

PEXEVA®
Brand of
(paroxetine mesylate) tablets

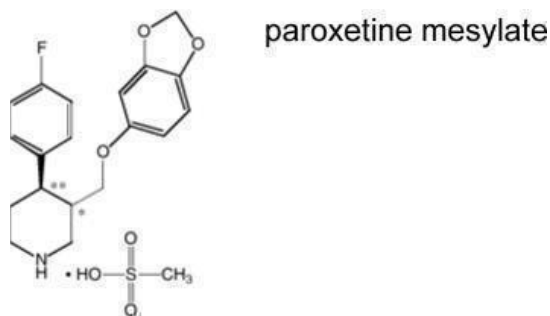
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Suicidality and Antidepressant Drugs

Antidepressants increased the risk compared to placebo of suicidal thinking and behavior (suicidality) in children, adolescents, and young adults in short-term studies of major depressive disorder (MDD) and other psychiatric disorders. Anyone considering the use of PEXEVA® (paroxetine mesylate) or any other antidepressant in a child, adolescent, or young adult must balance this risk with the clinical need. Short-term studies did not show an increase in the risk of suicidality with antidepressants compared to placebo in adults beyond age 24; there was a reduction in risk with antidepressants compared to placebo in adults aged 65 and older. Depression and certain other psychiatric disorders are themselves associated with increases in the risk of suicide. Patients of all ages who are started on antidepressant therapy should be monitored appropriately and observed closely for clinical worsening, suicidality, or unusual changes in behavior. Families and caregivers should be advised of the need for close observation and communication with the prescriber. PEXEVA® (paroxetine mesylate) is not approved for use in pediatric patients. (See [Warnings: Clinical Worsening and Suicide Risk](#), [Precautions: Information for Patients](#), and [Precautions: Pediatric Use](#).)

DESCRIPTION

PEXEVA® (paroxetine mesylate) is an orally administered psychotropic drug with a chemical structure related to paroxetine hydrochloride (Paxil®). It is the mesylate salt of a phenylpiperidine compound identified chemically as (-)-*trans*-4R-(4'-fluorophenyl)-3S-[(3',4'-methylenedioxyphenoxy) methyl] piperidine mesylate and has the empirical formula of $C_{19}H_{20}FNO_3 \cdot CH_3SO_3H$. The molecular weight is 425.5 (329.4 as free base). The structural formula is:



Paroxetine mesylate is an odorless, off-white powder, having a melting point range of 147° to 150°C and a solubility of more than 1 g/ml in water.

Tablets

Each oval, film-coated tablet contains paroxetine mesylate equivalent to paroxetine as follows: 10 mg (white); 20 mg (scored, dark orange); 30 mg (yellow); 40 mg (rose). Inactive ingredients consist of dibasic calcium phosphate, hydroxypropyl methylcellulose, hydroxypropylcellulose, magnesium stearate, sodium starch glycolate, titanium dioxide, ferric oxide red (C.I. 77491) (20 mg and 40 mg only) and ferric oxide yellow (C.I. 77492) (20 mg, 30 mg, and 40 mg only).

CLINICAL PHARMACOLOGY

Pharmacodynamics

The efficacy of paroxetine in the treatment of MDD, OCD, panic disorder (PD), and generalized anxiety disorder (GAD) is presumed to be linked to potentiation of serotonergic activity in the central nervous system resulting from inhibition of neuronal reuptake of serotonin (5-hydroxytryptamine, 5-HT). Studies at clinically relevant doses in humans have demonstrated that paroxetine blocks the uptake of serotonin into human platelets. *In vitro* studies in animals also suggest that paroxetine is a potent and highly selective inhibitor of neuronal serotonin reuptake and has only very weak effects on norepinephrine and dopamine neuronal reuptake. *In vitro* radioligand binding studies indicate that paroxetine has little affinity for muscarinic alpha1-, alpha2-, beta-adrenergic-, dopamine (D2)-, 5-HT1-, 5-HT2-, and histamine (H1)-receptors; antagonism of muscarinic, histaminergic, and alpha1-adrenergic receptors has been associated with various anticholinergic, sedative, and cardiovascular effects for other psychotropic drugs.

Because the relative potencies of paroxetine's major metabolites are at most 1/50 of the parent compound, they are essentially inactive.

Pharmacokinetics

Paroxetine mesylate is completely absorbed after oral dosing of the mesylate salt. In a study in which normal male subjects (n=25) received paroxetine 30 mg tablets daily for 24 days, steady-state paroxetine concentrations were achieved by approximately 13 days for most subjects, although it may take substantially longer in an occasional patient. At steady state, mean values of C_{max} , T_{max} , C_{min} , and $T_{1/2}$ were 81.3 ng/ml (CV 41%), 8.1 hr. (CV 56%), 43.2 ng/ml (CV 52%), and 33.2 hr. (CV 52%), respectively. The steady-state C_{max} and C_{min} values were about 7 and 10 times what would be predicted from single dose studies. Steady-state drug exposure based on AUC_{0-24} was about 10 times greater than would have been predicted from single-dose data in these subjects. The excess accumulation is a consequence of the fact that one of the enzymes that metabolizes paroxetine is readily saturable.

In steady-state dose proportionality studies involving elderly and nonelderly patients, at doses of 20 to 40 mg daily for the elderly and 20 to 50 mg daily for the nonelderly, some nonlinearity was observed in both populations, again reflecting a saturable metabolic pathway. In comparison to C_{min} values after 20 mg daily, values after 40 mg were only about 2 to 3 times greater than doubled.

The effects of food on the bioavailability of paroxetine were studied in subjects administered a single dose with and without food. AUC was only slightly increased (6%) when drug was

administered with food but the C_{\max} was 29% greater, while the time to reach peak plasma concentration decreased from 6.4 hours post-dosing to 4.9 hours.

Paroxetine is extensively metabolized after oral administration. The principal metabolites are polar and conjugated products of oxidation and methylation, which are readily cleared. Conjugates with glucuronic acid and sulfate predominate, and major metabolites have been isolated and identified. Data indicate that the metabolites have no more than 1/50 the potency of the parent compound at inhibiting serotonin uptake. The metabolism of paroxetine is accomplished in part by cytochrome CYP2D6. Saturation of this enzyme at clinical doses appears to account for the nonlinearity of paroxetine kinetics with increasing dose and increasing duration of treatment. The role of this enzyme in paroxetine metabolism also suggests potential drug-drug interactions (see [PRECAUTIONS](#)).

Approximately 64% of a 30 mg oral solution dose of paroxetine was excreted in the urine with 2% as the parent compound and 62% as metabolites over a 10-day post-dosing period. About 36% was excreted in the feces (probably via the bile), mostly as metabolites and less than 1% as the parent compound over the 10-day post-dosing period.

In a meta analysis of paroxetine from 4 studies done in healthy volunteers following multiple dosing of 20 mg/day to 40 mg/day, males did not exhibit a significantly lower C_{\max} or AUC than females.

Distribution: Paroxetine distributes throughout the body, including the CNS, with only 1% remaining in the plasma.

Protein Binding: Approximately 95% and 93% of paroxetine is bound to plasma protein at 100 ng/ml and 400 ng/ml, respectively. Under clinical conditions, paroxetine concentrations would normally be less than 400 ng/ml. Paroxetine does not alter the *in vitro* protein binding of phenytoin or warfarin.

Renal and Liver Disease: Increased plasma concentrations of paroxetine occur in subjects with renal and hepatic impairment. The mean plasma concentrations in patients with creatinine clearance below 30 ml/min was approximately 4 times greater than seen in normal volunteers. Patients with creatinine clearance of 30 to 60 ml/min and patients with hepatic functional impairment had about a 2-fold increase in plasma concentrations (AUC, C_{\max}).

The initial dosage should therefore be reduced in patients with severe renal or hepatic impairment, and upward titration, if necessary, should be at increased intervals (see [DOSAGE AND ADMINISTRATION](#)).

Elderly Patients: In a multiple-dose study in the elderly at daily paroxetine doses of 20, 30, and 40 mg, C_{\min} concentrations were about 70% to 80% greater than the respective C_{\min} concentrations in nonelderly subjects. Therefore the initial dosage in the elderly should be reduced (see [DOSAGE AND ADMINISTRATION](#)).

Drug-Drug Interactions: *In vitro* drug interaction studies reveal that paroxetine inhibits CYP2D6. Clinical drug interaction studies have been performed with substrates of CYP2D6 and show that paroxetine can inhibit the metabolism of drugs metabolized by CYP2D6 including desipramine, risperidone, and atomoxetine (see [PRECAUTIONS—Drug Interactions](#)).

Clinical Trials

Major Depressive Disorder

The efficacy of paroxetine as a treatment for MDD has been established in 6 placebo-controlled studies of patients with MDD (ages 18 to 73). In these studies paroxetine was shown to be significantly more effective than placebo in treating MDD by at least 2 of the following measures: Hamilton Depression Rating Scale (HDRS), the Hamilton depressed mood item, and the Clinical Global Impression (CGI)-Severity of Illness. Paroxetine was significantly better than placebo in improvement of the HDRS sub-factor scores, including the depressed mood item, sleep disturbance factor, and anxiety factor.

A study of outpatients with MDD who had responded to paroxetine (HDRS total score <8) during an initial 8-week open treatment phase and were then randomized to continuation on paroxetine or placebo for 1 year demonstrated a significantly lower relapse rate for patients taking paroxetine (15%) compared to those on placebo (39%). Effectiveness was similar for male and female patients.

Obsessive Compulsive Disorder

The effectiveness of paroxetine in the treatment OCD was demonstrated in two 12-week multicenter placebo-controlled studies of adult outpatients (Studies 1 and 2). Patients in all studies had moderate to severe OCD (DSM-III-R) with mean baseline ratings on the Yale Brown Obsessive Compulsive Scale (YBOCS) total score ranging from 23 to 26. Study 1, a dose-range finding study where patients were treated with fixed doses of 20, 40, or 60 mg of paroxetine/day demonstrated that daily doses of paroxetine 40 and 60 mg are effective in the treatment of OCD. Patients receiving doses of 40 and 60 mg paroxetine experienced a mean reduction of approximately 6 and 7 points, respectively, on the YBOCS total score which was significantly greater than the approximate 4-point reduction at 20 mg and a 3-point reduction in the placebo-treated patients. Study 2 was a flexible dose study comparing paroxetine (20 to 60 mg daily) with clomipramine (25 to 250 mg daily). In this study, patients receiving paroxetine experienced a mean reduction of approximately 7 points on the YBOCS total score, which was significantly greater than the mean reduction of approximately 4 points in the placebo-treated patients.

The following table provides the outcome classification by treatment group on Global Improvement items of the Clinical Global Impressions (CGI) scale for Study 1.

Outcome Classification (%) on CGI-Global Improvement Item for Completers in Study 1

Outcome Classification	Placebo (N=74)	Paroxetine 20 mg (N=75)	Paroxetine 40 mg (N=66)	Paroxetine 60 mg (N=66)
Worse	14%	7%	7%	3%
No Change	44%	35%	22%	19%
Minimally Improved	24%	33%	29%	34%
Much Improved	11%	18%	22%	24%
Very Much Improved	7%	7%	20%	20%

Subgroup analyses did not indicate that there were any differences in treatment outcomes as a function of age or gender.

The long-term maintenance effects of paroxetine in OCD were demonstrated in a long-term extension to Study 1. Patients who were responders on paroxetine during the 3-month double-blind phase and a 6-month extension on open-label paroxetine (20 to 60 mg/day) were randomized to either paroxetine or placebo in a 6-month double-blind relapse prevention phase. Patients randomized to paroxetine were significantly less likely to relapse than comparably treated patients who were randomized to placebo.

Panic Disorder

The effectiveness of paroxetine in the treatment of PD was demonstrated in three 10- to 12-week multicenter, placebo-controlled studies of adult outpatients (Studies 1-3). Patients in all studies had PD (DSM-III-R), with or without agoraphobia. In these studies, paroxetine was shown to be significantly more effective than placebo in treating PD by at least 2 out of 3 measures of panic attack frequency and on the Clinical Global Impression Severity of Illness score.

Study 1 was a 10-week dose-range finding study: patients were treated with fixed paroxetine doses of 10, 20, or 40 mg/day or placebo. A significant difference from placebo was observed only for the 40 mg/day group. At endpoint, 76% of patients receiving paroxetine 40 mg/day were free of panic attacks, compared to 44% of placebo-treated patients.

Study 2 was a 12-week flexible-dose study comparing paroxetine (10 to 60 mg daily) and placebo. At endpoint, 51% of paroxetine patients were free of panic attacks compared to 32% of placebo-treated patients.

Study 3 was a 12-week flexible-dose study comparing paroxetine (10 to 60 mg daily) to placebo in patients concurrently receiving standardized cognitive behavioral therapy. At endpoint, 33% of the paroxetine-treated patients showed a reduction to 0 or 1 panic attacks compared to 14% of placebo patients.

In both Studies 2 and 3, the mean paroxetine dose for completers at endpoint was approximately 40 mg/day of paroxetine.

Long-term maintenance effects of paroxetine in PD were demonstrated in an extension to Study 1. Patients who were responders during the 10-week double-blind phase and during a 3-month double-blind extension phase were randomized to either paroxetine (10, 20, or 40 mg/day) or placebo in a 3-month double-blind relapse prevention phase. Patients randomized to paroxetine were significantly less likely to relapse than comparably treated patients who were randomized to placebo.

Subgroup analyses did not indicate that there were any differences in treatment outcomes as a function of age or gender.

Generalized Anxiety Disorder

The effectiveness of paroxetine in the treatment of Generalized Anxiety Disorder (GAD) was demonstrated in two 8-week, multicenter, placebo-controlled studies (Studies 1 and 2) of adult outpatients with GAD (DSM-IV).

Study 1 was an 8-week study comparing fixed paroxetine doses of 20 mg or 40 mg/day with placebo. Doses of 20 mg or 40 mg of paroxetine were both demonstrated to be significantly superior to placebo on the Hamilton Rating Scale for Anxiety (HAM-A) total score. There was

not sufficient evidence in this study to suggest a greater benefit for the 40 mg/day dose compared to the 20 mg/day dose.

Study 2 was a flexible-dose study comparing paroxetine (20 mg to 50 mg daily) and placebo. Paroxetine demonstrated statistically significant superiority over placebo on the Hamilton Rating Scale for Anxiety (HAM-A) total score. A third study, also flexible-dose comparing paroxetine (20 mg to 50 mg daily), did not demonstrate statistically significant superiority of paroxetine over placebo on the Hamilton Rating Scale for Anxiety (HAM-A) total score, the primary outcome.

Subgroup analyses did not indicate differences in treatment outcomes as a function of race or gender. There were insufficient elderly patients to conduct subgroup analyses on the basis of age.

In a longer-term trial, 566 patients meeting DSM-IV criteria for GAD, who had responded during a single-blind, 8-week acute treatment phase with 20 to 50 mg/day of paroxetine, were randomized to continuation of paroxetine at their same dose, or to placebo, for up to 24 weeks of observation for relapse. Response during the single-blind phase was defined by having a decrease of ≥ 2 points compared to baseline on the CGI-Severity of Illness scale, to a score of ≤ 3 . Relapse during the double-blind phase was defined as an increase of ≥ 2 points compared to baseline on the CGI-Severity of Illness scale to a score of ≥ 4 , or withdrawal due to lack of efficacy. Patients receiving continued paroxetine experienced a significantly lower relapse rate over the subsequent 24 weeks compared to those receiving placebo.

INDICATIONS AND USAGE

Major Depressive Disorder

PEXEVA® (paroxetine mesylate) is indicated for the treatment of MDD.

The efficacy of paroxetine in the treatment of a major depressive episode was established in 6-week controlled trials of outpatients whose diagnoses corresponded most closely to the DSM-III category of MDD (see [CLINICAL PHARMACOLOGY](#)). A major depressive episode implies a prominent and relatively persistent depressed or dysphoric mood that usually interferes with daily functioning (nearly every day for at least 2 weeks); it should include at least 4 of the following 8 symptoms: change in appetite, change in sleep, psychomotor agitation or retardation, loss of interest in usual activities or decrease in sexual drive, increased fatigue, feelings of guilt or worthlessness, slowed thinking or impaired concentration, and a suicide attempt or suicidal ideation.

The effects of paroxetine in hospitalized depressed patients have not been adequately studied.

The efficacy of paroxetine in maintaining a response in MDD for up to 1 year was demonstrated in a placebo-controlled trial (see [CLINICAL PHARMACOLOGY](#)). Nevertheless, the physician who elects to use PEXEVA® (paroxetine mesylate) for extended periods should periodically reevaluate the long-term usefulness of the drug for the individual patient.

Obsessive Compulsive Disorder

PEXEVA® (paroxetine mesylate) is indicated for the treatment of obsessions and compulsions in patients with OCD as defined in the DSM-IV. The obsessions or compulsions cause marked distress, are time-consuming, or significantly interfere with social or occupational functioning.

The efficacy of paroxetine was established in two 12-week trials with obsessive compulsive outpatients whose diagnoses corresponded most closely to the DSM-III-R category of OCD (see [CLINICAL PHARMACOLOGY—Clinical Trials](#)).

OCD is characterized by recurrent and persistent ideas, thoughts, impulses, or images (obsessions) that are egodystonic and/or repetitive, purposeful, and intentional behaviors (compulsions) that are recognized by the person as excessive or unreasonable.

Long-term maintenance of efficacy was demonstrated in a 6-month relapse prevention trial. In this trial, patients assigned to paroxetine showed a lower relapse rate compared to patients on placebo (see [CLINICAL PHARMACOLOGY—Clinical Trials](#)). Nevertheless, the physician who elects to use PEXEVA® (paroxetine mesylate) for extended periods should periodically reevaluate the long-term usefulness of the drug for the individual patient (see [DOSAGE AND ADMINISTRATION](#)).

Panic Disorder

PEXEVA® (paroxetine mesylate) is indicated for the treatment of PD, with or without agoraphobia, as defined in DSM-IV. PD is characterized by the occurrence of unexpected panic attacks and associated concern about having additional attacks, worry about the implications or consequences of the attacks, and/or a significant change in behavior related to the attacks.

The efficacy of paroxetine was established in three 10- to 12-week trials in PD patients whose diagnoses corresponded to the DSM-III-R category of PD (see [CLINICAL PHARMACOLOGY—Clinical Trials](#)).

PD (DSM-IV) is characterized by recurrent unexpected panic attacks, ie, a discrete period of intense fear or discomfort in which 4 (or more) of the following symptoms develop abruptly and reach a peak within 10 minutes: (1) palpitations, pounding heart, or accelerated heart rate; (2) sweating; (3) trembling or shaking; (4) sensations of shortness of breath or smothering; (5) feeling of choking; (6) chest pain or discomfort; (7) nausea or abdominal distress; (8) feeling dizzy, unsteady, lightheaded, or faint; (9) derealization (feelings of unreality) or depersonalization (being detached from oneself); (10) fear of losing control; (11) fear of dying; (12) paresthesias (numbness or tingling sensations); (13) chills or hot flushes.

Long-term maintenance of efficacy was demonstrated in a 3-month relapse prevention trial. In this trial, patients with PD assigned to paroxetine demonstrated a lower relapse rate compared to patients on placebo (see [CLINICAL PHARMACOLOGY—Clinical Trials](#)). Nevertheless, the physician who prescribes PEXEVA® (paroxetine mesylate) for extended periods should periodically reevaluate the long-term usefulness of the drug for the individual patient.

Generalized Anxiety Disorder

Paroxetine is indicated for the treatment of Generalized Anxiety Disorder (GAD), as defined in DSM-IV. Anxiety or tension associated with the stress of everyday life usually does not require treatment with an anxiolytic.

The efficacy of paroxetine in the treatment of GAD was established in two 8-week placebo-controlled trials in adults with GAD. Paroxetine has not been studied in children or adolescents with Generalized Anxiety Disorder (see [CLINICAL PHARMACOLOGY—Clinical Trials](#)).

Generalized Anxiety Disorder (DSM-IV) is characterized by excessive anxiety and worry (apprehensive expectation) that is persistent for at least 6 months and which the person finds difficult to control. It must be associated with at least 3 of the following 6 symptoms: restlessness or feeling keyed up or on edge, being easily fatigued, difficulty concentrating or mind going blank, irritability, muscle tension, sleep disturbance.

The efficacy of paroxetine in maintaining a response in patients with Generalized Anxiety Disorder, who responded during an 8-week acute treatment phase while taking paroxetine and were then observed for relapse during a period of up to 24 weeks, was demonstrated in a placebo-controlled trial (see [CLINICAL PHARMACOLOGY—Clinical Trials](#)). Nevertheless, the physician who elects to use paroxetine for extended periods should periodically reevaluate the long-term usefulness of the drug for the individual patient (see [DOSAGE AND ADMINISTRATION](#)).

CONTRAINDICATIONS

The use of MAOIs intended to treat psychiatric disorders with PEXEVA® or within 14 days of stopping treatment with PEXEVA® is contraindicated because of an increased risk of serotonin syndrome. The use of PEXEVA® within 14 days of stopping an MAOI intended to treat psychiatric disorders is also contraindicated (see [WARNINGS](#) and [DOSAGE AND ADMINISTRATION](#)).

Starting PEXEVA® in a patient who is being treated with MAOIs such as linezolid or intravenous methylene blue is also contraindicated because of an increased risk of serotonin syndrome (see [WARNINGS](#) and [DOSAGE AND ADMINISTRATION](#)).

Concomitant use in patients taking thioridazine is contraindicated (see [WARNINGS](#) and [PRECAUTIONS](#)).

Concomitant use in patients taking pimozide is contraindicated (see [PRECAUTIONS](#)).

PEXEVA® (paroxetine mesylate) tablets are contraindicated in patients with a hypersensitivity to paroxetine or any of the inactive ingredients in PEXEVA® (paroxetine mesylate) tablets.

WARNINGS

Clinical Worsening and Suicide Risk

Patients with major depressive disorder (MDD), both adult and pediatric, may experience worsening of their depression and/or the emergence of suicidal ideation and behavior

(suicidality) or unusual changes in behavior, whether or not they are taking antidepressant medications, and this risk may persist until significant remission occurs. Suicide is a known risk of depression and certain other psychiatric disorders, and these disorders themselves are the strongest predictors of suicide. There has been a long-standing concern, however, that antidepressants may have a role in inducing worsening of depression and the emergence of suicidality in certain patients during the early phases of treatment. Pooled analyses of short-term placebo-controlled trials of antidepressant drugs (SSRIs and others) showed that these drugs increase the risk of suicidal thinking and behaviour (suicidality) in children, adolescents, and young adults (ages 18-24) with major depressive disorder (MDD) and other psychiatric disorders. Short-term studies did not show an increase in the risk of suicidality with antidepressants compared to placebo in adults beyond age 24; there was a reduction with antidepressants compared to placebo in adults aged 65 and older.

The pooled analyses of placebo-controlled trials in children and adolescents with MDD, obsessive compulsive disorder (OCD), or other psychiatric disorders included a total of 24 short-term trials of 9 antidepressant drugs in over 4400 patients. The pooled analyses of placebo-controlled trials in adults with MDD or other psychiatric disorders included a total of 295 short-term trials (median duration of 2 months) of 11 antidepressant drugs in over 77000 patients. There was considerable variation in risk of suicidality among drugs, but a tendency toward an increase in the younger patients for almost all drugs studied. There were differences in absolute risk of suicidality across the different indications, with the highest incidence in MDD. The risk differences (drug vs placebo), however, were relatively stable within age strata and across indications. These risk differences (drug-placebo difference in the number of cases of suicidality per 1000 patients treated) are provided in [Table 1](#).

TABLE 1

Age Range	Drug-Placebo Difference in Number of Cases of Suicidality per 1000 Patients Treated
	Increases Compared to Placebo
<18	14 additional cases
18-24	5 additional cases
	Decreases Compared to Placebo
25-64	1 fewer case
≥65	6 fewer cases

No suicides occurred in any of the pediatric trials. There were suicides in the adult trials, but the number was not sufficient to reach any conclusion about drug effect on suicide.

It is unknown whether the suicidality risk extends to longer-term use, ie, beyond several months. However, there is substantial evidence from placebo-controlled maintenance trials in adults with depression that the use of antidepressants can delay the recurrence of depression.

All patients being treated with antidepressants for any indication should be monitored appropriately and observed closely for clinical worsening, suicidality, and unusual changes in behavior, especially during the initial few months of a course of drug therapy, or at times of dose changes, either increases or decreases.

malformations in the paroxetine-exposed infants were primarily ventricular septal defects (VSDs) and atrial septal defects (ASDs). Septal defects range in severity from those that resolve spontaneously to those which require surgery.

- A separate retrospective cohort study from the United States (United Healthcare data) evaluated 5,956 infants of mothers dispensed antidepressants during the first trimester (n = 815 for paroxetine). This study showed a trend towards an increased risk for cardiovascular malformations for paroxetine (risk of 1.5%) compared to other antidepressants (risk of 1%), for an OR of 1.5 (95% confidence interval 0.8 to 2.9). Of the 12 paroxetine-exposed infants with cardiovascular malformations, 9 had VSDs. This study also suggested an increased risk of overall major congenital malformations including cardiovascular defects for paroxetine (4% risk) compared to other (2% risk) antidepressants (OR 1.8; 95% confidence interval 1.2 to 2.8).
- Two large case-control studies using separate databases, each with >9,000 birth defect cases and >4,000 controls, found that maternal use of paroxetine during the first trimester of pregnancy was associated with a 2- to 3-fold increased risk of right ventricular outflow tract obstructions. In one study the OR was 2.5 (95% confidence interval, 1.0 to 6.0, 7 exposed infants) and in the other study the OR was 3.3 (95% confidence interval, 1.3 to 8.8, 6 exposed infants).
- Other studies have found varying results as to whether there was an increased risk of overall, cardiovascular, or specific congenital malformations. A meta-analysis of epidemiological data over a 16-year period (1992 to 2008) included a total of 20 distinct studies: 11 studies (including the above noted studies) reported estimates for both cardiovascular defects and overall congenital malformations, 3 studies reported estimates only for cardiovascular defects, and 6 studies reported estimates only for overall congenital malformations. While subject to limitations, this meta-analysis suggested an increased occurrence of cardiovascular malformations (prevalence odds ratio [POR] 1.5; 95% confidence interval 1.2 to 1.9) and overall malformations (POR 1.2; 95% confidence interval 1.1 to 1.4) with paroxetine use during the first trimester. It was not possible in this meta-analysis to determine the extent to which cardiovascular malformations might have contributed to overall malformations, nor was it possible to determine whether any specific types of cardiovascular malformations contributed to all cardiovascular malformations.
- If a patient becomes pregnant while taking paroxetine, she should be advised of the potential harm to the fetus. Unless the benefits of paroxetine to the mother justify continuing treatment, consideration should be given to either discontinuing paroxetine therapy or switching to another antidepressant (see [PRECAUTIONS—Discontinuation of Treatment With PEEXVA®](#)). For women who intend to become pregnant or are in their first trimester of pregnancy, paroxetine should only be initiated after consideration of the other available treatment options.

Animal Findings: Reproduction studies were performed at doses up to 50 mg/kg/day in rats and 6 mg/kg/day in rabbits administered during organogenesis. These doses are approximately 8 (rat) and 2 (rabbit) times the MRHD on an mg/m² basis. These studies have revealed no evidence of teratogenic effects. However, in rats, there was an increase in pup deaths during the first 4 days of lactation when dosing occurred during the last trimester of gestation and continued throughout lactation. This effect occurred at a dose of 1 mg/kg/day or approximately one-sixth of the MRHD

on an mg/m² basis. The no-effect dose for rat pup mortality was not determined. The cause of these deaths is not known.

Nonteratogenic Effects: Neonates exposed to PEXEVA® and other SSRIs or serotonin and norepinephrine reuptake inhibitors (SNRIs), late in the third trimester have developed complications requiring prolonged hospitalization, respiratory support, and tube feeding. Such complications can arise immediately upon delivery. Reported clinical findings have included respiratory distress, cyanosis, apnea, seizures, temperature instability, feeding difficulty, vomiting, hypoglycemia, hypotonia, hypertonia, hyperreflexia, tremor, jitteriness, irritability, and constant crying. These features are consistent with either a direct toxic effect of SSRIs and SNRIs or, possibly, a drug discontinuation syndrome. It should be noted that, in some cases, the clinical picture is consistent with serotonin syndrome (see [WARNINGS: Serotonin Syndrome](#)).

Infants exposed to SSRIs in pregnancy may have an increased risk for persistent pulmonary hypertension of the newborn (PPHN). PPHN occurs in 1 – 2 per 1,000 live births in the general population and is associated with substantial neonatal morbidity and mortality. Several recent epidemiologic studies suggest a positive statistical association between SSRI use (including PEXEVA®) in pregnancy and PPHN. Other studies do not show a significant statistical association.

Physicians should also note the results of a prospective longitudinal study of 201 pregnant women with a history of major depression, who were either on antidepressants or had received antidepressants less than 12 weeks prior to their last menstrual period, and were in remission. Women who discontinued antidepressant medication during pregnancy showed a significant increase in relapse of their major depression compared to those women who remained on antidepressant medication throughout pregnancy.

When treating a pregnant woman with PEXEVA®, the physician should carefully consider both the potential risks of taking an SSRI, along with the established benefits of treating depression with an antidepressant. This decision can only be made on a case by case basis (see [DOSAGE AND ADMINISTRATION](#) and [ADVERSE REACTIONS, Postmarketing Reports](#)).

PRECAUTIONS

General

Activation of Mania/Hypomania: During premarketing testing, hypomania or mania occurred in approximately 1.0% of paroxetine-treated unipolar patients compared to 1.1% of active-control and 0.3% of placebo-treated unipolar patients. In a subset of patients classified as bipolar, the rate of manic episodes was 2.2% for paroxetine and 11.6% for the combined active-control groups. As with all drugs effective in the treatment of MDD, paroxetine should be used cautiously in patients with a history of mania.

Seizures: During premarketing testing, seizures occurred in 0.1% of paroxetine-treated patients, a rate similar to that associated with other drugs effective in the treatment of MDD. Paroxetine should be used cautiously in patients with a history of seizures. It should be discontinued in any patient who develops seizures.

Discontinuation of Treatment with PEXEVA® (paroxetine mesylate): Recent clinical trials supporting the various approved indications for paroxetine employed a taper-phase regimen,

rather than an abrupt discontinuation of treatment. The taper-phase regimen used in GAD and PTSD clinical trials involved an incremental decrease in the daily dose by 10 mg/day at weekly intervals. When a daily dose of 20 mg/day was reached, patients were continued on this dose for 1 week before treatment was stopped.

With this regimen in those studies, the following adverse events were reported at an incidence of 2% or greater for paroxetine at an incidence at least twice that reported for placebo: abnormal dreams, paresthesia, and dizziness. In the majority of patients, these events were mild to moderate and were self-limiting and did not require medical intervention.

During marketing of paroxetine and other SSRIs and SNRIs (serotonin and norepinephrine reuptake inhibitors), there have been spontaneous reports of adverse events occurring upon the discontinuation of these drugs (particularly when abrupt), including the following: dysphoric mood, irritability, agitation, dizziness, sensory disturbances (eg, paresthesias such as electric shock sensations and tinnitus), anxiety, confusion, headache, lethargy, emotional lability, insomnia, and hypomania. While these events are generally self-limiting, there have been reports of serious discontinuation symptoms.

Patients should be monitored for these symptoms when discontinuing treatment with paroxetine. A gradual reduction in the dose, rather than abrupt cessation, is recommended whenever possible. If intolerable symptoms occur following a decrease in the dose or upon discontinuation of treatment, then resuming the previously prescribed dose may be considered. Subsequently, the physician may continue decreasing the dose but at a more gradual rate (see [DOSAGE and ADMINISTRATION](#)).

See also [PRECAUTIONS—Pediatric Use](#) for adverse events reported upon discontinuation of treatment with paroxetine in pediatric patients.

Tamoxifen: Some studies have shown that the efficacy of tamoxifen, as measured by the risk of breast cancer relapse/mortality, may be reduced when co-prescribed with paroxetine as a result of paroxetine's irreversible inhibition of CYP2D6 (see [Drug Interactions](#)). However, other studies have failed to demonstrate such a risk. It is uncertain whether the co-administration of paroxetine and tamoxifen has a significant adverse effect on the efficacy of tamoxifen. When tamoxifen is used for the treatment or prevention of breast cancer, prescribers should consider using an alternative antidepressant with little or no CYP2D6 inhibition.

Akathisia: The use of paroxetine or other SSRIs has been associated with the development of akathisia, which is characterized by an inner sense of restlessness and psychomotor agitation such as an inability to sit or stand still usually associated with subjective distress. This is most likely to occur within the first few weeks of treatment.

Hyponatremia: Hyponatremia may occur as a result of treatment with SSRIs and SNRIs, including PEEXVA® (paroxetine mesylate). In many cases, this hyponatremia appears to be the result of the syndrome of inappropriate antidiuretic hormone secretion (SIADH). Cases with serum sodium lower than 110 mmol/L have been reported. Elderly patients may be at greater risk of developing hyponatremia with SSRIs and SNRIs. Also, patients taking diuretics or who are otherwise volume depleted may be at greater risk (see [Geriatric Use](#)). Discontinuation of PEEXVA® (paroxetine mesylate) should be considered in patients with symptomatic hyponatremia and appropriate medical intervention should be instituted.

Signs and symptoms of hyponatremia include headache, difficulty concentrating, memory impairment, confusion, weakness, and unsteadiness, which may lead to falls. Signs and symptoms associated with more severe and/or acute cases have included hallucination, syncope, seizure, coma, respiratory arrest, and death.

Abnormal Bleeding: SSRIs and SNRIs, including PEXEVA® (paroxetine mesylate), may increase the risk of bleeding events. Concomitant use of aspirin, nonsteroidal anti-inflammatory drugs, warfarin, and other anti-coagulants may add to this risk. Case reports and epidemiological studies (case-control and cohort design) have demonstrated an association between use of drugs that interfere with serotonin reuptake and the occurrence of gastrointestinal bleeding. Bleeding events related to SSRIs and SNRIs use have ranged from ecchymoses, hematomas, epistaxis, and petechiae to life-threatening hemorrhages.

Patients should be cautioned about the risk of bleeding associated with the concomitant use of PEXEVA® (paroxetine mesylate) and NSAIDs, aspirin, or other drugs that affect coagulation.

Bone Fracture: Epidemiological studies on bone fracture risk following exposure to some antidepressants, including SSRIs, have reported an association between antidepressant treatment and fractures. There are multiple possible causes for this observation and it is unknown to what extent fracture risk is directly attributable to SSRI treatment. The possibility of a pathological fracture, that is, a fracture produced by minimal trauma in a patient with decreased bone mineral density, should be considered in patients treated with paroxetine who present with unexplained bone pain, point tenderness, swelling, or bruising.

Use in Patients with Concomitant Illness: Clinical experience with paroxetine in patients with certain concomitant systemic illness is limited. Caution is advisable in using paroxetine in patients with diseases or conditions that could affect metabolism or hemodynamic responses.

Paroxetine has not been evaluated or used to any appreciable extent in patients with a recent history of myocardial infarction or unstable heart disease. Patients with these diagnoses were excluded from clinical studies during the product's premarket testing. Evaluation of electrocardiograms of 682 patients who received paroxetine in double-blind, placebo-controlled trials, however, did not indicate that paroxetine is associated with the development of significant ECG abnormalities. Similarly, paroxetine does not cause any clinically important changes in heart rate or blood pressure.

Increased plasma concentrations of paroxetine occur in patients with severe renal impairment (creatinine clearance <30 ml/min) or severe hepatic impairment. A lower starting dose should be used in such patients (see [DOSAGE AND ADMINISTRATION](#)).

Information for Patients

PEXEVA® (paroxetine mesylate) should not be chewed or crushed, and should be swallowed whole.

Patients should be cautioned about the risk of serotonin syndrome with the concomitant use of paroxetine and triptans, tramadol, or other serotonergic agents.

Patients should be advised that taking Pexeva can cause mild pupillary dilation, which in susceptible individuals, can lead to an episode of angle closure glaucoma. Pre-existing glaucoma is almost always open-angle glaucoma because angle closure glaucoma, when diagnosed, can be

treated definitively with iridectomy. Open-angle glaucoma is not a risk factor for angle closure glaucoma. Patients may wish to be examined to determine whether they are susceptible to angle closure, and have a prophylactic procedure (e.g., iridectomy), if they are susceptible.

Prescribers or other health professionals should inform patients, their families, and their caregivers about the benefits and risks associated with treatment with PEXEVA® (paroxetine mesylate) and should counsel them in its appropriate use. A patient [Medication Guide](#) about “Antidepressant Medicines, Depression and other Serious Mental Illness, and Suicidal Thoughts or Actions” is available for PEXEVA® (paroxetine mesylate). The prescriber or health professional should instruct patients, their families, and their caregivers to read the [Medication Guide](#) and should assist them in understanding its contents. Patients should be given the opportunity to discuss the contents of the [Medication Guide](#) and to obtain answers to any questions they may have. The complete text of the [Medication Guide](#) is reprinted at the end of this document.

Patients should be advised of the following issues and asked to alert their prescriber if these occur while taking PEXEVA® (paroxetine mesylate).

Clinical Worsening and Suicide Risk: Patients, their families, and their caregivers should be encouraged to be alert to the emergence of anxiety, agitation, panic attacks, insomnia, irritability, hostility, aggressiveness, impulsivity, akathisia (psychomotor restlessness), hypomania, mania, other unusual changes in behavior, worsening of depression, and suicidal ideation, especially early during antidepressant treatment and when the dose is adjusted up or down. Families and caregivers of patients should be advised to look for the emergence of such symptoms on a day-to-day basis, since changes may be abrupt. Such symptoms should be reported to the patient’s prescriber or health professional, especially if they are severe, abrupt in onset, or were not part of the patient’s presenting symptoms. Symptoms such as these may be associated with an increased risk for suicidal thinking and behavior and indicate a need for very close monitoring and possibly changes in the medication.

Drugs that Interfere with Hemostasis (NSAIDs, Aspirin, Warfarin, etc.): Patients should be cautioned about concomitant use of paroxetine with NSAIDs, aspirin, or other drugs that affect coagulation since the combined use of psychotropic drugs that interfere with serotonin reuptake and these agents has been associated with an increased risk of bleeding.

Interference with Cognitive and Motor Performance: Any psychoactive drug may impair judgment, thinking, or motor skills. Although in controlled studies paroxetine has not been shown to impair psychomotor performance, patients should be cautioned about operating hazardous machinery, including automobiles, until they are reasonably certain that paroxetine therapy does not affect their ability to engage in such activities.

Completing Course of Therapy: While patients may notice improvement with paroxetine therapy in 1 to 4 weeks, they should be advised to continue therapy as directed.

Concomitant Medication: Patients should be advised to inform their physician if they are taking, or plan to take, any prescription or over-the-counter drugs, since there is a potential for interactions.

Alcohol: Although paroxetine has not been shown to increase the impairment of mental and motor skills caused by alcohol, patients should be advised to avoid alcohol while taking PEXEVA® (paroxetine mesylate).

Pregnancy: Patients should be advised to notify their physician if they become pregnant or intend to become pregnant during therapy (see [WARNINGS—Usage in Pregnancy: Teratogenic and Nonteratogenic Effects](#)).

Nursing: Patients should be advised to notify their physician if they are breast-feeding an infant (see [PRECAUTIONS—Nursing Mothers](#)).

Laboratory Tests

There are no specific laboratory tests recommended.

Paxil® (paroxetine hydrochloride)

Paroxetine, the active ingredient in PEXEVA® (paroxetine mesylate), is also the active ingredient of Paxil®. Thus, these two agents should not be coadministered.

Drug Interactions

Tryptophan: As with other serotonin reuptake inhibitors, an interaction between paroxetine and tryptophan may occur when they are coadministered. Adverse experiences, consisting primarily of headache, nausea, sweating, and dizziness, have been reported when tryptophan was administered to patients taking paroxetine. Consequently, concomitant use of paroxetine with tryptophan is not recommended.

Monoamine Oxidase Inhibitors: See [CONTRAINDICATIONS](#) and [WARNINGS](#).

Pimozide: In a controlled study of healthy volunteers, after paroxetine was titrated to 60 mg daily, coadministration of a single dose of 2 mg pimozide was associated with mean increases in pimozide AUC of 151% and C_{max} of 62%, compared to pimozide administered alone. The increase in pimozide AUC and C_{max} is due to the CYP2D6 inhibitory properties of paroxetine. Due to the narrow therapeutic index of pimozide and its known ability to prolong the QT interval, concomitant use of pimozide and paroxetine is contraindicated (see [CONTRAINDICATIONS](#)).

Serotonergic Drugs: Based on the mechanism of action of paroxetine and the potential for serotonin syndrome, caution is advised when paroxetine is coadministered with other drugs or agents that may affect the serotonergic neurotransmitter systems, such as triptans, linezolid (an antibiotic which is a reversible non-selective MAOI), lithium, fentanyl, tramadol, amphetamines, or St. John's Wort (see [WARNINGS—Serotonin Syndrome](#)). The concomitant use of paroxetine with other SSRIs, SNRIs, or tryptophan is not recommended (see [PRECAUTIONS—Drug Interactions, Tryptophan](#)).

Thioridazine: See [CONTRAINDICATIONS](#) and [WARNINGS](#).

Warfarin: Preliminary data suggest that there may be a pharmacodynamic interaction (that causes an increased bleeding diathesis in the face of unaltered prothrombin time) between paroxetine and warfarin. Since there is little clinical experience, the concomitant administration

of paroxetine and warfarin should be undertaken with caution (see [PRECAUTIONS: Drugs That Interfere With Hemostasis](#)).

Triptans: There have been rare postmarketing reports of serotonin syndrome with the use of an SSRI and a triptan. If concomitant use of paroxetine with a triptan is warranted, careful observation of the patient is advised, particularly during treatment initiation and dose increases (see [WARNINGS—Serotonin Syndrome](#)).

Drugs Affecting Hepatic Metabolism: The metabolism and pharmacokinetics of paroxetine may be affected by the induction or inhibition of drug-metabolizing enzymes.

Cimetidine— Cimetidine inhibits many cytochrome P450 (oxidative) enzymes. In a study where paroxetine (30 mg qd) was dosed orally for 4 weeks, steady-state plasma concentrations of paroxetine were increased by approximately 50% during coadministration with oral cimetidine (300 mg tid) for the final week. Therefore, when these drugs are administered concurrently, dosage adjustment of paroxetine after the 20 mg starting dose should be guided by clinical effect. The effect of paroxetine on cimetidine's pharmacokinetics was not studied.

Phenobarbital— Phenobarbital induces many cytochrome P450 (oxidative) enzymes. When a single oral 30 mg dose of paroxetine was administered at phenobarbital steady state (100 mg qd for 14 days), paroxetine AUC and $T_{1/2}$ were reduced (by an average of 25% and 38%, respectively) compared to paroxetine administered alone. The effect of paroxetine on phenobarbital pharmacokinetics was not studied. Since paroxetine exhibits nonlinear pharmacokinetics, the results of this study may not address the case where the 2 drugs are both being chronically dosed. No initial paroxetine dosage adjustment is considered necessary when coadministered with phenobarbital; any subsequent adjustment should be guided by clinical effect.

Phenytoin— When a single oral 30 mg dose of paroxetine was administered at phenytoin steady state (300 mg qd for 14 days), paroxetine AUC and $T_{1/2}$ were reduced (by an average of 50% and 35%, respectively) compared to paroxetine administered alone. In a separate study, when a single oral 300 mg dose of phenytoin was administered at paroxetine steady state (30 mg qd for 14 days), phenytoin AUC was slightly reduced (12% on average) compared to phenytoin administered alone. Since both drugs exhibit nonlinear pharmacokinetics, the above studies may not address the case where the 2 drugs are both being chronically dosed. No initial dosage adjustments are considered necessary when these drugs are coadministered; any subsequent adjustments should be guided by clinical effect (see [ADVERSE REACTIONS—Postmarketing Reports](#)).

Drugs Metabolized by Cytochrome CYP2D6: Many drugs, including most drugs effective in the treatment of MDD (paroxetine, other SSRIs, and many tricyclics), are metabolized by the cytochrome P450 isozyme CYP2D6. Like other agents that are metabolized by CYP2D6, paroxetine may significantly inhibit the activity of this isozyme. In most patients (>90%), this CYP2D6 isozyme is saturated early during paroxetine dosing. In one study, daily dosing of paroxetine (20 mg qd) under steady-state conditions increased single dose desipramine (100 mg) C_{max} , AUC, and $T_{1/2}$ by an average of approximately 2-, 5-, and 3-fold, respectively. Concomitant use of paroxetine with risperidone, a CYP2D6 substrate, has also been evaluated. In one study, daily dosing of paroxetine 20 mg in patients stabilized on risperidone (4 to 8 mg/day) increased mean plasma concentrations of risperidone approximately 4-fold, decreased 9-

hydroxyrisperidone concentrations approximately 10%, and increased concentrations of the active moiety (the sum of risperidone plus 9-hydroxyrisperidone) approximately 1.4-fold. The effect of paroxetine on the pharmacokinetics of atomoxetine has been evaluated when both drugs were at steady state. In healthy volunteers who were extensive metabolizers of CYP2D6, paroxetine 20 mg daily was given in combination with 20 mg atomoxetine every 12 hours. This resulted in increases in steady state atomoxetine AUC values that were 6- to 8-fold greater and in atomoxetine C_{max} values that were 3- to 4-fold greater than when atomoxetine was given alone. Dosage adjustment of atomoxetine may be necessary and it is recommended that atomoxetine be initiated at a reduced dose when it is given with paroxetine.

Concomitant use of paroxetine with other drugs metabolized by cytochrome CYP2D6 has not been formally studied but may require lower doses than usually prescribed for either paroxetine or the other drug.

Therefore, coadministration of PEXEVA® (paroxetine mesylate) with other drugs that are metabolized by this isozyme, including certain drugs effective in the treatment of MDD (eg, nortriptyline, amitriptyline, imipramine, desipramine, and fluoxetine), phenothiazines, risperidone, and Type 1C antiarrhythmics (eg, propafenone, flecainide, and encainide), or that inhibit this enzyme (eg, quinidine), should be approached with caution.

However, due to the risk of serious ventricular arrhythmias and sudden death potentially associated with elevated plasma levels of thioridazine, paroxetine, and thioridazine should not be coadministered (see [CONTRAINDICATIONS](#) and [WARNINGS](#)).

Tamoxifen is a pro-drug requiring metabolic activation by CYP2D6. Inhibition of CYP2D6 by paroxetine may lead to reduced plasma concentrations of an active metabolite (endoxifen) and hence reduced efficacy of tamoxifen (see [PRECAUTIONS](#)).

At steady state, when the CYP2D6 pathway is essentially saturated, paroxetine clearance is governed by alternative P450 isozymes, which, unlike CYP2D6, show no evidence of saturation (see [PRECAUTIONS—Tricyclic Antidepressants](#)).

Drugs Metabolized by Cytochrome CYP3A4: An *in vivo* interaction study involving the coadministration under steady-state conditions of paroxetine and terfenadine, a substrate for cytochrome CYP3A4, revealed no effect of paroxetine on terfenadine pharmacokinetics. In addition, *in vitro* studies have shown ketoconazole, a potent inhibitor of CYP3A4 activity, to be at least 100 times more potent than paroxetine as an inhibitor of the metabolism of several substrates for this enzyme, including terfenadine, astemizole, cisapride, triazolam, and cyclosporine. Based on the assumption that the relationship between paroxetine's *in vitro* K_i and its lack of effect on terfenadine's *in vivo* clearance predicts its effect on other 3A4 substrates, paroxetine's extent of inhibition of CYP3A4 activity is not likely to be of clinical significance.

Tricyclic Antidepressants (TCA): Caution is indicated in the coadministration of tricyclic antidepressants (TCAs) with PEXEVA® (paroxetine mesylate), because paroxetine may inhibit TCA metabolism. Plasma TCA concentrations may need to be monitored and the dose of TCA may need to be reduced, if a TCA is coadministered with PEXEVA® (paroxetine mesylate). (See [PRECAUTIONS—Drugs Metabolized by Cytochrome CYP2D6](#)).

Drugs Highly Bound to Plasma Protein: Because paroxetine is highly bound to plasma protein, administration of PEXEVA® (paroxetine mesylate) to a patient taking another drug that is

highly protein-bound may cause increased free concentrations of the other drug, potentially resulting in adverse events. Conversely, adverse effects could result from displacement of paroxetine by other highly bound drugs.

Drugs That Interfere With Hemostasis (e.g., NSAIDs, Aspirin, and Warfarin): Serotonin release by platelets plays an important role in hemostasis. Epidemiological studies of the case-control and cohort design that have demonstrated an association between use of psychotropic drugs that interfere with serotonin reuptake and the occurrence of upper gastrointestinal bleeding have also shown that concurrent use of an NSAID or aspirin may potentiate this risk of bleeding. Altered anticoagulant effects, including increased bleeding, have been reported when SSRIs or SNRIs are coadministered with warfarin. Patients receiving warfarin therapy should be carefully monitored when PEXEVA® (paroxetine mesylate) is initiated or discontinued.

Alcohol— Although paroxetine does not increase the impairment of mental and motor skills caused by alcohol, patients should be advised to avoid alcohol while taking PEXEVA® (paroxetine mesylate).

Lithium— A multiple-dose study has shown that there is no pharmacokinetic interaction between paroxetine and lithium carbonate. However, due to the potential for serotonin syndrome, the concurrent administration of paroxetine and lithium should be undertaken with caution.

Digoxin— The steady-state pharmacokinetics of paroxetine was not altered when administered with digoxin at steady state. Mean digoxin AUC at steady state decreased by 15% in the presence of paroxetine. Since there is little clinical experience, the concurrent administration of paroxetine and digoxin should be undertaken with caution.

Diazepam— Under steady-state conditions, diazepam does not appear to affect paroxetine kinetics. The effects of paroxetine on diazepam were not evaluated.

Procyclidine— Daily oral dosing of paroxetine (30 mg qd) increased steady-state AUC₀₋₂₄, C_{max}, and C_{min} values of procyclidine (5 mg oral qd) by 35%, 37%, and 67%, respectively, compared to procyclidine alone at steady state. If anticholinergic effects are seen, the dose of procyclidine should be reduced.

Beta-Blockers— In a study where propranolol (80 mg bid) was dosed orally for 18 days, the established steady-state plasma concentrations of propranolol were unaltered during coadministration with paroxetine (30 mg qd) for the final 10 days. The effects of propranolol on paroxetine have not been evaluated (see [ADVERSE REACTIONS—Postmarketing Reports](#)).

Theophylline— Reports of elevated theophylline levels associated with paroxetine treatment have been reported. While this interaction has not been formally studied, it is recommended that theophylline levels be monitored when these drugs are concurrently administered.

Fosamprenavir/Ritonavir— Coadministration of fosamprenavir/ ritonavir with paroxetine significantly decreased plasma levels of paroxetine. Any dose adjustment should be guided by clinical effect (tolerability and efficacy).

Electroconvulsive Therapy (ECT)— There are no clinical studies of the combined use of ECT and paroxetine.

Carcinogenesis, Mutagenesis, Impairment of Fertility

Carcinogenesis: Two-year carcinogenicity studies were conducted in rodents given paroxetine in the diet at 1, 5, and 25 mg/kg/day (mice) and 1, 5, and 20 mg/kg/day (rats). These doses are up to 2.4 (mouse) and 3.9 (rat) times the maximum recommended human dose (MRHD) for MDD and GAD on a mg/m² basis. Because the MRHD for MDD is slightly less than that for OCD (50 mg vs 60 mg), the doses used in these carcinogenicity studies were only 2.0 (mouse) and 3.2 (rat) times the MRHD for OCD. There was a significantly greater number of male rats in the high-dose group with reticulum cell sarcomas (1/100, 0/50, 0/50, and 4/50 for control, low-, middle-, and high-dose groups, respectively) and a significantly increased linear trend across groups for the occurrence of lymphoreticular tumors in male rats. Female rats were not affected. Although there was a dose-related increase in the number of tumors in mice, there was no drug-related increase in the number of mice with tumors. The relevance of these findings to humans is unknown.

Mutagenesis: Paroxetine produced no genotoxic effects in a battery of 5 *in vitro* and 2 *in vivo* assays that included the following: bacterial mutation assay, mouse lymphoma mutation assay, unscheduled DNA synthesis assay, and tests for cytogenetic aberrations *in vivo* in mouse bone marrow and *in vitro* in human lymphocytes and in a dominant lethal test in rats.

Impairment of Fertility: Some clinical studies have shown that SSRIs (including paroxetine) may affect sperm quality during SSRI treatment, which may affect fertility in some men.

A reduced pregnancy rate was found in reproduction studies in rats at a dose of paroxetine of 15 mg/kg/day, which is 2.9 times the MRHD for MDD and GAD or 2.4 times the MRHD for OCD on a mg/m² basis. Irreversible lesions occurred in the reproductive tract of male rats after dosing in toxicity studies for 2 to 52 weeks. These lesions consisted of vacuolation of epididymal tubular epithelium at 50 mg/kg/day and atrophic changes in the seminiferous tubules of the testes with arrested spermatogenesis at 25 mg/kg/day (9.8 and 4.9 times the MRHD for MDD and GAD; 8.2 and 4.1 times the MRHD for OCD and PD on a mg/m² basis).

Pregnancy

Pregnancy Category D (see [WARNINGS—Usage in Pregnancy: Teratogenic and Nonteratogenic Effects](#)).

Labor and Delivery

The effect of paroxetine on labor and delivery in humans is unknown.

Nursing Mothers

Like many other drugs, paroxetine is secreted in human milk, and caution should be exercised when PEXEVA® (paroxetine mesylate) is administered to a nursing woman.

Pediatric Use

Safety and effectiveness in the pediatric population have not been established (see [BOX WARNING](#) and [WARNINGS—Clinical Worsening and Suicide Risk](#)). Three placebo-controlled trials in 752 pediatric patients with MDD have been conducted with paroxetine, and the data

were not sufficient to support a claim for use in pediatric patients. Anyone considering the use of paroxetine mesylate in a child or adolescent must balance the potential risks with the clinical need. Decreased appetite and weight loss have been observed in association with the use of SSRIs. Consequently, regular monitoring of weight and growth should be performed in children and adolescents treated with an SSRI such as PEXEVA®.

In placebo-controlled clinical trials conducted with pediatric patients, the following adverse events were reported in at least 2% of pediatric patients treated with paroxetine and occurred at a rate at least twice that for pediatric patients receiving placebo: emotional lability (including self-harm, suicidal thoughts, attempted suicide, crying, and mood fluctuations), hostility, decreased appetite, tremor, sweating, hyperkinesia, and agitation.

Events reported upon discontinuation of treatment with paroxetine in the pediatric clinical trials that included a taper phase regimen, which occurred in at least 2% of patients who received paroxetine and which occurred at a rate at least twice that of placebo, were: emotional lability (including suicidal ideation, suicide attempt, mood changes, and tearfulness), nervousness, dizziness, nausea, and abdominal pain (see [Discontinuation of Treatment with Paroxetine](#)).

Geriatric Use

SSRIs and SNRIs, including PEXEVA® (paroxetine mesylate), have been associated with cases of clinically significant hyponatremia in elderly patients, who may be at greater risk for this adverse event (See [PRECAUTIONS, Hyponatremia](#)).

In worldwide premarketing paroxetine clinical trials, 17% of paroxetine-treated patients (approximately 700) were 65 years of age or older. Pharmacokinetic studies revealed a decreased clearance in the elderly, and a lower starting dose is recommended; there were, however, no overall differences in the adverse event profile between elderly and younger patients, and effectiveness was similar in younger and older patients (see [CLINICAL PHARMACOLOGY](#) and [DOSAGE AND ADMINISTRATION](#)).

ADVERSE REACTIONS

Associated with Discontinuation of Treatment

Twenty percent (1199/6145) of patients treated with paroxetine in worldwide clinical trials in MDD and 11.8% (64/542), 9.4% (44/469), and 10.7% (79/735) of patients treated with paroxetine in worldwide trials in OCD, PD, and GAD, respectively, discontinued treatment due to an adverse event. The most common events ($\geq 1\%$) associated with discontinuation and considered to be drug related (ie, those events associated with dropout at a rate approximately twice or greater for paroxetine compared to placebo) included the following:

	MDD		OCD		PD		GAD	
	Paroxetine	Placebo	Paroxetine	Placebo	Paroxetine	Placebo	Paroxetine	Placebo
CNS								
Somnolence	2.3%	0.7%	-	-	1.9%	0.3%	2.0%	0.2%
Insomnia	-	-	1.7%	0%	1.3%	0.3%	-	-
Agitation	1.1%	0.5%	-	-	-	-	-	-
Tremor	1.1%	0.3%	-	-	-	-	-	-
Dizziness	-	-	1.5%	0%	-	-	1.0%	0.2%
Gastrointestinal								
Constipation	-	-	1.1%	0%	-	-	-	-
Nausea	3.2%	1.1%	1.9%	0%	3.2%	1.2%	2.0%	0.2%
Diarrhea	1.0%	0.3%	-	-	-	-	-	-
Dry mouth	1.0%	0.3%	-	-	-	-	-	-
Vomiting	1.0%	0.3%	-	-	-	-	-	-
Other								
Asthenia	1.6%	0.4%	1.9%	0.4%	-	-	1.8%	0.2%
Abnormal Ejaculation ¹	1.6%	0%	2.1%	0%	-	-	2.5%	0.5%
Sweating	1.0%	0.3%	-	-	-	-	1.1%	0.2%
Impotence ¹	-	-	1.5%	0%	-	-	-	-

Where numbers are not provided the incidence of the adverse events in patients treated with paroxetine was not >1% or was not greater than or equal to two times the incidence of placebo.

¹ Incidence corrected for gender.

Commonly Observed Adverse Events

Major Depressive Disorder

The most commonly observed adverse events associated with the use of paroxetine (incidence of 5% or greater and incidence for paroxetine at least twice that for placebo, derived from [Table 2](#) below) were: asthenia, sweating, nausea, decreased appetite, somnolence, dizziness, insomnia, tremor, nervousness, ejaculatory disturbance, and other male genital disorders.

Obsessive Compulsive Disorder

The most commonly observed adverse events associated with the use of paroxetine (incidence of 5% or greater and incidence for paroxetine at least twice that of placebo, derived from [Table 3](#) below) were: nausea, dry mouth, decreased appetite, constipation, dizziness, somnolence, tremor, sweating, impotence, and abnormal ejaculation.

Panic Disorder

The most commonly observed adverse events associated with the use of paroxetine (incidence of 5% or greater and incidence for paroxetine at least twice that for placebo, derived from [Table 3](#) below) were: asthenia, sweating, decreased appetite, libido decreased, tremor, abnormal ejaculation, female genital disorders, and impotence.

Generalized Anxiety Disorder

The most commonly observed adverse events associated with the use of paroxetine (incidence of 5% or greater and incidence for paroxetine at least twice that for placebo, derived from [Table 4](#)) were: asthenia, infection, constipation, decreased appetite, dry mouth, nausea, libido decreased, somnolence, tremor, sweating, and abnormal ejaculation.

Incidence in Controlled Clinical Trials

The prescriber should be aware that the figures in the tables following cannot be used to predict the incidence of side effects in the course of usual medical practice where patient characteristics and other factors differ from those that prevailed in the clinical trials. Similarly, the cited frequencies cannot be compared with figures obtained from other clinical investigations involving different treatments, uses, and investigators. The cited figures, however, do provide the prescribing physician with some basis for estimating the relative contribution of drug and nondrug factors to the side effect incidence rate in the populations studied.

Major Depressive Disorder

[Table 2](#) enumerates adverse events that occurred at an incidence of 1% or more among paroxetine-treated patients who participated in short-term (6-week) placebo-controlled trials in which patients were dosed in a range of 20 to 50 mg/day. Reported adverse events were classified using a standard COSTART-based Dictionary terminology.

TABLE 2

Treatment-Emergent Adverse Experience Incidence in Placebo-Controlled Clinical Trials for MDD¹				
Body System	Preferred Term	Paroxetine (n=421)	Placebo (n=421)	
Body as a Whole	Headache	18%	17%	
	Asthenia	15%	6%	
Cardiovascular	Palpitation	3%	1%	
	Vasodilation	3%	1%	
Dermatologic	Sweating	11%	2%	
	Rash	2%	1%	
Gastrointestinal	Nausea	26%	9%	
	Dry Mouth	18%	12%	
	Constipation	14%	9%	
	Diarrhea	12%	8%	
	Decreased Appetite	6%	2%	
	Flatulence	4%	2%	
	Oropharynx Disorder ²	2%	0%	
	Dyspepsia	2%	1%	
	Myopathy	2%	1%	
Musculoskeletal	Myalgia	2%	1%	
	Myasthenia	1%	0%	
	Nervous System	Somnolence	23%	9%
		Dizziness	13%	6%
Insomnia		13%	6%	
Tremor		8%	2%	
Nervousness		5%	3%	
Anxiety		5%	3%	
Paresthesia		4%	2%	
Libido Decreased		3%	0%	
Respiration	Drugged Feeling	2%	1%	
	Yawn	4%	0%	
Special Senses	Confusion	1%	0%	
	Blurred Vision	4%	1%	
Urogenital System	Taste Perversion	2%	0%	
	Ejaculatory Disturbance ^{3,4}	13%	0%	
	Other Male Genital Disorders ^{3,5}	10%	0%	
	Urinary Frequency	3%	1%	
	Urination Disorder ⁶	3%	0%	
	Female Genital Disorders ^{3,7}	2%	0%	

¹ Events reported by at least 1% of patients treated with paroxetine are included, except the following events which

had an incidence on placebo \geq paroxetine: abdominal pain, agitation, back pain, chest pain, CNS stimulation, fever, increased appetite, myoclonus, pharyngitis, postural hypotension, respiratory disorder (includes mostly “cold symptoms” or “URI”), trauma, and vomiting.

² Includes mostly “lump in throat” and “tightness in throat.”

³ Percentage corrected for gender.

⁴ Mostly “ejaculatory delay.”

⁵ Includes “anorgasmia,” “erectile difficulties,” “delayed ejaculation/orgasm,” and “sexual dysfunction” and “impotence.”

⁶ Includes mostly “difficulty with micturition” and “urinary hesitancy.”

⁷ Includes mostly “anorgasmia” and “difficulty reaching climax/orgasm.”

Obsessive Compulsive Disorder and Panic Disorder

[Table 3](#) enumerates adverse events that occurred at a frequency of 2% or more among OCD patients on paroxetine who participated in placebo-controlled trials of 12-weeks duration in which patients were dosed in a range of 20 to 60 mg/day or among patients with PD on paroxetine who participated in placebo-controlled trials of 10- to 12-weeks duration in which patients were dosed in a range of 10 to 60 mg/day.

TABLE 3

Treatment-Emergent Adverse Experience Incidence in Placebo-Controlled Clinical Trials for Obsessive Compulsive Disorder and Panic Disorder¹						
Body System	Preferred Term	Obsessive Compulsive Disorder		Panic Disorder		
		Paroxetine (n=542)	Placebo (n=265)	Paroxetine (n=469)	Placebo (n=324)	
Body as a Whole	Asthenia	22%	14%	14%	5%	
	Abdominal Pain	-	-	4%	3%	
	Chest Pain	3%	2%	-	-	
	Back Pain	-	-	3%	2%	
	Chills	2%	1%	2%	1%	
Cardiovascular	Vasodilation	4%	1%	-	-	
	Palpitation	2%	0%	-	-	
Dermatologic	Sweating	9%	3%	14%	6%	
	Rash	3%	2%	-	-	
Gastrointestinal	Nausea	23%	10%	23%	17%	
	Dry Mouth	18%	9%	18%	11%	
	Constipation	16%	6%	8%	5%	
	Diarrhea	10%	10%	12%	7%	
	Decreased Appetite	9%	3%	7%	3%	
	Increased Appetite	4%	3%	2%	1%	
Nervous System	Insomnia	24%	13%	18%	10%	
	Somnolence	24%	7%	19%	11%	
	Dizziness	12%	6%	14%	10%	
	Tremor	11%	1%	9%	1%	
	Nervousness	9%	8%	-	-	
	Libido Decreased	7%	4%	9%	1%	
	Agitation	-	-	5%	4%	
	Anxiety	-	-	5%	4%	
	Abnormal Dreams	4%	1%	-	-	
	Concentration Impaired	3%	2%	-	-	
	Depersonalization	3%	0%	-	-	
	Myoclonus	3%	0%	3%	2%	
	Amnesia	2%	1%	-	-	
	Respiratory System	Rhinitis	-	-	3%	0%
	Special Senses	Abnormal Vision	4%	2%	-	-
Taste Perversion		2%	0%	-	-	
Urogenital System	Abnormal Ejaculation ²	23%	1%	21%	1%	
	Female Genital Disorder ²	3%	0%	9%	1%	
	Impotence ²	8%	1%	5%	0%	

Urinary Frequency	3%	1%	2%	0%
Urination Impaired	3%	0%	-	-
Urinary Tract Infection	2%	1%	2%	1%

¹ Events reported by at least 2% of OCD or PD paroxetine-treated patients are included, except the following events which had an incidence on placebo \geq paroxetine [OCD]: abdominal pain, agitation, anxiety, back pain, cough increased, depression, headache, hyperkinesia, infection, paresthesia, pharyngitis, respiratory disorder, rhinitis, and sinusitis. [PD]: abnormal dreams, abnormal vision, chest pain, cough increased, depersonalization, depression, dysmenorrhea, dyspepsia, flu syndrome, headache, infection, myalgia, nervousness, palpitation, paresthesia, pharyngitis, rash, respiratory disorder, sinusitis, taste perversion, trauma, urination impaired, and vasodilation.

² Percentage corrected for gender.

Generalized Anxiety Disorder

[Table 4](#) enumerates adverse events that occurred at a frequency of 2% or more among GAD patients on paroxetine who participated in placebo-controlled trials of 8-weeks duration in which patients were dosed in a range of 10 mg/day to 50 mg/day.

TABLE 4

**Treatment-Emergent Adverse Experience Incidence in
Placebo-Controlled Clinical Trials for Generalized Anxiety Disorder¹**

Body System	Preferred Term	Paroxetine (n=735)	Placebo (n=529)
Body as a Whole	Asthenia	14%	6%
	Headache	17%	14%
	Infection	6%	3%
Cardiovascular	Vasodilation	3%	1%
Dermatologic	Sweating	6%	2%
Gastrointestinal	Nausea	20%	5%
	Dry Mouth	11%	5%
	Constipation	10%	2%
	Diarrhea	9%	7%
	Decreased Appetite	5%	1%
	Vomiting	3%	2%
	Nervous System	Insomnia	11%
Somnolence		15%	5%
Dizziness		6%	5%
Tremor		5%	1%
Nervousness		4%	3%
Libido Decreased		9%	2%
Respiratory System		Respiratory Disorder	7%
	Sinusitis	4%	3%
	Yawn	4%	-
Special Senses	Abnormal Vision	2%	1%
Urogenital System	Abnormal Ejaculation ²	25%	2%
	Female Genital Disorder ²	4%	1%
	Impotence ²	4%	3%

¹ Events reported by at least 2% of GAD patients treated with paroxetine are included, except the following events which had an incidence on placebo \geq paroxetine: abdominal pain, back pain, trauma, dyspepsia, myalgia, and pharyngitis.

² Percentage corrected for gender.

Dose Dependency of Adverse Events: A comparison of adverse event rates in a fixed-dose study comparing paroxetine 10, 20, 30, and 40 mg/day with placebo in the treatment of MDD revealed a clear dose dependency for some of the more common adverse events associated with paroxetine use, as shown in the following table:

TABLE 5

Treatment-Emergent Adverse Experience Incidence in a Dose-Comparison Trial in the Treatment of MDD*					
Body System/ Preferred Term	Placebo	Paroxetine			
	n=51	10 mg n=102	20 mg n=104	30 mg n=101	40 mg n=102
Body as a Whole					
Asthenia	0.0%	2.9%	10.6%	13.9%	12.7%
Dermatology					
Sweating	2.0%	1.0%	6.7%	8.9%	11.8%
Gastrointestinal					
Constipation	5.9%	4.9%	7.7%	9.9%	12.7%
Decreased Appetite	2.0%	2.0%	5.8%	4.0%	4.9%
Diarrhea	7.8%	9.8%	19.2%	7.9%	14.7%
Dry Mouth	2.0%	10.8%	18.3%	15.8%	20.6%
Nausea	13.7%	14.7%	26.9%	34.7%	36.3%
Nervous System					
Anxiety	0.0%	2.0%	5.8%	5.9%	5.9%
Dizziness	3.9%	6.9%	6.7%	8.9%	12.7%
Nervousness	0.0%	5.9%	5.8%	4.0%	2.9%
Paresthesia	0.0%	2.9%	1.0%	5.0%	5.9%
Somnolence	7.8%	12.7%	18.3%	20.8%	21.6%
Tremor	0.0%	0.0%	7.7%	7.9%	14.7%
Special Senses					
Blurred Vision	2.0%	2.9%	2.9%	2.0%	7.8%
Urogenital System					
Abnormal Ejaculation	0.0%	5.8%	6.5%	10.6%	13.0%
Impotence	0.0%	1.9%	4.3%	6.4%	1.9%
Male Genital Disorders	0.0%	3.8	8.7%	6.4%	3.7%

* Rule for including adverse events in table: incidence at least 5% for one of paroxetine groups and \geq twice the placebo incidence for at least one paroxetine group.

In a fixed-dose study comparing placebo and paroxetine 20, 40, and 60 mg in the treatment of OCD, there was no clear relationship between adverse events and the dose of paroxetine to which patients were assigned. No new adverse events were observed in the paroxetine 60 mg dose group compared to any of the other treatment groups.

In a fixed-dose study comparing placebo and paroxetine 10, 20, and 40 mg in the treatment of PD, there was no clear relationship between adverse events and the dose of paroxetine to which patients were assigned, except for asthenia, dry mouth, anxiety, libido decreased, tremor, and abnormal ejaculation. In flexible-dose studies, no new adverse events were observed in patients receiving 60 mg of paroxetine compared to any of the other treatment groups.

In a fixed-dose study comparing placebo and 20 and 40 mg of paroxetine in the treatment of GAD, for most of the adverse events, there was no clear relationship between adverse events and the dose of paroxetine to which patients were assigned, except for the following adverse events: asthenia, constipation, and abnormal ejaculation.

In flexible dose studies, no new adverse events were observed in patients receiving paroxetine 60 mg compared to any of the other treatment groups.

Adaptation to Certain Adverse Events: Over a 4- to 6-week period, there was evidence of adaptation to some adverse events with continued therapy (eg, nausea and dizziness), but less to other effects (eg, dry mouth, somnolence, and asthenia).

Male and Female Sexual Dysfunction with SSRIs: Although changes in sexual desire, sexual performance, and sexual satisfaction often occur as manifestations of a psychiatric disorder, they may also be a consequence of pharmacologic treatment. In particular, some evidence suggests that SSRIs can cause such untoward sexual experiences.

Reliable estimates of the incidence and severity of untoward experiences involving sexual desire, performance, and satisfaction are difficult to obtain, however, in part because patients and physicians may be reluctant to discuss them. Accordingly, estimates of the incidence of untoward sexual experience and performance cited in product labeling are likely to underestimate their actual incidence.

In placebo-controlled clinical trials involving more than 3200 patients the ranges for the reported incidence of sexual side effects in males and females with MDD, OCD, PD, social anxiety disorder, GAD, and post traumatic stress disorder (PTSD) are displayed in [Table 6](#).

TABLE 6

Incidence of Sexual Adverse Events in Controlled Clinical Trials		
	Paroxetine	Placebo
n (males)	1446	1042
Decreased Libido	6% - 15%	0% - 5%
Ejaculatory Disturbance	13% - 28%	0% - 2%
Impotence	2% - 9%	0% - 3%
n (females)	1822	1340
Decreased Libido	0% - 9%	0% - 2%
Orgasmic Disturbance	2% - 9%	0% - 1%

There are no adequate and well-controlled studies examining sexual dysfunction with paroxetine treatment.

Paroxetine treatment has been associated with several cases of priapism. In those cases with a known outcome, patients recovered without sequelae.

While it is difficult to know the precise risk of sexual dysfunction associated with the use of SSRIs, physicians should routinely inquire about such possible side effects.

Weight and Vital Sign Changes: Significant weight loss may be an undesirable result of treatment with paroxetine for some patients but, on average, patients in controlled trials had minimal (about 1 pound) weight loss vs smaller changes on placebo and active control. No

significant changes in vital signs (systolic and diastolic blood pressure, pulse, and temperature) were observed in patients treated with paroxetine in controlled clinical trials.

ECG Changes: In an analysis of ECGs obtained in 682 patients treated with paroxetine and 415 patients treated with placebo in controlled clinical trials, no clinically significant changes were seen in the ECGs of either group.

Liver Function Tests: In placebo-controlled clinical trials, patients treated with paroxetine exhibited abnormal values on liver function tests at no greater rate than that seen in placebo-treated patients. In particular, the paroxetine vs placebo comparisons for alkaline phosphatase, SGOT, SGPT, and bilirubin revealed no differences in the percentage of patients with marked abnormalities.

Hallucinations: In pooled clinical trials of immediate-release paroxetine hydrochloride, hallucinations were observed in 22 of 9089 patients receiving drug and 4 of 3187 patients receiving placebo.

Other Events Observed During the Premarketing Evaluation of Paroxetine

During its premarketing assessment in MDD, multiple doses of paroxetine were administered to 6145 patients in phase 2 and 3 studies. The conditions and duration of exposure to paroxetine varied greatly and included (in overlapping categories) open and double-blind studies, uncontrolled and controlled studies, inpatient and outpatient studies, and fixed-dose and titration studies. During premarketing clinical trials in OCD, PD, and GAD, 542, 469, and 735 patients, respectively, received multiple doses of paroxetine. Untoward events associated with this exposure were recorded by clinical investigators using terminology of their own choosing. Consequently, it is not possible to provide a meaningful estimate of the proportion of individuals experiencing adverse events without first grouping similar types of untoward events into a smaller number of standardized event categories.

In the tabulations that follow, reported adverse events were classified using a standard COSTART-based Dictionary terminology. The frequencies presented, therefore, represent the proportion of the 9089 patients exposed to multiple doses of paroxetine who experienced an event of the type cited on at least one occasion while receiving paroxetine. All reported events are included except those already listed in [Tables 2 to 4](#), those reported in terms so general as to be uninformative, and those events where a drug cause was remote.

It is important to emphasize that although the events reported occurred during treatment with paroxetine, they were not necessarily caused by it.

Events are further categorized by body system and listed in order of decreasing frequency according to the following definitions: frequent adverse events are those occurring on one or more occasions in at least 1/100 patients (only those not already listed in the tabulated results from placebo-controlled trials appear in this listing); infrequent adverse events are those occurring in 1/100 to 1/1000 patients; rare events are those occurring in fewer than 1/1000 patients. Events of major clinical importance are also described in the PRECAUTIONS section.

Body as a Whole: *infrequent:* allergic reaction, chills, face edema, malaise, neck pain; *rare:* adrenergic syndrome, cellulitis, moniliasis, neck rigidity, pelvic pain, peritonitis, sepsis, ulcer.
Cardiovascular System: frequent: hypertension, tachycardia; *infrequent* : bradycardia,

hematoma, hypotension, migraine, postural hypotension, syncope; *rare*: angina pectoris, arrhythmia nodal, atrial fibrillation, bundle branch block, cerebral ischemia, cerebrovascular accident, congestive heart failure, heart block, low cardiac output, myocardial infarction, myocardial ischemia, pallor, phlebitis, pulmonary embolus, supraventricular extrasystoles, thrombophlebitis, thrombosis, varicose vein, vascular headache, ventricular extrasystoles.

Digestive System: *infrequent*: bruxism, colitis, dysphagia, eructation, gastritis, gastroenteritis, gingivitis, glossitis, increased salivation, liver function tests abnormal, rectal hemorrhage, ulcerative stomatitis; *rare*: aphthous stomatitis, bloody diarrhea, bulimia, cardiospasm, cholelithiasis, duodenitis, enteritis, esophagitis, fecal impactions, fecal incontinence, gum hemorrhage, hematemesis, hepatitis, ileitis, ileus, intestinal obstruction, jaundice, melena, mouth ulceration, peptic ulcer, salivary gland enlargement, sialadenitis, stomach ulcer, stomatitis, tongue discoloration, tongue edema, tooth caries.

Endocrine System: *rare*: diabetes mellitus, goiter, hyperthyroidism, hypothyroidism, thyroiditis.

Hemic and Lymphatic Systems: *infrequent*: anemia, leukopenia, lymphadenopathy, purpura; *rare*: abnormal erythrocytes, basophilia, bleeding time increased, eosinophilia, hypochromic anemia, iron deficiency anemia, leukocytosis, lymphedema, abnormal lymphocytes, lymphocytosis, microcytic anemia, monocytosis, normocytic anemia, thrombocythemia, thrombocytopenia.

Metabolic and Nutritional: *frequent*: weight gain; *infrequent*: edema, peripheral edema, SGOT increased, SGPT increased, thirst, weight loss; *rare*: alkaline phosphatase increased, bilirubinemia, BUN increased, creatinine phosphokinase increased, dehydration, gamma globulins increased, gout, hypercalcemia, hypercholesteremia, hyperglycemia, hyperkalemia, hyperphosphatemia, hypocalcemia, hypoglycemia, hypokalemia, hyponatremia, ketosis, lactic dehydrogenase increased, non-protein nitrogen (NPN) increased.

Musculoskeletal System: *frequent*: arthralgia; *infrequent*: arthritis, arthrosis; *rare*: bursitis, myositis, osteoporosis, generalized spasm, tenosynovitis, tetany.

Nervous System: *frequent*: emotional lability, vertigo; *infrequent*: abnormal thinking, alcohol abuse, ataxia, dystonia, dyskinesia, euphoria, hallucinations, hostility, hypertonia, hypesthesia, hypokinesia, incoordination, lack of emotion, libido increased, manic reaction, neurosis, paralysis, paranoid reaction; *rare*: abnormal gait, akinesia, antisocial reaction, aphasia, choreoathetosis, circumoral paresthesias, convulsion, delirium, delusions, diplopia, drug dependence, dysarthria, extrapyramidal syndrome, fasciculations, grand mal convulsion, hyperalgesia, hysteria, manic-depressive reaction, meningitis, myelitis, neuralgia, neuropathy, nystagmus, peripheral neuritis, psychotic depression, psychosis, reflexes decreased, reflexes increased, stupor, torticollis, trismus, withdrawal syndrome.

Respiratory System: *infrequent*: asthma, bronchitis, dyspnea, epistaxis, hyperventilation, pneumonia, respiratory flu; *rare*: emphysema, hemoptysis, hiccups, lung fibrosis, pulmonary edema, sputum increased, stridor, voice alteration.

Skin and Appendages: *frequent*: pruritus; *infrequent*: acne, alopecia, contact dermatitis, dry skin, ecchymosis, eczema, herpes simplex, photosensitivity, urticaria; *rare*: angioedema, erythema nodosum, erythema multiforme, exfoliative dermatitis, fungal dermatitis, furunculosis, herpes zoster, hirsutism, maculopapular rash, seborrhea, skin discoloration, skin hypertrophy, skin ulcer, sweating decreased, vesiculobullous rash.

Special Senses: *frequent*: tinnitus; *infrequent*: abnormality of accommodation, conjunctivitis, ear pain, eye pain, keratoconjunctivitis, mydriasis, otitis media; *rare*: amblyopia, anisocoria, blepharitis, cataract, conjunctival edema, corneal ulcer, deafness, exophthalmos, eye hemorrhage, glaucoma, hyperacusis, night blindness, otitis externa, parosmia, photophobia, ptosis, retinal hemorrhage, taste loss, visual field defect.

Urogenital System: *infrequent*: amenorrhea, breast pain, cystitis, dysuria, hematuria, menorrhagia, nocturia, pyuria, polyuria, urinary incontinence, urinary

retention, urinary urgency, vaginitis; *rare*: abortion, breast atrophy, breast enlargement, endometrial disorder, epididymitis, female lactation, fibrocystic breast, kidney calculus, kidney pain, leukorrhea, mastitis, metrorrhagia, nephritis, oliguria, salpingitis, urethritis, urinary casts, uterine spasm, urolith, vaginal hemorrhage, vaginal moniliasis.

Postmarketing Reports

Voluntary reports of adverse events in patients taking paroxetine that have been received since market introduction and not listed above that may have no causal relationship with the drug include acute pancreatitis, elevated liver function tests (the most severe cases were deaths due to liver necrosis, and grossly elevated transaminases associated with severe liver dysfunction), Guillain-Barré syndrome, Stevens-Johnson syndrome, toxic epidermal necrolysis, priapism, syndrome of inappropriate ADH secretion, symptoms suggestive of prolactinemia and galactorrhea; extrapyramidal symptoms which have included akathisia, bradykinesia, cogwheel rigidity, dystonia, hypertonia, oculogyric crisis which has been associated with concomitant use of pimozide, tremor and trismus; status epilepticus, acute renal failure, pulmonary hypertension, allergic alveolitis, anaphylaxis, eclampsia, laryngismus, optic neuritis, porphyria, restless legs syndrome (RLS), ventricular fibrillation, ventricular tachycardia (including torsade de pointes), thrombocytopenia, hemolytic anemia, events related to impaired hematopoiesis (including aplastic anemia, pancytopenia, bone marrow aplasia, and agranulocytosis), and vasculitic syndromes (such as Henoch-Schönlein purpura), and premature births in pregnant women.

There has been a case report of an elevated phenytoin level after 4 weeks of paroxetine and phenytoin coadministration. There has been a case report of severe hypotension when paroxetine was added to chronic metoprolol treatment.

DRUG ABUSE AND DEPENDENCE

Controlled Substance Class: Paroxetine is not a controlled substance.

Physical and Psychologic Dependence: Paroxetine has not been systematically studied in animals or humans for its potential for abuse, tolerance, or physical dependence. While the clinical trials did not reveal any tendency for any drug-seeking behavior, these observations were not systematic and it is not possible to predict on the basis of this limited experience the extent to which a CNS-active drug will be misused, diverted, and/or abused once marketed. Consequently, patients should be evaluated carefully for history of drug abuse, and such patients should be observed closely for signs of PEXEVA® (paroxetine mesylate) misuse or abuse (eg, development of tolerance, incrementations of dose, drug-seeking behavior).

OVERDOSAGE

Human Experience: Since the introduction of paroxetine in the US, 342 spontaneous cases of deliberate or accidental overdose during paroxetine treatment have been reported worldwide (circa 1999). These include overdoses with paroxetine alone and in combination with other substances. Of these, 48 cases were fatal and, of the fatalities, 17 appeared to involve paroxetine alone. Eight fatal cases which documented the amount of paroxetine ingested were generally confounded by the ingestion of other drugs or alcohol or the presence of significant comorbid conditions. Of 145 non-fatal cases with known outcome, most recovered without sequelae. The

treatment phase has demonstrated a benefit of such maintenance (see [CLINICAL PHARMACOLOGY—Clinical Trials](#)). Nevertheless, patients should be periodically reassessed to determine the need for maintenance treatment.

Special Populations

Treatment of Pregnant Women During the Third Trimester: Neonates exposed to paroxetine and other SSRIs or SNRIs late in the third trimester have developed complications requiring prolonged hospitalization, respiratory support, and tube feeding (see [PRECAUTIONS](#)). When treating pregnant women with paroxetine during the third trimester, the physician should carefully consider the potential risks and benefits of treatment.

Dosage for Elderly or Debilitated, and Patients with Severe Renal or Hepatic Impairment: The recommended initial dose is 10 mg/day for elderly patients, debilitated patients, and/or patients with severe renal or hepatic impairment. Increases may be made if indicated. Dosage should not exceed 40 mg/day.

Switching a Patient To or From a Monoamine Oxidase Inhibitor (MAOI) Intended to Treat Psychiatric Disorders:

At least 14 days should elapse between discontinuation of an MAOI intended to treat psychiatric disorders and initiation of therapy with PEXEVA®. Conversely, at least 14 days should be allowed after stopping PEXEVA® before starting an MAOI intended to treat psychiatric disorders (see [CONTRAINDICATIONS](#)).

Use of PEXEVA® With Other MAOIs, Such as Linezolid or Methylene Blue:

Do not start PEXEVA® in a patient who is being treated with linezolid or intravenous methylene blue because there is increased risk of serotonin syndrome. In a patient who requires more urgent treatment of a psychiatric condition, other interventions, including hospitalization, should be considered (see [CONTRAINDICATIONS](#)).

In some cases, a patient already receiving PEXEVA® therapy may require urgent treatment with linezolid or intravenous methylene blue. If acceptable alternatives to linezolid or intravenous methylene blue treatment are not available and the potential benefits of linezolid or intravenous methylene blue treatment are judged to outweigh the risks of serotonin syndrome in a particular patient, PEXEVA® should be stopped promptly, and linezolid or intravenous methylene blue can be administered. The patient should be monitored for symptoms of serotonin syndrome for 2 weeks or until 24 hours after the last dose of linezolid or intravenous methylene blue, whichever comes first. Therapy with PEXEVA® may be resumed 24 hours after the last dose of linezolid or intravenous methylene blue (see [WARNINGS](#)).

The risk of administering methylene blue by non-intravenous routes (such as oral tablets or by local injection) or in intravenous doses much lower than 1 mg/kg with PEXEVA® is unclear. The clinician should, nevertheless, be aware of the possibility of emergent symptoms of serotonin syndrome with such use (see [WARNINGS](#)).

Discontinuation of Treatment with PEXEVA® (paroxetine mesylate): Symptoms associated with discontinuation of paroxetine have been reported (see [PRECAUTIONS](#)). Patients should be monitored for these symptoms when discontinuing treatment, regardless of the indication for which paroxetine is being prescribed. A gradual reduction in the dose rather than abrupt

cessation is recommended whenever possible. If intolerable symptoms occur following a decrease in the dose or upon discontinuation of treatment, then resuming the previously prescribed dose may be considered. Subsequently, the physician may continue decreasing the dose but at a more gradual rate.

HOW SUPPLIED

Tablets:

Film-coated, modified-oval tablets as follows:

10 mg white tablets with the inscription POT 10 on one side.

NDC 54766-201-01 Bottles of 30

20 mg dark orange tablets with the inscription POT 20 on one side.

The tablets are scored on both sides.

NDC 54766-202-01 Bottles of 30

30 mg yellow tablets with the inscription POT 30 on one side.

NDC 54766-203-01 Bottles of 30

40 mg rose tablets with the inscription POT 40 on one side.

NDC 54766-204-01 Bottles of 30

Protect from Humidity. Store at 25°C (77°F); excursions permitted to 15°-30°C

(59° and 86°F) (see USP Controlled Room Temperature)

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Rx only

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Medication Guide

PEXEVA® (pex-EE-va)

(paroxetine mesylate)

Read the Medication Guide that comes with PEXEVA® before you start taking it and each time you get a refill. There may be new information. This Medication Guide does not take the place of

talking to your healthcare provider about your medical condition or treatment. Talk with your healthcare provider if there is something you do not understand or want to learn more about.

What is the most important information I should know about PEXEVA®?

PEXEVA® and other antidepressant medicines may cause serious side effects, including:

1. Suicidal thoughts or actions:

- **PEXEVA® and other antidepressant medicines may increase suicidal thoughts or actions** in some children, teenagers, or young adults within the **first few months of treatment or when the dose is changed.**
- Depression or other serious mental illnesses are the most important causes of suicidal thoughts or actions.
- Watch for these changes and call your healthcare provider right away if you notice:
- New or sudden changes in mood, behavior, actions, thoughts, or feelings, especially if severe.
- Pay particular attention to such changes when PEXEVA® is started or when the dose is changed.

Keep all follow-up visits with your healthcare provider and call between visits if you are worried about symptoms.

Call your healthcare provider right away if you have any of the following symptoms, or call 911 if an emergency, especially if they are new, worse, or worry you:

- attempts to commit suicide
- acting on dangerous impulses
- acting aggressive or violent
- thoughts about suicide or dying
- new or worse depression
- new or worse anxiety or panic attacks
- feeling agitated, restless, angry or irritable
- trouble sleeping
- an increase in activity or talking more than what is normal for you
- other unusual changes in behavior or mood

Call your healthcare provider right away if you have any of the following symptoms, or call 911 if an emergency. PEXEVA® may be associated with these serious side effects:

2. Serotonin Syndrome. This condition can be life-threatening and 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
- sweating or fever
- nausea, vomiting, or diarrhea
- muscle rigidity

3. 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.

4. Severe allergic reactions:

- trouble breathing
- swelling of the face, tongue, eyes or mouth
- rash, itchy welts (hives) or blisters, alone or with fever or joint pain

5. Abnormal bleeding: PEXEVA® 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 (NSAID's, like ibuprofen or naproxen), or aspirin.

6. Seizures or convulsions

7. Manic episodes:

- greatly increased energy
- severe trouble sleeping
- racing thoughts
- reckless behavior
- unusually grand ideas
- excessive happiness or irritability
- talking more or faster than usual

8. Changes in appetite or weight. Children and adolescents should have height and weight monitored during treatment.

9. Low salt (sodium) levels in the blood. Elderly people may be at greater risk for this. Symptoms may include:

- headache
- weakness or feeling unsteady
- confusion, problems concentrating or thinking or memory problems

Do not stop PEXEVA® without first talking to your healthcare provider. Stopping PEXEVA® too quickly may cause serious symptoms including:

- anxiety, irritability, high or low mood, feeling restless or changes in sleep habits
- headache, sweating, nausea, dizziness
- electric shock-like sensations, shaking, confusion

What is PEXEVA®?

PEXEVA® is a prescription medicine used to treat depression. It is important to talk with your healthcare provider about the risks of treating depression and also the risks of not treating it. You should discuss all treatment choices with your healthcare provider.

PEXEVA® is also used to treat:

- Major Depressive Disorder (MDD)
- Obsessive Compulsive Disorder (OCD)
- Panic Disorder
- Generalized Anxiety Disorder (GAD)

Talk to your healthcare provider if you do not think that your condition is getting better with PEXEVA® treatment.

Who should not take PEXEVA®?

Do not take PEXEVA® if you:

- are allergic to paroxetine mesylate or any of the ingredients in PEXEVA®. See the end of this Medication Guide for a complete list of ingredients in PEXEVA®.
- take a Monoamine Oxidase Inhibitor (MAOI). Ask your healthcare provider or pharmacist if you are not sure if you take an MAOI.
- Do not take an MAOI within 2 weeks of stopping PEXEVA® unless directed to do so by your physician.
- Do not start PEXEVA® if you stopped taking an MAOI in the last 2 weeks unless directed to do so by your physician.
- **People who take PEXEVA® close in time to an MAOI may have serious or even life-threatening side effects. Get medical help right away if you have any of these symptoms:**
 - high fever
 - uncontrolled muscle spasms
 - stiff muscles
 - rapid changes in heart rate or blood pressure
 - confusion
 - loss of consciousness (pass out)
- **take Mellaril® (thioridazine). Do not take Mellaril® together with PEXEVA® because this can cause serious heart rhythm problems or sudden death.**
- **take the antipsychotic medicine pimozide (Orap®) because this can cause serious heart problems.**

What should I tell my healthcare provider before taking PEXEVA®? Ask if you are not sure.

Before starting PEXEVA®, tell your healthcare provider if you:

- are pregnant, may be pregnant, or plan to become pregnant. There is a possibility that PEXEVA® may harm your unborn baby, including an increased risk of birth defects,

particularly heart defects. Other risks include a serious condition in which there is not enough oxygen in the baby's blood. Your baby may also have certain other symptoms shortly after birth. Premature births have also been reported in some women who used PEXEVA during pregnancy.

- are breastfeeding. PEXEVA passes into your milk. Talk to your healthcare provider about the best way to feed your baby while taking PEXEVA.
- are taking certain drugs such as:
 - triptans used to treat migraine headache
 - other antidepressants (SSRI's, SNRI's, tricyclics, or lithium) or antipsychotics
 - drugs that affect serotonin such as lithium, tramadol, tryptophan, amphetamines, St. John's wort
 - certain drugs used to treat irregular heart beats
 - certain drugs used to treat schizophrenia
 - certain drugs used to treat HIV infection
 - certain drugs that affect the blood such as warfarin, aspirin, and ibuprofen
 - certain drugs used to treat epilepsy
 - atomoxetine
 - cimetidine
 - fentanyl
 - metoprolol
 - pimozide
 - procyclidine
 - tamoxifen
 - have liver problems
 - have kidney problems
 - have heart problems
 - have or had seizures or convulsions
 - have bipolar disorder or mania
 - have low sodium levels in your blood
 - have a history of a stroke
 - have high blood pressure
 - have or had bleeding problems
 - have glaucoma (high pressure in the eye).

Tell your healthcare provider about all the medicines that you take, including prescription and non-prescription medicines, vitamins, and herbal supplements. PEXEVA® and some medicines may interact with each other, may not work as well, or may cause serious side effects.

Your healthcare provider or pharmacist can tell you if it is safe to take PEXEVA® with your other medicines. Do not start or stop any medicine while taking PEXEVA® without talking to your healthcare provider first.

If you take PEXEVA®, you should not take any other medicines that contain paroxetine including: PAXIL® and PAXIL CR®.

How should I take PEXEVA®?

- Take PEXEVA® exactly as prescribed. Your healthcare provider may need to change the dose of PEXEVA® until it is the right dose for you.
- PEXEVA® may be taken with or without food.
- If you miss a dose of PEXEVA®, take the missed dose as soon as you remember. If it is almost time for the next dose, skip the missed dose and take your next dose at the regular time. Do not take two doses of PEXEVA® at the same time.
- If you take too much PEXEVA®, call your healthcare provider or poison control center right away, or get emergency treatment.
- Do not stop taking PEXEVA® suddenly without talking to your doctor (unless you have symptoms of a severe allergic reaction). If you need to stop taking PEXEVA®, your healthcare provider can tell you how to safely stop taking it.

What should I avoid while taking PEXEVA®?

PEXEVA® can cause sleepiness or may affect your ability to make decisions, think clearly, or react quickly. You should not drive, operate heavy machinery, or do other dangerous activities until you know how PEXEVA® affects you. Do not drink alcohol while using PEXEVA®.

What are the possible side effects of PEXEVA®?

PEXEVA® may cause serious side effects, including all of those described in the section entitled “What is the most important information I should know about PEXEVA®?”

Common possible side effects in people who take PEXEVA® include:

- Nausea
- Sleepiness
- Weakness
- Dizziness
- Feeling anxious
- Trouble sleeping
- Sexual problems
- Sweating
- Shaking
- Not feeling hungry
- Dry mouth
- Constipation
- Infection
- Yawning

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 PEXEVA®. For more information, ask your healthcare provider or pharmacist.

CALL YOUR DOCTOR FOR MEDICAL ADVICE ABOUT SIDE EFFECTS. YOU MAY REPORT SIDE EFFECTS TO THE FDA AT 1-800-FDA-1088.

How should I store PEXEVA®?

- Store PEXEVA® at room temperature between 59°F and 86°F (15°C to 30°C).
- Keep PEXEVA® away from light.
- Keep PEXEVA® bottle closed tightly.

Keep PEXEVA® and all medicines out of the reach of children.**General information about PEXEVA®**

Medicines are sometimes prescribed for purposes other than those listed in a Medication Guide. Do not use PEXEVA® for a condition for which it was not prescribed. Do not give PEXEVA® to other people, even if they have the same condition. It may harm them.

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

For more information about PEXEVA® call (1-844-732-3521) or go to www.PEXEVA.com.

What are the ingredients in PEXEVA®?

Active ingredient: paroxetine mesylate

Inactive ingredients: dibasic calcium phosphate, hydroxypropyl methylcellulose, hydroxypropylcellulose, magnesium stearate, sodium starch glycolate, titanium dioxide, and iron oxide(s)

Distributed by:

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