)

Abnormal Bleeding: Duloxetine delayed-release capsules may increase the risk of bleeding events. Patients should be cautioned about the risk of bleeding associated with the concomitant use of duloxetine delayed-release capsules and NSAIDs, aspirin, or other drugs that affect coagulation (5.5, 7.4)

Severe Skin Reactions: Severe skin reactions, including erythema multiforme and Stevens-Johnson Syndrome (SJS), can occur with duloxetine delayed-release capsules. Duloxetine delayed-release capsules should be discontinued at the first appearance of blisters, peeling rash, mucosal erosions, or any other sign of hypersensitivity if no other etiology can be identified. (5.6)

Discontinuation: May result in symptoms, including dizziness, headache, nausea, diarrhea, paresthesia, irritability, vomiting, insomnia, anxiety, hyperhidrosis, and fatigue (5.7)

Activation of mania or hypomania has occurred (5.8)

Angle-Closure Glaucoma: Angle-closure glaucoma has occurred in patients with untreated anatomically narrow angles treated with antidepressants. (5.9)

Blood Pressure: Monitor blood pressure prior to initiating treatment and periodically throughout treatment (5.11)

Inhibitors of CYP1A2 or Thiazidines: Should not administer with duloxetine delayed-release capsules (5.12)

Hypotension: Cases of hypotension have been reported with duloxetine delayed-release capsules. In diabetic peripheral neuropathic pain patients, glucose control in fasting blood glucose, and HbA_{1c} have been observed (5.14)

Conditions that Slow Gastric Emptying: Use cautiously in these patients (5.14)

Urinary Hesitation and Retention (5.15)

Most common adverse reactions (25% and at least twice the incidence of placebo and hypotension): nausea, dry mouth, somnolence, constipation, decreased appetite, and hyperhidrosis (6-3)

To report SUSPECTED ADVERSE REACTIONS, contact Par Pharmaceutical, Inc., at 1-800-828-5393 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

DRUG INTERACTIONS

- Potent inhibitors of CYP1A2 may increase duloxetine delayed-release capsules concentrations (7.2)
- Duloxetine delayed-release capsules are a moderate inhibitor of CYP2D6 (7.9)

USE IN SPECIFIC POPULATIONS

- Pregnancy: Based on animal data may cause fetal harm (8.1)
- Nursing Mothers: Exercise caution when administered to a nursing woman (8.3)

See 17 for PATIENT COUNSELING INFORMATION AND FDA-approved Medication Guide.

Pediatric use information for patients ages 7 to 17 years is approved for Eli Lilly and Company, Inc.'s CYMBALTA® (duloxetine) delayed-release capsules. However, due to Eli Lilly and Company, Inc.'s marketing exclusivity rights, this product is not labeled with that pediatric information.

3.2 Postmarketing Spontaneous Reports

7.2 Inhibitors of CYP1A2

7.2 Inhibitors of CYP2D6

7.3 Dual Inhibition of CYP1A2 and CYP2D6

7.4 Drugs that Interfere with Hemostasis (e.g., NSAIDs, Aspirin, and Warfarin)

7.5 Lorazepam

7.6 Temazepam

7.7 Drugs that Affect Gastric Acidity

7.8 Drugs Metabolized by CYP1A7

7.9 Drugs Metabolized by CYP2D6

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machinery, or do other dangerous activities until you know how duloxetine delayed-release capsules affect you.

Use of duloxetine delayed-release capsules concomitantly with heavy alcohol intake may be associated with severe liver injury. Avoid heavy alcohol use while taking duloxetine delayed-release capsules.

What are the possible side effects of duloxetine delayed-release capsules?
Duloxetine delayed-release capsules may cause serious side effects, including: See "What is the most important information I should know about duloxetine delayed-release capsules?"

- Common possible side effects in people who take duloxetine delayed-release capsules include:
- liver damage. Symptoms may include:**
 - itching
 - right upper abdominal pain
 - dark urine
 - yellow skin or eyes
 - enlarged liver
 - increased liver enzymes
 - changes in blood pressure and falls.** Monitor your blood pressure before starting and throughout treatment. Duloxetine delayed-release capsules may:
 - increase your blood pressure.
 - decrease your blood pressure when standing and cause dizziness or fainting, mostly when first starting duloxetine delayed-release capsules or when increasing the dose.
 - increase risk of falls, especially in elderly.

- Serotonin Syndrome: This condition can be life-threatening and symptoms may include:**
 - agitation, hallucinations, coma or other changes in mental status
 - coordination problems or muscle twitching (overactive reflexes)
 - racing heartbeat, high or low blood pressure
 - nausea, vomiting, or diarrhea
 - dizziness
 - flushing
 - tremor
 - seizures

- abnormal bleeding:** duloxetine delayed-release capsules and other antidepressant medicines may increase your risk of bleeding or bruising, especially if you take the blood thinner warfarin (Coumadin, Jantoven), a non-steroidal anti-inflammatory drug (NSAIDs, like ibuprofen or naproxen), or aspirin.

- severe skin reactions:** duloxetine delayed-release capsules may cause serious skin reactions that may require stopping its use. This may need to be treated in a hospital and may be life-threatening. Call your healthcare provider right away or get emergency help if you have skin blisters, peeling rash, sores in the mouth, hives or any other allergic reactions.

- discontinuation symptoms:** Do not stop duloxetine delayed-release capsules without first talking to your healthcare provider. Stopping duloxetine delayed-release capsules too quickly or changing from another antidepressant too quickly may result in serious symptoms including:

- anxiety
- feeling tired or problems sleeping
- sweating
- electric shock-like sensations
- diarrhea
- irritability
- headache
- dizziness
- vomiting or nausea

- manic episodes:**
 - greatly increased energy
 - reaching thoughts
 - unusually grand ideas
 - talking more or faster than usual
 - severe trouble sleeping
 - reckless behavior
 - excessive happiness or irritability

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

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.

9. seizures or convulsions

- low salt (sodium) levels in the blood.** Elderly people may be at greater risk for this.

- problems with urination. Symptoms may include:**
 - decreased urine flow
 - unable to pass any urine
 - headache
 - weakness or feeling unsteady
 - confusion, problems concentrating or thinking or memory problems

- problems with urination. Symptoms may include:**
 - decreased urine flow
 - unable to pass any urine

- the most common side effects of duloxetine delayed-release capsules include:**
 - nausea
 - sleepiness
 - constipation
 - increased sweating
 - dizziness
 - dry mouth
 - fatigue
 - loss of appetite
 - dizziness

Common possible side effects in children and adolescents who take duloxetine delayed-release capsules include:

- nausea
- decreased weight
- dizziness

Side effects in adults may also occur in children and adolescents who take duloxetine delayed-release capsules. Children and adolescents should have height and weight monitored during treatment.

Tell your healthcare provider if you have any side effect that bothers you or that does not go away.

These are not all the possible side effects of duloxetine delayed-release capsules. For more information, ask your healthcare provider or pharmacist.

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

How should I store duloxetine delayed-release capsules?
Store duloxetine delayed-release capsules at 20°C to 25°C (68°F to 77°F) [see USP Controlled Room Temperature].

Keep duloxetine delayed-release capsules and all medicines out of the reach of children. General information about the safe and effective use of duloxetine delayed-release capsules.

Medicines are sometimes prescribed for purposes other than those listed in a Medication Guide. Do not use duloxetine delayed-release capsules for a condition for which it was not prescribed. Do not give duloxetine delayed-release capsules to other people, even if they have the same symptoms that you have. It may harm them.

This Medication Guide summarizes the most important information about duloxetine delayed-release capsules. If you would like more information, talk with your healthcare provider. You may ask your healthcare provider or pharmacist for information about duloxetine delayed-release capsules that is written for healthcare professionals.

What are the ingredients in duloxetine delayed-release capsules?
Active ingredient: duloxetine hydrochloride

Inactive ingredients: include black iron oxide, cetyl alcohol, corn starch, colloidal silicon dioxide, FD&C Red No. 40, FD&C Yellow No. 6, gelatin, hypromellose, hypromellose phthalate, microcrystalline cellulose, povidone, shellac, sucrose, talc, titanium dioxide, propylene glycol and triethyl citrate. In addition, the 20 mg and 30 mg capsules contain D&C Yellow No. 10, FD&C Blue No. 1 and FD&C Blue No. 2. The 20 mg capsules also contain red iron oxide.

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

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Rx only

Manufactured by:
Par Pharmaceutical Companies, Inc.
Chestnut Ridge, NY 10977

10715 MG156A-01-1-01

7.4 Drugs that Interfere with Hemostasis (e.g., NSAIDs, Aspirin, and Warfarin)
The efficacy of duloxetine delayed-release capsules in chronic low back pain (CLBP) was assessed in two double-blind, placebo-controlled, randomized clinical trials at 12 weeks during an initial 12-week open-label period. Two hundred and seventy-eight patients who responded to open label treatment (defined as meeting the following criteria at weeks 10 and 12) a HAM-D-17 total score ≤ 5 , Clinical Global Impression of Severity (CGI-S) ≤ 2 , and not meeting the DSM-IV criteria for MDD were randomly assigned to continuation of duloxetine delayed-release capsules at the same dose (N=136) or to placebo (N=142) for 6 months. Patients on duloxetine delayed-release capsules experienced a statistically significantly longer time to relapse of depression than did patients on placebo (Study 5 in Figure 7). Patients on placebo had a higher rate of relapse of depression than did patients on duloxetine delayed-release capsules at 6 months. In addition, patients on placebo had a higher rate of relapse of depression than did patients on duloxetine delayed-release capsules at 12 months. The effect of duloxetine delayed-release capsules on the risk of bleeding, altered anticoagulant effects, including increased bleeding, have been reported when SSRIs or SNRIs are coadministered with warfarin. Concomitant administration of warfarin (2 to 9 mg once daily) under steady-state conditions of duloxetine 60 or 120 mg once daily for up to 14 days in healthy subjects (n=15) did not significantly change INR from baseline (mean INR changes ranged from 0.05 to -0.07). The total warfarin (parent plus free drug pharmacokinetics) (AUC₀₋₂₄ or C_{max}) for both 5- and 5-warfarin were not significantly affected by duloxetine. The effect of duloxetine on platelets, patients receiving warfarin therapy should be carefully monitored when duloxetine is initiated or discontinued [see Warnings and Precautions (5.5)].

7.5 Itraconazole
Under steady-state conditions for duloxetine (60 mg Q 12 hours) and itraconazole (2 mg Q 12 hours), the pharmacokinetic parameters were not affected by coadministration.

7.6 Tizanapam
Under steady-state conditions for duloxetine (20 mg qhs) and tizanapam (30 mg qhs), the pharmacokinetics of duloxetine were not affected by coadministration.

7.7 Drugs that Affect Gastric Acid
Duloxetine delayed-release capsules have an enteric coating that results dissolution until reaching a segment of the gastrointestinal tract where the pH exceeds 5.5. In extremely acidic conditions, duloxetine delayed-release capsules, unprotected by the enteric coating, may undergo hydrolysis to form naphthol. Caco-2 cells, which are used to evaluate the permeability of drugs, have been used to evaluate the permeability of duloxetine. Duloxetine is not a substrate of P-glycoprotein (P-gp) and is not a substrate of the efflux transporter ABCG2. Drugs that raise the gastrointestinal pH may lead to an earlier release of duloxetine.

However, administration of duloxetine delayed-release capsules with aluminum- and magnesium-containing antacids (51 mg) or duloxetine delayed-release capsules with famotidine, had no significant effect on the rate or extent of duloxetine absorption after administration of duloxetine. In a clinical trial, the concomitant administration of proton pump inhibitors affected duloxetine absorption [see Warnings and Precautions (5.14)].

7.8 Duloxetine Metabolized by CYP1A2
In vitro drug interaction studies demonstrate that duloxetine does not induce CYP1A2 activity. Therefore, an increase in the metabolism of CYP1A2 substrates (e.g., theophylline, caffeine) resulting from induction is not anticipated, although clinical studies of induction have not been performed. Duloxetine is an inhibitor of the CYP1A2 enzyme in vitro studies, and in two clinical studies the average C_{max} of duloxetine was 15% higher in theophylline AUC was 7% (15% to 15%) and 20% (13% to 27%) when coadministered with duloxetine (60 mg twice daily).

7.9 Duloxetine Metabolized by CYP2D6
Duloxetine is a moderate inhibitor of CYP2D6. When duloxetine was administered (at a dose of 60 mg twice daily) in conjunction with a single 50 mg dose of desipramine, a CYP2D6 substrate, the AUC of desipramine was increased 3-fold [see Warnings and Precautions (5.12)].

7.10 Duloxetine Metabolized by CYP2C9
Results of in vitro studies demonstrate that duloxetine does not inhibit activity. In a clinical study, the pharmacokinetics of S-warfarin, a CYP2C9 substrate, were not significantly affected by duloxetine [see Drug Interactions (7.4)].

7.11 Duloxetine Metabolized by CYP3A4
Results of in vitro studies demonstrate that duloxetine does not inhibit or induce CYP3A4 activity. Therefore, an increase or decrease in the metabolism of CYP3A4 substrates (e.g., oral contraceptives and other oral agents) resulting from induction or inhibition is not anticipated, although clinical studies have not been performed.

7.12 Duloxetine Metabolized by CYP2C19
Results of in vitro studies demonstrate that duloxetine does not inhibit CYP2C19 activity at therapeutic concentrations. Inhibition of the metabolism of CYP2C19 substrates is therefore not anticipated, although clinical studies of inhibition have not been performed.

7.13 Monoamine Oxidase Inhibitors (MAOIs)
See Dosage and Administration (2.2.3), CONTRAINDICATIONS (4), and Warnings and Precautions (5.4).

7.14 Serotonergic Drugs
See Dosage and Administration (2.2.3), CONTRAINDICATIONS (4), and Warnings and Precautions (5.4).

7.15 Alcohol
When duloxetine delayed-release capsules and ethanol were administered several hours apart so that peak plasma concentrations of each would coincide, duloxetine delayed-release capsules did not increase the impairment of mental and motor skills caused by alcohol.

In the duloxetine delayed-release capsules clinical trials database, three duloxetine delayed-release capsule-treated patients had liver injury as manifested by ALT and total bilirubin levels with evidence of obstruction. Substantial intercurrent ethanol use was present in each of these cases, and this may have contributed to the abnormalities seen [see Warnings and Precautions (5.2, 5.12)].

7.16 CNS Drugs
See Warnings and Precautions (5.12).

7.17 Drugs Highly Bound to Plasma Protein
Because duloxetine is highly bound to plasma protein, administration of duloxetine delayed-release capsules to a patient taking another drug that is highly protein bound may cause increased plasma levels of the other drug, potentially resulting in adverse reactions. However, coadministration of duloxetine (60 or 120 mg with warfarin (2 to 9 mg), a highly protein-bound drug, did not result in significant changes in INR and in the pharmacokinetics of either total or free warfarin (protein bound plus free drug) [see Drug Interactions (7.4)].

8. USE IN SPECIFIC POPULATIONS

8.1 Pregnancy
Pregnancy Category C

Risk Summary—There are no adequate and well-controlled studies of duloxetine delayed-release capsules administration in pregnant women. In animal studies with duloxetine, fetal deaths were observed when there was no evidence of teratogenicity in pregnant rats and rabbits at oral doses administered during the period of organogenesis up to 4 and 7 times the maximum recommended human dose (MRHD) of 120 mg/day, respectively. When duloxetine was administered orally to pregnant rats throughout gestation and lactation, pup weights at birth and pup survival to 1 day postpartum were decreased at a dose 2 times the MRHD. At oral doses up to 7 times the maximum recommended human dose, there was no evidence of increased resorptions, such as increased resorptions to resorptions and decreased implantation of implantations were observed. Post-weaning growth was not adversely affected. Duloxetine delayed-release capsules should be used in pregnancy only if the potential benefit justifies the potential risk to the fetus.

8.2 Lactation
Duloxetine delayed-release capsules should be used in lactating women only if the potential benefit justifies the potential risk to the infant.

8.3 Nursing Mothers
Risk Summary
Duloxetine delayed-release capsules are present in human milk. In a published study, lactating women who were wearing their infants were given duloxetine delayed-release capsules. At steady-state, the concentration of duloxetine delayed-release capsules in breast milk was approximately 25% that of maternal plasma. The estimated daily infant dose was approximately 0.14% of the maternal dose. The developmental and health benefits of human milk feeding should be considered along with the mother's clinical need for duloxetine delayed-release capsules and any potential adverse effects on the infant. The use of duloxetine delayed-release capsules during lactation should be considered only if the potential benefits of treatment are judged to outweigh the potential risks to the infant.

8.4 Pediatric Use
The safety and effectiveness of duloxetine delayed-release capsules have not been established in pediatric patients less than 18 years of age with MDD.

Decreased appetite and weight loss have been observed in association with the use of SSRIs and SNRIs. Perform regular monitoring of weight and growth in children and adolescents treated with an SSRI or a duloxetine delayed-release capsules [see Adverse Reactions (8.11)].

Information describing two additional clinical studies in which efficacy was not demonstrated in patients ages 7 to 17 years is approved for ELLI and Company, Inc. and Cymbalta® (duloxetine delayed-release capsules). However, due to ELLI and Company, Inc.'s marketing exclusivity rights, this drug product is not labeled with that pediatric information.

11.1 Carcinogenesis, Mutagenesis, Impairment of Fertility
Carcinogenesis—Duloxetine was administered in the diet to mice and rats for 2 years.

In female mice receiving duloxetine at 140 mg/kg/day (6 times the maximum recommended human dose, based on body weight) for 2 years, there was an increased incidence of hepatocellular adenomas. The incidence of these tumors was 50% (2 times the MRHD). Tumor incidence was not increased in male mice receiving duloxetine at doses up to 140 mg/kg/day (6 times the MRHD).

In rats, dietary doses of duloxetine up to 27 mg/kg/day in females (2 times the MRHD) and up to 36 mg/kg/day in males (3 times the MRHD) did not increase the incidence of tumors.

11.2 Mutagenesis
Duloxetine was not mutagenic in the in vitro bacterial reverse mutation assay (Ames test) and was not clastogenic in an in vivo chromosomal aberration test in mouse bone marrow cells. Additionally, duloxetine was not clastogenic in an in vitro chromosomal aberration test in human lymphocytes or in an in vitro unscheduled DNA synthesis (UDS) assay in primary rat hepatocytes, and did not induce sister chromatid exchange in Chinese hamster bone marrow in vivo.

11.3 Impairment of Fertility
Duloxetine administered orally to either male or female rats prior to and throughout mating at doses up to 145 mg/kg/day (6 times the MRHD) did not alter mating or fertility.

11.4 CLINICAL STUDIES
The efficacy of duloxetine delayed-release capsules has been established in the following adequate and well-controlled trials:

- Major Depressive Disorder (MDD): 4 short-term and 1 maintenance trial in adults [see Clinical Studies (14.1)].
- Generalized Anxiety Disorder (GAD): 3 short-term trials in adults [see Clinical Studies (14.1)].
- Chronic Musculoskeletal Pain: Two 12- to 13-week trials in adult patients with chronic low back pain (CLBP) and one 13-week trial in adult patients with chronic low back pain to osteoarthritis [see Clinical Studies (14.3)].

Pediatric use information for patients ages 7 to 17 years is approved for ELLI and Company, Inc.'s Cymbalta® (duloxetine delayed-release capsules). However, due to ELLI and Company, Inc.'s marketing exclusivity rights, this drug product is not labeled with that pediatric information.

14.1 Major Depressive Disorder
The efficacy of duloxetine delayed-release capsules as a treatment for depression was established in a randomized, double-blind, placebo-controlled, fixed-dose study in patients (18 to 83 years) meeting DSM-IV criteria for major depression. In 2 studies, patients were randomized to duloxetine delayed-release capsules 60 mg once daily (N=123 and N=120, respectively) or placebo (N=122 and N=119, respectively) for 8 weeks. In the third study, patients were randomized to duloxetine delayed-release capsules 20 or 40 mg twice daily (N=86 and N=81, respectively) or placebo (N=89) for 8 weeks. In the fourth study, patients were randomized to duloxetine delayed-release capsules 60 or 120 mg twice daily (N=85 and N=81, respectively) or placebo (N=83) for 8 weeks. There is no evidence that doses greater than 60 mg/day confer additional benefits.

In all 4 studies, duloxetine delayed-release capsules demonstrated superiority over placebo as measured by improvement in the 17-item Hamilton Depression Rating Scale (HAM-D-17) total score [see Table 7.4 in Table 7.4].

All of these studies, studies, analyses of the relation between treatment outcome and age, sex, and race did not suggest any differential responsiveness on the basis of these major characteristics.

Table 7. Summary of the Primary Efficacy Results for Studies in Major Depressive Disorder

Study Number	Treatment Group	Mean Baseline Score (SD)	LS Mean Change from Baseline (95% CI)	Placebo-Subgroup Difference* (95% CI)
Study 1	Duloxetine Delayed-Release Capsules (60 mg/day)*	21.5 (4.0)	-10.9 (0.70)	-4.9 (-6.8, -2.9)
	Placebo	21.1 (3.71)	-6.1 (0.69)	
Study 2	Duloxetine Delayed-Release Capsules (60 mg/day)*	20.3 (3.2)	-10.5 (0.71)	-2.2 (-4.0, -0.3)
	Placebo	20.5 (4.2)	-8.3 (0.67)	
Study 3	Duloxetine Delayed-Release Capsules (20 mg BID)*	18.6 (5.8)	-7.4 (0.80)	-2.4 (-4.7, -0.2)
	Duloxetine Delayed-Release Capsules (40 mg BID)*	18.1 (4.52)	-8.6 (0.81)	-3.6 (-5.9, -1.4)
Study 4	Duloxetine Delayed-Release Capsules (40 mg BID)*	17.2 (5.1)	-10.0 (0.81)	
	Placebo	19.9 (5.34)	-2.2 (-3.6, -0.9)	
Study 5	Duloxetine Delayed-Release Capsules (40 mg BID)*	20.2 (4.1)	-12.1 (0.49)	-3.3 (-4.7, -1.9)
	Placebo	19.9 (5.58)	-8.8 (0.55)	

SD: standard deviation; SE: standard error; LS: Least-squares mean; CI: confidence interval, not adjusted for multiplicity in trials where multiple groups were included.

*Difference (drug minus placebo) in least-squares mean change from baseline.

†Doses statistically significantly superior to placebo.

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4-Hydroxy duloxetine and 5-Hydroxy-6-methoxy duloxetine sulfate, largely excreted in urine, were the major metabolites of duloxetine. Two hundred and seventy-eight patients who responded to open label treatment (defined as meeting the following criteria at weeks 10 and 12) a HAM-D-17 total score ≤ 5 , Clinical Global Impression of Severity (CGI-S) ≤ 2 , and not meeting the DSM-IV criteria for MDD were randomly assigned to continuation of duloxetine delayed-release capsules at the same dose (N=136) or to placebo (N=142) for 6 months. Patients on duloxetine delayed-release capsules experienced a statistically significantly longer time to relapse of depression than did patients on placebo (Study 5 in Figure 7). Patients on placebo had a higher rate of relapse of depression than did patients on duloxetine delayed-release capsules at 6 months. In addition, patients on placebo had a higher rate of relapse of depression than did patients on duloxetine delayed-release capsules at 12 months. The effect of duloxetine delayed-release capsules on the risk of bleeding, altered anticoagulant effects, including increased bleeding, have been reported when SSRIs or SNRIs are coadministered with warfarin. Concomitant administration of warfarin (2 to 9 mg once daily) under steady-state conditions of duloxetine 60 or 120 mg once daily for up to 14 days in healthy subjects (n=15) did not significantly change INR from baseline (mean INR changes ranged from 0.05 to -0.07). The total warfarin (parent plus free drug pharmacokinetics) (AUC₀₋₂₄ or C_{max}) for both 5- and 5-warfarin were not significantly affected by duloxetine. The effect of duloxetine on platelets, patients receiving warfarin therapy should be carefully monitored when duloxetine is initiated or discontinued [see Warnings and Precautions (5.5)].

9 DRUG ABSORPTION AND DEPENDENCE

2.2 Abuse
In animal studies, duloxetine did not demonstrate barbiturate-like (depressant) abuse potential. While duloxetine delayed-release capsules have not been systematically studied in humans for its potential for abuse, there was no indication of drug-seeking behavior. However, it is not possible to predict the effects of premarketing experience the extent to which a CNS active drug will be misused, diverted, and/or abused. Therefore, duloxetine delayed-release capsules should be evaluated for signs of drug abuse and follow such patients closely, observing them for signs of misuse or abuse of duloxetine delayed-release capsules (e.g., development of tolerance, incrementation of dose, drug-seeking behavior).

3.1 Dependence
In drug dependence studies, duloxetine did not demonstrate dependence-producing potential in rats.

10 OVERDOSEAGE

10.1 Signs and Symptoms
In postmarketing experience, total outcomes have been reported for acute overdoses, primarily with mixed overdoses, but also with duloxetine only, at doses as low as 1,000 mg. Signs and symptoms of overdose (duloxetine alone or with mixed drugs) included somnolence, coma, serotonergic syndrome, seizures, tachycardia, hypotension, and vomiting.

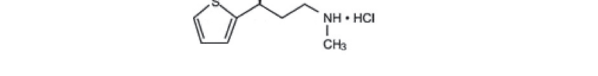
10.2 Management of Overdose
Duloxetine delayed-release capsules, like all serotonergic agents, should be managed with caution. Supportive treatment (such as with cyproheptadine and/or temperature control) may be considered. In case of acute overdose, treatment should consist of those general measures employed in the management of overdose with any drug.

An adequate airway, oxygenation and ventilation should be assured, and cardiac rhythm and vital signs should be monitored. Induction of emesis is not recommended. Gastric lavage with a large-bore orogastric tube with appropriate airway protection, if needed, may be indicated if performed soon after ingestion or if multiple overdoses are ingested.

Activated charcoal may be useful in limiting absorption of duloxetine from the gastrointestinal tract. Administration of activated charcoal has been shown to decrease AUC and C_{max} by an average of one-third. However, in clinical studies the average C_{max} of duloxetine was 15% higher in theophylline AUC was 7% (15% to 15%) and 20% (13% to 27%) when coadministered with duloxetine (60 mg twice daily).

In managing overdose, the possibility of multiple drug involvement should be considered. A specific antidote involves patients who are taking or have recently taken duloxetine delayed-release capsules and might ingest activated charcoal. In a clinical study, the average C_{max} of duloxetine was 15% higher in theophylline AUC was 7% (15% to 15%) and 20% (13% to 27%) when coadministered with duloxetine (60 mg twice daily).

11 DESCRIPTION
Duloxetine Delayed-Release Capsules, USP are a selective serotonin and norepinephrine reuptake inhibitor (SNRI) for oral administration. Its chemical designation is (1S)-N-methyl-1-(3-methylphenyl)-2-methylpropylamine hydrochloride. The empirical formula is C₁₄H₁₉NO₂·HCl, which corresponds to a molecular weight of 333.8. The structural formula is:



Duloxetine hydrochloride is a white to slightly brownish solid, which is slightly soluble in water. Each capsule contains an enteric-coated tablet of 22.4, 33.7, or 67.3 mg of duloxetine hydrochloride equivalent to 20, 30, or 60 mg of duloxetine, respectively. These enteric-coated tablets are designed to prevent degradation of the drug in the acidic environment of the stomach. Inactive ingredients include black iron oxide, cetyl alcohol, corn starch, colloidal silicon dioxide, FD&C Yellow No. 6, gelatin, hypromellose, hypromellose phthalate, microcrystalline cellulose, povidone, shellac, sucrose, talc, titanium dioxide, propylene glycol and triethyl citrate. In addition, the 20 mg and 30 mg capsules contain D&C Yellow No. 10, FD&C Blue No. 1 and FD&C Blue No. 2. The 20 mg capsules also contain red iron oxide.

USP Dissolution Test is Pending.

12 CLINICAL PHARMACOLOGY

12.1 Mechanism of Action
Although the exact mechanisms of the antidepressant, central pain inhibitory and anxiolytic actions of duloxetine in humans are unknown, these actions are believed to be related to its potentiation of serotonergic and norepinephrine activity in the CNS.

12.2 Pharmacokinetics
Preclinical studies have shown that duloxetine is a potent inhibitor of neuronal serotonin and norepinephrine reuptake inhibitors (SNRIs) or selective serotonin reuptake inhibitors (SSRIs) have developed compounds that inhibit the reuptake of serotonin and norepinephrine. Duloxetine delayed-release capsules are in a class of drugs known to affect neuronal resistance. If symptoms of organogenesis up to 4 and 7 times the maximum recommended human dose (MRHD) of 120 mg/day, respectively. When duloxetine was administered orally to pregnant rats throughout gestation and lactation, pup weights at birth and pup survival to 1 day postpartum were decreased at a dose 2 times the MRHD. At oral doses up to 7 times the maximum recommended human dose, there was no evidence of increased resorptions, such as increased resorptions to resorptions and decreased implantation of implantations were observed. Post-weaning growth was not adversely affected. Duloxetine delayed-release capsules should be used in pregnancy only if the potential benefit justifies the potential risk to the fetus.

12.3 Pharmacokinetics
Duloxetine has an elimination half-life of about 12 hours (range 8 to 17 hours) and its pharmacokinetics are dose-dependent. In a clinical study, the average C_{max} of duloxetine was 15% higher in theophylline AUC was 7% (15% to 15%) and 20% (13% to 27%) when coadministered with duloxetine (60 mg twice daily).

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