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February 21, 2002

Redacted

Dear Dr Redacted

Your representative, Michael Santeramo, forwarded your request for information regarding the use of Paxil® (paroxetine hydrochloride) for the treatment of depression, obsessive compulsive disorder (OCD), panic disorder, social anxiety disorder (social phobia) or generalized anxiety disorder (GAD) in children and/or adolescents.

SUMMARY

- *Paxil* is not FDA-approved for use in children or adolescents; therefore, we may not offer any recommendations regarding the use of *Paxil* in these patients.

- A search of the Medical Information Department's published literature database and MEDLINE identified several studies and case reviews discussing the use of *Paxil* in children or adolescents for the treatment of depression, OCD, panic disorder or social anxiety disorder. In the identified publications patient ages ranged from 5 to 18 years.

- A double-blind, placebo-controlled study by Keller et al evaluated treatment of *Paxil* and imipramine in adolescents with depression. In this study *Paxil* was superior to placebo by several assessment methods, including 1) response defined as Hamilton Depression Rating Scale (HAM-D) total score ≤ 8; 2) HAM-D depressed mood item; 3) the Schedule for Affective Disorders and Schizophrenia for School-age Children – Lifetime version (K-SADS-L) depressed mood item; and 4) CGI-I score of 1 (very much improved) or 2 (much improved). *Paxil* was better tolerated than treatment with imipramine.

- Another study in depression showed numerical improvement in response based on Montgomery Asberg Depression Rating Scale (MADRS) after treatment with *Paxil* versus placebo, however statistical significance was not reached. Two additional open-label studies and one retrospective study reported improvement in depression symptoms with the treatment of *Paxil*.

- The use of *Paxil* in the treatment of children and adolescents with OCD has been evaluated in several open-label studies. Overall, treatment with *Paxil* has shown an improvement in OCD symptoms. In a study of children and adolescents with OCD who had comorbid psychiatric conditions, this group was found to be more likely to relapse following discontinuation of treatment than those patients without comorbidity.

- A retrospective study by Masi et al evaluated treatment of *Paxil* in children and adolescents with panic disorder. *Paxil* was shown to be effective based on the Clinical Global Impression Severity (CGI-S) scale. In addition, there are published case reports in this population.

- Published data regarding the use of *Paxil* in children or adolescents for the treatment of social anxiety disorder are limited to a few case reports. No studies or case reports were identified that discussed the use of *Paxil* for the treatment of GAD.

- Findling et al conducted a pharmacokinetic study in children and adolescents with depression which demonstrated many similarities between adults and children in terms of pharmacokinetics. However, the half-life was considerably shorter in the younger patients compared to adults suggesting more rapid clearance.

- Conclusions regarding the efficacy and safety of *Paxil* in children and adolescents for the treatment of depression, OCD, panic disorder, social anxiety disorder and GAD awaits additional adequately designed, double-blind, placebo-controlled trials.

Depression

Keller et al (2001) conducted an 8-week, double-blind, placebo-controlled, multi-center trial comparing the safety and efficacy of *Paxil* and imipramine with placebo in the treatment of adolescents with major depression. A total of 275 adolescents (12 to 18 years), who met DSM-IV criteria for major depression, were randomized to receive *Paxil* 20 mg/day (n = 93), imipramine 200 mg/day (dose titrated from 50 mg/day over a period of 3 weeks, n = 95), or placebo (n = 87). Patients were treated for a total of eight weeks and 190 patients completed the study. If no response was noted at week 4, treatment could be increased over the next two weeks to a maximum of 40 mg/day of *Paxil* or 300 mg/day of imipramine. For doses of *Paxil* 30-40 mg/day, *Paxil* could be administered in divided doses at the clinician's discretion.

The primary efficacy parameters included the proportion of responders with a ≥ 50% reduction from baseline on the HAM-D or a final HAM-D score of ≤ 8 and the mean change from baseline in HAM-D total scores at endpoint. Secondary assessments included mean Clinical Global Impression Improvement (CGI-I) scores and the 9-item depression subscale of the Schedule for Affective Disorders and Schizophrenia for School-age Children – Lifetime version (K-SADS-L). In the depression-related parameters, *Paxil* was statistically superior to placebo at endpoint among four parameters: 1) response defined as HAM-D ≤ 8; 2) HAM-D depressed mood item; 3) K-SADS-L depressed mood item; and 4) CGI-I score of 1 (very much improved) or 2 (much improved).

Analysis of last observation carried forward (LOCF) at endpoint resulted in significant separation (p = 0.02) between the percentage of responders defined as HAM-D ≤ 8 among those treated with *Paxil* (63.3%) compared to placebo (46%). The percentage of responders in the imipramine group (50%) did not separate from placebo. Analysis of observed cases (OC) at endpoint resulted in significant separation (p = 0.02) between the percentage of responders treated with *Paxil* (76.1%) compared to placebo (57.6%). The percentage of patients treated with *Paxil* who had a CGI-I of 1 or 2 was 65.6% compared to 48.3% with placebo (p = 0.02). Premature withdrawal rates from the study were highest (40%) in the imipramine group (p = 0.02 versus placebo), compared to 28% and 20% in the *Paxil* and placebo groups (p = 0.60 versus placebo), respectively. Withdrawal from the study due to adverse events was (31.5%) in the imipramine group, compared to 9.7% and 6.9% in the *Paxil* and placebo groups, respectively. The most common adverse events during therapy with *Paxil* included headache, nausea, dizziness, dry mouth and somnolence. All of the events were reported in an incidence similar to placebo with the exception of somnolence, *Paxil* 17.2% vs. placebo 3.4%. In the imipramine treatment group, the most common adverse events included dizziness, dry mouth, headache, nausea and tachycardia.

In a double blind, placebo-controlled, multi-center study, the efficacy of *Paxil* and placebo in the treatment of adolescents (ages 13-18 years) with major depression based on DSM-IV criteria was evaluated (Data on File; Milin 1999). Patients were treated with *Paxil* 20-40 mg/day (n = 187) or placebo (n = 99) for 12 weeks. Efficacy was based on the proportion of patients with a ≥ 50% reduction in the MADRS and a change (between baseline and endpoint) in the K-SADS-L. Based on ≥ 50% reduction in the total MADRS score at the end of 12 weeks, treatment results were numerically higher with *Paxil*, however, this result did not reach statistical significance (70% vs 66.2%, p = 0.633). Nausea (24.2%), headache (18.7%) and dizziness (10.4%) were the most commonly reported adverse events in the group treated with *Paxil*.

Rey-Sánchez et al (1997) conducted an open-label study of *Paxil* in the treatment of major depression in children less than 14 years of age. Patients (n = 45, mean age 10.7 years), meeting DSM-III-R criteria for major depressive disorder, were treated with *Paxil* (initial dose 10 mg/day; mean final dose 16 mg/day) in an outpatient setting. Treatment was continued until the depressive episode was completely resolved. Disease severity was measured utilizing a 5-point Clinical Global Severity scale (CGI-S) at baseline, month 1,

month 3 and at the end of treatment. Response was reported as the intensity of therapeutic response (ITR), a reflection of point change in CGI-S. At baseline, the mean CGI-S was 3.0. At month 1, the mean CGS was 2.2 (mean ITR = 0.8) and at month 3 the mean CGI-S was 1.2 (mean ITR = 1.8). A complete remission of symptoms was reported in all patients at the end of treatment (mean duration 8.4 months). No patient experienced a worsening of symptoms. Patients were permitted to receive benzodiazepines during the study if needed; 16/45 (36%) patients were treated as such for insomnia or acute anxiety. Adverse events were reported in 4/45 (9.5%) of the patients (vomiting during the first four days of treatment, anxiety and nervousness, abdominal pain, abdominal cramps and nausea). These events were reported as mild to moderate with no patient withdrawals.

Masi et al (1997) reported improvement in four of seven patients (ages 14 to 18 years) with intellectual disability (IQ range 53 to 68) treated with *Paxil* (20 to 40 mg/day) for major depressive disorder. Adverse events included sedation, insomnia, nausea and dyspepsia. In a retrospective review, Rodriguez-Ramos et al (1996) reported findings in 25 adolescents, aged 13 to 17 years, treated with *Paxil* 10 to 40 mg/day for either primary or secondary depression. Total remission was reported for 11/25 (44%) patients, improvement with residual symptoms in 8/25 (32%) patients, and no change in 4/25 (16%) patients. Common adverse events included asthenia, somnolence and nausea. Two patients withdrew from the treatment due to adverse events (dizziness with hypotension, anxiety).

Obsessive Compulsive Disorder

Carpenter et al (2000) reported on the safety and efficacy of *Paxil* for the treatment of OCD in children (8 to 11 years; n = 167) and adolescents (12 to 17 years; n = 168). Following 16 weeks of open-label therapy of *Paxil* 10 to 60 mg/day, responders, defined as a ≥ 25% decrease in the Children's Yale-Brown Obsessive Compulsive Scale (CY-BOCS) score and a CGI-I score of 1 or 2, were randomized to receive *Paxil* or placebo in a double-blind 16-week extension. The baseline mean CY-BOCS score was 26.3. During the first phase of the study, the mean CY-BOCS score was reduced by 13. Of those completing the first 16 weeks of the study, 86% met response criteria. After the double-blind phase, 28.9% in the *Paxil* group experienced a further decrease in CY-BOCS score compared to 14.4% in the placebo group (p = 0.023). Mean increase, or worsening, in CY-BOCS score was +3.6 in the *Paxil* group compared to +6.9 in the placebo group (p = 0.008). While relapse rates (defined as any worsening of CGI-I score for two consecutive visits or a worsening of 2 or more points at any single visit) were lower for *Paxil* (34.7%) compared to placebo (43.9%), the findings did not reach statistical significance (p = 0.136).

Adverse events leading to discontinuation were generally low; the most common events included hostility (2.7%), hyperkinesia (2.1%) and agitation (1.8%). Even though the incidence of adverse events was similar in children and adolescents, agitation (11.4% vs 3.6%), hyperkinesia (14.4% vs 8.3%), trauma (18.6% vs 8.3%), infection (12.0% vs

7.1%), manic reaction (4.2% vs 0.6%) and myoclonus (9.6% vs 4.8%) were reported more frequently in the younger age group.

Wagner et al. (2001) also reported on this study regarding the safety of *Paxil* for the treatment of OCD (n = 335). Adverse events, laboratory test results, vital signs, and ECGs were evaluated to determine safety. Headache (24.5%), asthenia (21.5%), and insomnia (21.2%) were the most commonly reported adverse events.

In a post-hoc analysis, Gellar et al (2001) evaluated the influence of psychiatric comorbidity on response and relapse rates in children and adolescents with OCD (n = 335) treated with *Paxil*. Upon entering the study, 57.6% patients had at least one psychiatric disorder in addition to OCD and 30.4% of these OCD patients had multiple disorders (≥ 2). Overall, the response rates in patients with comorbid conditions did not differ significantly from patients without comorbid conditions (68% vs 75%, respectively, $p = 0.163$). The response rates in patients with tic disorders, ADHD, or oppositional defiant disorder (53%, 56%, and 39%) were significantly less than those patients with only OCD (75%, $p < 0.05$). The presence of comorbid psychiatric disorders was associated with a statistically significant increase in relapse rate in the placebo group only ($p < 0.05$). This suggests that continued *Paxil* administration may prevent relapse in patients with comorbid conditions.

Diler et al (2000) conducted a 12-week, open-label study to assess the safety and effectiveness of paroxetine in 47 pediatric patients with OCD (DSM-IV criteria) not previously treated for the condition. Of the enrolled patients (aged 9 to 15 years), 19 (40%) had one comorbid diagnosis, 8 (17%) had two comorbid diagnoses, 4 (9%) had three comorbid diagnoses and 16 (34%) had no comorbid diagnoses. The comorbid diagnoses were major depression (n = 14), social anxiety disorder (n = 10), Tourette's syndrome (n = 5), generalized anxiety disorder (n = 4), panic disorder (n = 4), stuttering (n = 4), conversion disorder (n = 4), attention-deficit hyperactivity disorder (n = 2), conduct disorder (n = 2), trichotillomania (n = 2), encopresis (n = 1), and night terror (n = 1). Patients started treatment with paroxetine 10 mg/day for one week and were increased to a fixed dose of paroxetine 20 mg/day for five weeks; for the following six weeks the treating psychiatrist could maintain or change the dosage based on efficacy or adverse events. During the study, the mean dose was paroxetine 20.7 mg/day. No additional medication was used. Efficacy was assessed at baseline, weeks 3, 6 and 12 by Maudsley Obsessive Compulsive Inventory (MOCI), Children's Depression Inventory (CDI), Clinical Global Impressions-Severity of illness (CGI-SI) scale and Spielberger's State-Trait Anxiety Inventory for Children (SAI-C and TAI-C). Adverse events were assessed by the Adverse Experience Scale and the CGI-Adverse Effects scale.

At week 6, evaluation of 42 patients (five patients withdrew at week 6 due to noncompliance with study protocol) revealed significantly lower scores on the total MOCI, CDI, SAI-C, TAI-C and CGI-SI scale. These findings were sustained at study endpoint. At week 12, 61.9% (26) patients showed ≥ 50% improvement according to the MOCI. The mean reduction in the CGI-SI score was 56.8% ± 19.4%. The most commonly reported adverse events included sleepiness (23.4%), increase in anger (8.5%)

and fatigue (8.5%). The percentage of patients with no adverse events increased from 34.5% at week 3 to 64.3% at week 12. No patient experienced adverse events severe enough to discontinue the drug.

Rosenberg et al (1999) conducted a 12-week, open-label trial of *Paxil* in 20 children (9 boys, 11 girls) ages 8 to 17 years with OCD (DSM-IV criteria). Twelve of the children had comorbid psychiatric conditions including anxiety disorders other than OCD (n = 3), eating disorders (n = 3), trichotillomania (n = 1), attention-deficit hyperactivity disorder (n = 1), dysthymia (n = 1), oppositional defiant disorder (n = 1) and tic-related/Tourette's disorder (n = 2). Response assessments were made at baseline and weeks 2, 4, 6, 8 and 12. Response was evaluated utilizing the CY-BOCS, the Children's Global Assessment Scale (CGAS) and the CGI scale. In addition, the severity of tics and anxiety was evaluated with the Yale Global Tic Severity Scale and the Hamilton Anxiety Rating Scale (HAM-A) at baseline and weeks 4, 8 and 12.

Paxil was initiated at 10 mg/day in all patients and could be increased in increments of 10 mg/day every two weeks up to a maximum of 60 mg/day (final mean dose 41 mg/day). Nineteen patients completed 12 weeks of treatment; the remaining patient was assessed at week 8 and was included in the analysis. A significant (p = 0.0001) reduction in CY-BOCS scores from baseline was noted at endpoint. Significant improvements in CGAS scores (p = 0.0001) and CGI scores (p = 0.0001) were also noted (Table 1).

Table 1: Treatment Response at Endpoint

	Baseline	Endpoint	p value
CY-BOCS	30.55 ± 3.50	21.60 ± 6.83	0.0001
CGAS*	46.79 ± 7.34	57.47 ± 7.89	0.0001
CGI	5.63 ± 0.60	4.26 ± 1.04	0.0001

* increase scores indicates improvement

In general, OCD response did not appear to correlate with any comorbid disorders. The two patients with tics did not respond to treatment and one of these patients experienced a worsening of tics. Adverse events were rated every two weeks on the Adverse Experience Scale. Mild adverse events included hyperactivity/behavioral disinhibition (n = 6), headache (n = 5), insomnia (n = 3) gastrointestinal distress (n = 3), increased anxiety (n = 2), drowsiness (n = 1) and dry mouth (n = 1); severe treatment-emergent adverse events included suicidal ideation (n = 1) and increased tics (n = 1). The authors noted that they did not observe any hypomania or mania in these patients.

Thomsen et al (1999) examined the addition of buspirone to existing selective serotonin reuptake inhibitor (SSRI) therapy in six adolescents with OCD. Of these patients, one 15-year-old male was treated with paroxetine. After three months of treatment with paroxetine 60 mg/day (starting dose or titration schedule not provided), there was a reduction of Y-BOCS score from 33 to 28. After approximately 6 weeks of combination therapy with paroxetine and buspirone 20 mg/day, his Y-BOCS score was 22. In addition, a decrease in the subject's obsessive-compulsive symptoms was noted. Specifically, a

reduction in his evening rituals and less anxiety when trying to resist compulsions. The subject reported extreme tiredness after three weeks of combination therapy, but this dissipated after week 5.

Panic Disorder

Masi et al (2001) conducted a retrospective study in a natural setting evaluating the safety and efficacy of *Paxil* in the treatment of children and adolescents with panic disorder. A total of 18 patients (7 to 16 years) meeting the DSM-IV criteria for panic disorder were started on *Paxil* (mean initial dose of 8.9 mg/day) and were gradually increased to 40 mg/day, depending on clinical response and adverse events. No concomitant drugs were allowed. Sixteen of these patients had co-morbid conditions, most commonly GAD (55.6%). Patients with mental retardation, pervasive developmental disorder, psychotic disorder, severe motor disorders, and sensory disorders were excluded from the study.

Clinical status was assessed retrospectively at every visit by a 5-point CGI-Severity scale. Based on the CGI scale, 15 patients (83.3%) were considered responders at the final evaluation ($p < 0.0001$). Symptoms improved at a mean dose of 22 mg/day after approximately 21.87 days. The treatment duration in this study was approximately 12 months (mean 11.7 months) with a mean dosage at the final observation of 23.9 mg/day. The most common adverse events were nausea ($n = 7$), tension-agitation ($n = 7$), sedation ($n = 6$), insomnia ($n = 4$), palpitations ($n = 4$), and headache ($n = 4$). In this small study, *Paxil* was well tolerated and effective in children and adolescents with panic disorder.

Response to treatment with a number of different SSRIs, including *Paxil* was evaluated in an naturalistic, open-label study consisting of two phases: an acute treatment period consisting of six to eight weeks and follow-up phase lasting approximately six months (Renaud, 1999). Twelve patients, ages 7 to 17 years (mean age 16 years), with panic disorder (DSM-IV criteria) were included in the study, including eight patients with another comorbid anxiety disorder (generalized anxiety, separation anxiety, social phobia). Assessments were made utilizing a variety of anxiety scales, panic disorder scales, the CGI scale and the CGAS. The frequency of panic attacks was not noted.

Patients were treated with fluoxetine unless there was a previous unsuccessful trial with fluoxetine or the patient refused it. Two patients were treated with *Paxil* during the acute phase (20 or 60 mg/day) and three were treated with *Paxil* during the follow-up phase (10 to 30 mg/day). Because of the naturalistic nature of the study, eight patients, including one of the patients treated with *Paxil*, received a concomitant benzodiazepine (clonazepam or lorazepam).

At the end of the study (end of follow-up) significant improvement was noted in the mean CGI-Severity scores (baseline 4.4, endpoint 2.2, $p = 0.002$). The mean time to achieve a CGI-Improvement score of 1 or 2 (much or very much improved) was 10.5 weeks. Significant improvement was also noted with the C-GAS score (baseline 48.3, endpoint 74.3, $p < 0.001$). The two patients treated with *Paxil* throughout the study had

improvements from baseline scores of 51 and 45 to final scores of 82 and 70, respectively. Adverse events were assessed with the Side Effects Form for Children and Adolescents. No significant differences were noted in adverse events from baseline to endpoint.

Social Anxiety Disorder

Mancini et al (1999) reported response to treatment with a serotonergic agent in a consecutive series of seven patients (ages 7 to 18 years) with generalized social anxiety disorder. Five of these patients were treated with *Paxil*; the remaining two patients were treated with sertraline or nefazodone. The initial dose of *Paxil* was in the range of 5 to 20 mg/day. Over a few weeks, the dose was increased until there was a response or the dose was no longer tolerated. The maximum dose ranged from 5 to 80 mg/day. Initial response was seen between week 4 and week 9 of treatment. One adverse event was reported for each of the treatments: somnolence was reported with *Paxil*; diarrhea was reported with sertraline, and difficulty with visual accommodation was reported with nefazodone.

Pharmacokinetics

Findling et al (1999) conducted an 8-week, open study to assess the pharmacokinetics and safety of paroxetine in 30 adolescents (aged 5 to 17 years) with depression (DSM-IV criteria). In addition to DSM-IV criteria, younger patients needed a score of at least 40 on the Children's Depression Rating Scale (CRDS) and older subjects were required to have a HAM-D score $\geq$ 17. Patients were initiated on paroxetine 10 mg/day. After four weeks, the dose could be increased to 20 mg/day based on response. Following a single dose of paroxetine 10 mg, the mean Cmax, Tmax, half-life and area under the curve (AUC) were 5.5 ng/mL (SD 4.0), 5.7 ng/mL (SD 1.9), 11.1 hr (SD 5.2) and 0.09 mcg•hr/mL (SD 0.10), respectively. There were 15 subjects who received paroxetine 10 mg/day for eight weeks. For these patients, the average paroxetine concentration was 12.9 ng/mL (SD 8.4) at week 4 and 7.2 ng/mL (SD 7.5) at week 8. There were eight subjects that had their paroxetine dose increased to 20 mg/day at week 4. For these patients, the average paroxetine concentration was 10.0 ng/mL (SD 9.7) at week 4 and 48.9 ng/mL (SD 47.5) at week 8. Efficacy results in terms of HAM-D and CRDS were not provided.

Overall, adverse events were mild and transient; gastrointestinal events (e.g., nausea, abdominal cramps) were reported most commonly. The only adverse event that led to treatment discontinuation was hypomania and this occurred in two patients at a dose of 10 mg/day. There were no clinically significant changes in weight, blood pressure, pulse, electrocardiogram, serum chemistry and hematological studies noted.

I appreciate your interest in *Paxil*. The citations noted may contain information on uses, doses, dosage forms, routes of administration or specific patient populations which are not described in the approved prescribing information for *Paxil*. GlaxoSmithKline makes no recommendations beyond those in the approved labeling and suggests that you review the enclosed prescribing information before initiating therapy. If you have further questions regarding our products, please contact the Medical Information Department at 800-366-8900.

Sincerely,

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Medical Information Department

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Enclosures: **Prescribing Information for *Paxil*. PXL0**

Keller MB, et al. J Am Acad Child Adolesc Psychiatry 2001;40(7):762-772.

REV1101

Please add reprint Keller et al PX2808

Thank you

PRESCRIBING INFORMATION

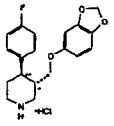
PAXIL®

brand of

aroxetine hydrochloride
blets and oral suspension

DESCRIPTION

Paxil (paroxetine hydrochloride) is an orally administered psychotropic drug. It is the hydrochloride salt of a phenylpiperidine compound identified chemically as (-)-*trans*-4*R*-(4'-fluorophenyl)-3*S*-[(3',4'-methylenedioxyphenoxy) methyl) piperidine hydrochloride hemihydrate and has the empirical formula of $C_{19}H_{20}FNO_3 \cdot HCl \cdot 1/2H_2O$. The molecular weight is 374.8 [329.4 as free base]. The structural formula is:



paroxetine hydrochloride

Paroxetine hydrochloride is an odorless, off-white powder, having a melting point range of 120° to 138°C and a solubility of 5.4 mg/mL n water.

Tablets

Each film-coated tablet contains paroxetine hydrochloride equivalent to paroxetine as follows: 10 mg–yellow (scored); 20 mg–pink scored); 30 mg–blue, 40 mg–green. Inactive ingredients consist of dibasic calcium phosphate dihydrate, hydroxypropyl methylcellulose, nagnesium stearate, polyethylene glycols, polysorbate 80, sodium starch glycolate, titanium dioxide and one or more of the following: D&C Red No. 30, D&C Yellow No. 10, FD&C Blue No. 2, FD&C Yellow No. 6.

Suspension for Oral Administration

Each 5 mL of orange-colored, orange-flavored liquid contains paroxetine hydrochloride equivalent to paroxetine, 10 mg. Inactive ingredi- nts consist of polacrilin potassium, microcrystalline cellulose, propylene glycol, glycerin, sorbitol, methyl paraben, propyl paraben, odium citrate dihydrate, citric acid anhydrate, sodium saccharin, flavorings, FD&C Yellow No. 6 and simethicone emulsion, USP.

CLINICAL PHARMACOLOGY

Pharmacodynamics

he efficacy of paroxetine in the treatment of major depressive disorder, social anxiety disorder, obsessive compulsive disorder (OCD), anic disorder (PD), generalized anxiety disorder (GAD) and posttraumatic stress disorder (PTSD) is presumed to be linked to potenti- tion of serotonergic activity in the central nervous system resulting from inhibition of neuronal reuptake of serotonin (5-hydroxy-typ- amine, 5-HT). Studies at clinically relevant doses in humans have demonstrated that paroxetine blocks the uptake of serotonin into uman platelets. *In vitro* studies in animals also suggest that paroxetine is a potent and highly selective inhibitor of neuronal seroto- in reuptake and has only very weak effects on norepinephrine and dopamine neuronal reuptake. *In vitro* radioligand binding studies ndicate that paroxetine has little affinity for muscarinic, alpha$_1$-, alpha$_2$-, beta-adrenergic-, dopamine (D_2)-, 5-HT_1-, 5-HT_2- and hista- ine (H_1)-receptors; antagonism of muscarinic, histaminergic and alpha$_1$-adrenergic receptors has been associated with various nticholinergic, sedative and cardiovascular effects for other psychotropic drugs.

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

Pharmacokinetics

aroxetine is equally bioavailable from the oral suspension and tablet.

aroxetine hydrochloride is completely absorbed after oral dosing of a solution of the hydrochloride salt. In a study in which normal male ubjects (n=15) received 30 mg tablets daily for 30 days, steady-state paroxetine concentrations were achieved by approximately 10 days r 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 $_{ss}$ were 61.7 ng/mL (CV 45%), 5.2 hr. (CV 10%), 30.7 ng/mL (CV 67%) and 21.0 hr. (CV 32%), respectively. The steady-state C_{max} and C_{min} alues were about 6 and 14 times what would be predicted from single-dose studies. Steady-state drug exposure based on AUC_{0-24} was bout 8 times greater than would have been predicted from single-dose data in these subjects. The excess accumulation is a conse- uence of the fact that one of the enzymes that metabolizes paroxetine is readily saturable.

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

he effects of food on the bioavailability of paroxetine were studied in subjects administered a single dose with and without food. AUC as only slightly increased (6%) when drug was administered with food but the C_{max} was 29% greater, while the time to reach peak asma concentration decreased from 6.4 hours post-dosing to 4.9 hours.

roxetine is extensively metabolized after oral administration. The principal metabolites are polar and conjugated products of oxidation - thylation, which are readily cleared. Conjugates with glucuronic acid and sulfate predominate, and major metabolites have been - and identified. Data indicate that the metabolites have no more than 1/50 the potency of the parent compound at inhibiting sero- ptake. The metabolism of paroxetine is accomplished in part by cytochrome $P_{450}IID_6$. Saturation of this enzyme at clinical doses -pears to account for the nonlinearity of paroxetine kinetics with increasing dose and increasing duration of treatment. The role of this nzyme in paroxetine metabolism also suggests potential drug-drug interactions (see PRECAUTIONS).

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

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. nder clinical conditions, paroxetine concentrations would normally be less than 400 ng/mL. Paroxetine does not alter the *in vitro* otein binding of phenytoin or warfarin.

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

e initial dosage should therefore be reduced in patients with severe renal or hepatic impairment, and upward titration, if necessary, ould 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_{max} concentrations were about % to 80% greater than the respective C_{max} concentrations in nonelderly subjects. Therefore the initial dosage in the elderly should be duced (see DOSAGE AND ADMINISTRATION).

Clinical Trials

Major Depressive Disorder

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

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

Obsessive Compulsive Disorder

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

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

Outcome Classification [%] on CGI-Global Improvement Item for Completers in Study 1

tcome assification	Placebo (n=74)	*Paxil* 20 mg (n=75)	*Paxil* 40 mg (n=66)	*Paxil* 60 mg (n=66)
prse	14%	7%	7%	3%
Change	44%	35%	22%	19%
inimally Improved	24%	33%	29%	34%
uch Improved	11%	18%	22%	24%
ry Much Improved	7%	7%	20%	20%

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

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

Panic Disorder

The effectiveness of *Paxil* in the treatment of panic disorder was demonstrated in three 10- to 12-week multicenter, placebo-controlled studies of adult outpatients (Studies 1-3). Patients in all studies had panic disorder (DSM-IIIR), with or without agoraphobia. In these studies, *Paxil* was shown to be significantly more effective than placebo in treating panic disorder 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 *Paxil* in panic disorder 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.

Social Anxiety Disorder

The effectiveness of *Paxil* in the treatment of social anxiety disorder was demonstrated in three 12-week, multicenter, placebo-controlled studies (Studies 1-3) of adult outpatients with social anxiety disorder (DSM-IV). In these studies, the effectiveness of *Paxil* compared to placebo was evaluated on the basis of (1) the proportion of responders, as defined by a Clinical Global Impression (CGI) Improvement score of 1 (very much improved) or 2 (much improved), and (2) change from baseline in the Liebowitz Social Anxiety Scale (LSAS).

Studies 1 and 2 were flexible-dose studies comparing paroxetine (20 to 50 mg daily) and placebo. Paroxetine demonstrated statistically significant superiority over placebo on both the CGI Improvement responder criterion and the Liebowitz Social Anxiety Scale (LSAS). In Study 1, for patients who completed to week 12, 69% of paroxetine- treated patients compared to 29% of placebo-treated patients were CGI Improvement responders. In Study 2, CGI Improvement responders were 77% and 42% for the paroxetine- and placebo-treated patients, respectively.

Study 3 was a 12-week study comparing fixed paroxetine doses of 20, 40 or 60 mg/day with placebo. Paroxetine 20 mg was demonstrated to be significantly superior to placebo on both the LSAS Total Score and the CGI Improvement responder criterion; there were trends for superiority over placebo for the 40 and 60 mg/day dose groups. There was no indication in this study of any additional benefit for doses higher than 20 mg/day.

Subgroup analyses generally did not indicate differences in treatment outcomes as a function of age, race, or gender.

Generalized Anxiety Disorder

The effectiveness of *Paxil* 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 Generalized Anxiety Disorder [DSM-IV].

Study 1 was an 8-week study comparing fixed paroxetine doses of 20 mg or 40 mg/day with placebo. *Paxil* 20 mg or 40 mg 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. *Paxil* 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 *Paxil* 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.

Posttraumatic Stress Disorder

The effectiveness of *Paxil* in the treatment of Posttraumatic Stress Disorder (PTSD) was demonstrated in two 12-week, multicenter, placebo-controlled studies (Studies 1 and 2) of adult outpatients who met DSM-IV criteria for PTSD. The mean duration of PTSD symptoms for the 2 studies combined was 13 years [ranging from .1 year to 57 years). The percentage of patients with secondary major depressive disorder or non-PTSD anxiety disorders in the combined two studies was 41% (356 out of 858 patients) and 40% (345 out of 858 patients), respectively. Study outcome was assessed by (i) the Clinician-Administered PTSD Scale Part 2 (CAPS-2) score and (ii) the Clinical Global Impression-Global Improvement Scale (CGI-I). The CAPS-2 is a multi-item instrument that measures three aspects of PTSD with the following symptom clusters: reexperiencing/intrusion, avoidance/numbing and hyperarousal. The two primary outcomes for each trial were (i) change from baseline to endpoint on the CAPS-2 total score (17 items), and (ii) proportion of responders on the CGI-I, where responders were defined as patients having a score of 1 (very much improved) or 2 (much improved).

Study 1 was a 12-week study comparing fixed paroxetine doses of 20 mg or 40 mg/day to placebo. *Paxil* 20 mg and 40 mg were demonstrated to be significantly superior to placebo on change from baseline for the CAPS-2 total score and on proportion of responders on the CGI-I. 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 12-week flexible-dose study comparing paroxetine (20 mg to 50 mg daily) to placebo. *Paxil* was demonstrated to be significantly superior to placebo on change from baseline for the CAPS-2 total score and on proportion of responders on the CGI-I.

A third study, also a flexible-dose study comparing paroxetine (20 mg to 50 mg daily) to placebo, demonstrated *Paxil* to be significantly superior to placebo on change from baseline for CAPS-2 total score, but not on proportion of responders on the CGI-I.

The majority of patients in these trials were women (68% women: 377 out of 551 subjects in Study 1 and 66% women: 202 out of 303 subjects in Study 2). Subgroup analyses did not indicate differences in treatment outcomes as a function of gender. There were an insufficient number of patients who were 65 years and older or were non-Caucasian to conduct subgroup analyses on the basis of age or race, respectively.

INDICATIONS AND USAGE

Major Depressive Disorder

Paxil (paroxetine hydrochloride) is indicated for the treatment of major depressive disorder.

The efficacy of *Paxil* 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 major depressive disorder (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 *Paxil* in hospitalized depressed patients have not been adequately studied.

The efficacy of *Paxil* in maintaining a response in major depressive disorder for up to 1 year was demonstrated in a placebo-controlled trial (see CLINICAL PHARMACOLOGY). Nevertheless, the physician who elects to use *Paxil* for extended periods should periodically re-evaluate the long-term usefulness of the drug for the individual patient.

Obsessive Compulsive Disorder

Paxil is indicated for the treatment of obsessions and compulsions in patients with obsessive compulsive disorder (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 *Paxil* was established in two 12-week trials with obsessive compulsive outpatients whose diagnoses corresponded most closely to the DSM-IIIR category of obsessive compulsive disorder (see CLINICAL PHARMACOLOGY—Clinical Trials).

Obsessive compulsive disorder is characterized by recurrent and persistent ideas, thoughts, impulses or images (obsessions) that are ego-dystonic 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). Nevertheless, the physician who elects to use *Paxil* for extended periods should periodically re-evaluate the long-term usefulness of the drug for the individual patient (see DOSAGE AND ADMINISTRATION).

Panic Disorder

Paxil is indicated for the treatment of panic disorder, with or without agoraphobia, as defined in DSM-IV. Panic disorder 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 Paxil [paroxetine hydrochloride] was established in three 10- to 12-week trials in panic disorder patients whose diagnoses corresponded to the DSM-IIIR category of panic disorder (see CLINICAL PHARMACOLOGY—Clinical Trials).

Panic disorder [DSM-IV] is characterized by recurrent unexpected panic attacks, i.e., a discrete period of intense fear or discomfort in which four (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 panic disorder assigned to paroxetine demonstrated a lower relapse rate compared to patients on placebo (see CLINICAL PHARMACOLOGY). Nevertheless, the physician who prescribes *Paxil* for extended periods should periodically re-evaluate the long-term usefulness of the drug for the individual patient.

Social Anxiety Disorder

Paxil is indicated for the treatment of social anxiety disorder, also known as social phobia, as defined in DSM-IV (300.23). Social anxiety disorder is characterized by a marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others. Exposure to the feared situation almost invariably provokes anxiety, which may approach the intensity of a panic attack. The feared situations are avoided or endured with intense anxiety or distress. The avoidance, anxious anticipation, or distress in the feared situation(s) interferes significantly with the person's normal routine, occupational or academic functioning, or social activities or relationships, or there is marked distress about having the phobias. Lesser degrees of performance anxiety or shyness generally do not require psychopharmacological treatment.

The efficacy of Paxil (paroxetine hydrochloride) was established in three 12-week trials in adult patients with social anxiety disorder (DSM-IV). *Paxil* has not been studied in children or adolescents with social phobia (see CLINICAL PHARMACOLOGY—Clinical Trials).

The effectiveness of *Paxil* in long-term treatment of social anxiety disorder, i.e., for more than 12 weeks, has not been systematically evaluated in adequate and well-controlled trials. Therefore, the physician who elects to prescribe *Paxil* for extended periods should periodically re-evaluate the long-term usefulness of the drug for the individual patient (see DOSAGE AND ADMINISTRATION).

Generalized Anxiety Disorder

Paxil 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.

continued

xil™ (paroxetine hydrochloride) continued

efficacy of *Paxil* in the treatment of GAD was established in two 8-week placebo-controlled trials in adults with GAD. *Paxil* has not n studied in children or adolescents with Generalized Anxiety Disorder (see CLINICAL PHARMACOLOGY—Clinical Trials).

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

ectiveness of *Paxil* in the long-term treatment of GAD, that is, for more than 8 weeks, has not been systematically evaluated ontrolled trials. The physician who elects to use *Paxil* for extended periods should periodically re-evaluate the long-term usefuls of the drug for the individual patient (see DOSAGE AND ADMINISTRATION).

ıtraumatic Stress Disorder

il is indicated for the treatment of Posttraumatic Stress Disorder (PTSD).

efficacy of *Paxil* in the treatment of PTSD was established in two 12-week placebo-controlled trials in adults with PTSD (DSM- see CLINICAL PHARMACOLOGY–Clinical Trials).

D, as defined by DSM-IV, requires exposure to a traumatic event that involved actual or threatened death or serious injury, or threat he physical integrity of self or others, and a response which involves intense fear, helplessness, or horror. Symptoms that occur as sult of exposure to the traumatic event include reexperiencing of the event in the form of intrusive thoughts, flashbacks or dreams, intense psychological distress and physiological reactivity on exposure to cues to the event; avoidance of situations reminiscent of traumatic event, inability to recall details of the event, and/or numbing of general responsiveness manifested as diminished interin significant activities, estrangement from others, restricted range of affect, or sense of foreshortened future; and symptoms of nomic arousal including hypervigilance, exaggerated startle response, sleep disturbance, impaired concentration, and irritability or bursts of anger. A PTSD diagnosis requires that the symptoms are present for at least a month and that they cause clinically signifit distress or impairment in social, occupational, or other important areas of functioning.

efficacy of *Paxil* in longer-term treatment of PTSD, i.e., for more than 12 weeks, has not been systematically evaluated in placecontrolled trials. Therefore, the physician who elects to prescribe *Paxil* for extended periods should periodically re-evaluate the g-term usefulness of the drug for the individual patient (see DOSAGE AND ADMINISTRATION).

NTRAINDICATIONS

comitant use in patients taking either monoamine oxidase inhibitors (MAOIs) or thioridazine is contraindicated (see WARNINGS and CAUTIONS).

il is contraindicated in patients with a hypersensitivity to paroxetine or any of the inactive ingredients in *Paxil*.

RNINGS

ential for Interaction with Monoamine Oxidase Inhibitors

atients receiving another serotonin reuptake inhibitor drug in combination with a monoamine oxidase inhibitor OI), there have been reports of serious, sometimes fatal, reactions including hyperthermia, rigidity, myoclonus, autoic instability with possible rapid fluctuations of vital signs, and mental status changes that include extreme agitation pressing to delirium and coma. These reactions have also been reported in patients who have recently discontinued that g and have been started on an MAOI. Some cases presented with features resembling neuroleptic malignant syndrome. ile there are no human data showing such an interaction with *Paxil*, limited animal data on the effects of combined of paroxetine and MAOIs suggest that these drugs may act synergistically to elevate blood pressure and evoke behavil excitation. Therefore, it is recommended that Paxil (paroxetine hydrochloride) not be used in combination with an OI, or within 14 days of discontinuing treatment with an MAOI. At least 2 weeks should be allowed after stopping *Paxil* ore starting an MAOI.

ential Interaction with Thioridazine

ridazine administration alone produces prolongation of the QTc interval, which is associated with serious ventricular rrhythmias, such as torsade de pointes-type arrhythmias, and sudden death. This effect appears to be dose related.

***In vivo* study suggests that drugs which inhibit $P_{450}IID_6$, such as paroxetine, will elevate plasma levels of thioridazine. refore, it is recommended that paroxetine not be used in combination with thioridazine (see CONTRAINDICATIONS and :CAUTIONS).**

:CAUTIONS

eral

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

zures: During premarketing testing, seizures occurred in 0.1% of *Paxil*-treated patients, a rate similar to that associated with other s effective in the treatment of major depressive disorder. *Paxil* should be used cautiously in patients with a history of seizures. It ld be discontinued in any patient who develops seizures.

cide: The possibility of a suicide attempt is inherent in major depressive disorder and may persist until significant remission occurs. e supervision of high-risk patients should accompany initial drug therapy. Prescriptions for *Paxil* should be written for the smallest ity of tablets consistent with good patient management, in order to reduce the risk of overdose.

se of well-established comorbidity between major depressive disorder and other psychiatric disorders, the same precautions l when treating patients with major depressive disorder should be observed when treating patients with other psychiatric s.

ination of Treatment with Paxil: Recent clinical trials supporting the various approved indications for *Paxil* employed a taper e regimen, rather than an abrupt discontinuation of treatment. The taper phase regimen used in GAD and PTSD clinical trials involved ncremental decrease in the daily dose by 10 mg/day at weekly intervals. When a daily dose of 20 mg/day was reached, patients were inued on this dose for 1 week before treatment was stopped.

this regimen in those studies, the following adverse events were reported at an incidence of 2% or greater for *Paxil* and were ast twice that reported for placebo: abnormal dreams [2.3% vs 0.5%], paresthesia [2.0% vs 0.4%], and dizziness (7.1% vs 1.5%). e majority of patients, these events were mild to moderate and were self-limiting and did not require medical intervention.

ng *Paxil* marketing, there have been spontaneous reports of similar adverse events, which may have no causal relationship to the upon the discontinuation of *Paxil* (particularly when abrupt), including the following: dizziness, sensory disturbances (e.g., paresias such as electric shock sensations), agitation, anxiety, nausea and sweating. These events are generally self-limiting. Similar sts have been reported for other selective serotonin reuptake inhibitors.

ents should be monitored for these symptoms when discontinuing treatment, regardless of the indication for which *Paxil* is being cribed. A gradual reduction in the dose rather than abrupt cessation is recommended whenever possible. If intolerable symptoms r following a decrease in the dose or upon discontinuation of treatment, then resuming the previously prescribed dose be considered. Subsequently, the physician may continue decreasing the dose but at a more gradual rate (see DOSAGE AND MINISTRATION).

onatremia: Several cases of hyponatremia have been reported. The hyponatremia appeared to be reversible when *Paxil* was disinued. The majority of these occurrences have been in elderly individuals, some in patients taking diuretics or who were otherwise ne depleted.

ormal Bleeding: There have been several reports of abnormal bleeding (mostly ecchymosis and purpura) associated with paroxetreatment, including a report of impaired platelet aggregation. While a causal relationship to paroxetine is unclear, impaired platelet egation may result from platelet serotonin depletion and contribute to such occurrences.

in Patients with Concomitant Illness: Clinical experience with *Paxil* in patients with certain concomitant systemic illness is lim- Caution is advisable in using *Paxil* in patients with diseases or conditions that could affect metabolism or hemodynamic responses.

ith other SSRIs, mydriasis has been infrequently reported in premarketing studies with *Paxil*. A few cases of acute angle closure coma associated with paroxetine therapy have been reported in the literature. As mydriasis can cause acute angle closure in patients narrow angle glaucoma, caution should be used when *Paxil* is prescribed for patients with narrow angle glaucoma.

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

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

rmation for Patients

icians are advised to discuss the following issues with patients for whom they prescribe *Paxil*.

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

pleting Course of Therapy: While patients may notice improvement with *Paxil* therapy in 1 to 4 weeks, they should be advised to nue therapy as directed.

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

ohol: Although *Paxil* has not been shown to increase the impairment of mental and motor skills caused by alcohol, patients should dvised to avoid alcohol while taking *Paxil*.

gnancy: Patients should be advised to notify their physician if they become pregnant or intend to become pregnant during therapy.

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

ratory Tests

e are no specific laboratory tests recommended.

Interactions

han: As with other serotonin reuptake inhibitors, an interaction between paroxetine and tryptophan may occur when they are sistered. Adverse experiences, consisting primarily of headache, nausea, sweating and dizziness, have been reported when tryp was administered to patients taking Paxil (paroxetine hydrochloride). Consequently, concomitant use of *Paxil* with tryptophan is ecommended.

mine Oxidase Inhibitors: See CONTRAINDICATIONS and WARNINGS.

ridazine: 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 *Paxil* and warfarin should be undertaken with caution.

Sumatriptan: There have been rare postmarketing reports describing patients with weakness, hyperreflexia, and incoordination following the use of a selective serotonin reuptake inhibitor (SSRI) and sumatriptan. If concomitant treatment with sumatriptan and an SSRI (e.g., fluoxetine, fluvoxamine, paroxetine, sertraline) is clinically warranted, appropriate observation of the patient is advised.

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 P_{450} (oxidative) enzymes. In a study where *Paxil* (30 mg q.d.) was dosed orally for 4 weeks, steady-state plasma concentrations of paroxetine were increased by approximately 50% during co-administration with oral cimetidine (300 mg t.i.d.) for the final week. Therefore, when these drugs are administered concurrently, dosage adjustment of Paxil (paroxetine hydrochloride) 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 P_{450} (oxidative) enzymes. When a single oral 30 mg dose of *Paxil* was administered at phenobarbital steady state (100 mg q.d. 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 *Paxil* exhibits nonlinear pharmacokinetics, the results of this study may not address the case where the two drugs are both being chronically dosed. No initial *Paxil* dosage adjustment is considered necessary when co-administered with phenobarbital; any subsequent adjustment should be guided by clinical effect.

Phenytoin–When a single oral 30 mg dose of *Paxil* was administered at phenytoin steady state (300 mg q.d. for 14 days), paroxetine AUC and $T_{1/2}$ were reduced (by an average of 50% and 35%, respectively) compared to *Paxil* administered alone. In a separate study, when a single oral 300 mg dose of phenytoin was administered at paroxetine steady state (30 mg q.d. 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 two drugs are both being chronically dosed. No initial dosage adjustments are considered necessary when these drugs are co-administered; any subsequent adjustments should be guided by clinical effect (see ADVERSE REACTIONS–Postmarketing Reports).

Drugs Metabolized by Cytochrome $P_{450}IID_6$: Many drugs, including most drugs effective in the treatment of major depressive disorder (paroxetine, other SSRIs and many tricyclics), are metabolized by the cytochrome P_{450} isozyme $P_{450}IID_6$. Like other agents that are metabolized by $P_{450}IID_6$, paroxetine may significantly inhibit the activity of this isozyme. In most patients (>90%), this $P_{450}IID_6$ isozyme is saturated early during *Paxil* dosing. In one study, daily dosing of *Paxil* (20 mg q.d.) under steady-state conditions increased single dose desipramine (100 mg) C_{max}, AUC and $T_{1/2}$ by an average of approximately two-, five- and three-fold, respectively. Concomitant use of *Paxil* with other drugs metabolized by cytochrome $P_{450}IID_6$ has not been formally studied but may require lower doses than usually prescribed for either *Paxil* or the other drug.

Therefore, co-administration of *Paxil* with other drugs that are metabolized by this isozyme, including certain drugs effective in the treatment of major depressive disorder (e.g., nortriptyline, amitriptyline, imipramine, desipramine and fluoxetine), phenothiazines and Type 1C antiarrhythmics (e.g., propafenone, flecainide and encainide), or that inhibit this enzyme (e.g., 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 co-administered (see CONTRAINDICATIONS and WARNINGS).

At steady state, when the $P_{450}IID_6$ pathway is essentially saturated, paroxetine clearance is governed by alternative P_{450} isozymes which, unlike $P_{450}IID_6$, show no evidence of saturation (see PRECAUTIONS–Tricyclic Antidepressants).

Drugs Metabolized by Cytochrome $P_{450}IIIA_4$: An *in vivo* interaction study involving the co-administration under steady-state conditions of paroxetine and terfenadine, a substrate for cytochrome $P_{450}IIIA_4$, revealed no effect of paroxetine on terfenadine pharmacokinetics. In addition, *in vitro* studies have shown ketoconazole, a potent inhibitor of $P_{450}IIIA_4$ 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 cyclosporin. 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 $IIIA_4$ substrates, paroxetine's extent of inhibition of $IIIA_4$ activity is not likely to be of clinical significance.

Tricyclic Antidepressants (TCAs): Caution is indicated in the co-administration of tricyclic antidepressants (TCAs) with *Paxil*, 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 co-administered with *Paxil* (see PRECAUTIONS–Drugs Metabolized by Cytochrome $P_{450}IID_6$).

Drugs Highly Bound to Plasma Protein: Because paroxetine is highly bound to plasma protein, administration of *Paxil* 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.

Alcohol: Although *Paxil* does not increase the impairment of mental and motor skills caused by alcohol, patients should be advised to avoid alcohol while taking Paxil (paroxetine hydrochloride).

Lithium: A multiple-dose study has shown that there is no pharmacokinetic interaction between *Paxil* and lithium carbonate. However, since there is little clinical experience, 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 *Paxil* (30 mg q.d.) increased steady-state $AUC_{0\text{-}24}$, C_{max} and C_{min} values of procyclidine (5 mg oral q.d.) 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 b.i.d.) was dosed orally for 18 days, the established steady-state plasma concentrations of propranolol were unaltered during co-administration with *Paxil* (30 mg q.d.) 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 *Paxil* 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.

Electroconvulsive Therapy (ECT): There are no clinical studies of the combined use of ECT and *Paxil*.

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 major depressive disorder, social anxiety disorder, GAD and PTSD on a mg/m² basis. Because the MRHD for major depressive disorder 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 dose 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 vivo* in human lymphocytes and in a dominant lethal test in rats.

Impairment of Fertility: 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 major depressive disorder, social anxiety disorder, GAD and PTSD 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 major depressive disorder, social anxiety disorder and GAD; 8.2 and 4.1 times the MRHD for OCD and PD on a mg/m² basis).

Pregnancy

Teratogenic Effects–Pregnancy Category C

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 equivalent to 7.9 (rat) and 2.2 (rabbit) times the maximum recommended human dose (MRHD) for major depressive disorder, social anxiety disorder, GAD and PTSD (50 mg) and 8.1 (rat) and 1.9 (rabbit) times the MRHD for OCD, on a 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 (0.16 times (mg/m²) the MRHD for major depressive disorder, social anxiety disorder, GAD and PTSD, and at 0.16 times (mg/m²) the MRHD for OCD. The no-effect dose for rat pup mortality was not determined. The cause of these deaths is not known. There are no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

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 Paxil (paroxetine hydrochloride) is administered to a nursing woman.

Pediatric Use

Safety and effectiveness in the pediatric population have not been established.

Geriatric Use

In worldwide premarketing *Paxil* clinical trials, 17% of *Paxil*-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 (1,199/6,145) of *Paxil* patients in worldwide clinical trials in major depressive disorder and 16.1% (84/522), 11.8% (64/542), 9.4% (44/469), 10.7% (79/735) and 11.7% (79/676) of *Paxil* patients in worldwide trials in social anxiety disorder, OCD, panic disorder, GAD and PTSD, respectively, discontinued treatment due to an adverse event. The most common events (≥1%) associated with discontinuation and considered to be drug related (i.e., those events associated with dropout at a rate approximately twice or greater for *Paxil* compared to placebo) included the following:

continued

	Major Depressive Disorder		OCD		Panic Disorder		Social Anxiety Disorder		Generalized Anxiety Disorder		PTSD	
	Paxil	Placebo	*Paxil*	Placebo	*Paxil*	Placebo	*Paxil*	Placebo	*Paxil*	Placebo	*Paxil*	Placebo
CNS												
Somnolence	23%	0.7%	—		1.9%	0.3%	3.4%	0.3%	2.0%	0.2%	2.8%	0.6%
Insomnia	—	—	1.7%	0%	1.3%	0.3%	3.1%	0%			—	—
Tension	1.1%	0.5%	—								—	—
Tremor	1.1%	0.3%	—				1.7%	0%			1.0%	0.2%
Anxiety	—	—	—				1.1%	0%			—	—
Dizziness	—	—	1.5%	0%			1.9%	0%	1.0%	0.2%	—	—
Gastrointestinal												
Constipation	—		1.1%	0%							—	—
Nausea	3.2%	1.1%	1.9%	0%	3.2%	1.2%	4.0%	0.3%	2.0%	0.2%	2.2%	0.6%
Diarrhea	1.0%	0.3%	—								—	—
Dry mouth	1.0%	0.3%	—								—	—
Vomiting	1.0%	0.3%	—				1.0%	0%			—	—
Flatulence							1.0%	0.3%			—	—
Other												
Asthenia	1.6%	0.4%	1.9%	0.4%			2.5%	0.6%	1.8%	0.2%	1.6%	0.2%
Abnormal ejaculation[2]	1.6%	0%	2.1%	0%			4.9%	0.6%	2.5%	0.5%	—	—
Sweating	1.0%	0.3%	—				1.1%	0%	1.1%	0.2%	—	—
Impotence[2]	—		1.5%	0%							—	—
Libido Decreased							1.0%	0%			—	—

Where numbers are not provided the incidence of the adverse events in Paxil (paroxetine hydrochloride) patients was not >1% or was not greater than or equal to twice the incidence of placebo.

[2] 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 *Paxil* at least twice that for placebo, derived from Table 1 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 *Paxil* at least twice that of placebo, derived from Table 2 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 *Paxil* at least twice that for placebo, derived from Table 2 below) were: asthenia, sweating, decreased appetite, libido decreased, tremor, abnormal ejaculation, female genital disorders and impotence.

Social Anxiety Disorder

The most commonly observed adverse events associated with the use of paroxetine (incidence of 5% or greater and incidence for *Paxil* at least twice that for placebo, derived from Table 2 below) were: sweating, nausea, dry mouth, constipation, decreased appetite, somnolence, tremor, libido decreased, yawn, 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 *Paxil* at least twice that for placebo, derived from Table 3 below) were: asthenia, infection, constipation, decreased appetite, dry mouth, nausea, libido decreased, somnolence, tremor, sweating and abnormal ejaculation.

Posttraumatic Stress Disorder

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

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 which 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 1 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 1. Treatment-Emergent Adverse Experience Incidence in Placebo-Controlled Clinical Trials for Major Depressive Disorder[1]

Body System	Preferred Term	*Paxil* (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%
Musculoskeletal	Myopathy	2%	1%
	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%
	Drugged Feeling	2%	1%
	Confusion	1%	0%
Respiration	Yawn	4%	0%
Special Senses	Blurred Vision	4%	1%
	Taste Perversion	2%	0%
Urogenital System	Ejaculatory Disturbance[2,4]	13%	0%
	Other Male Genital Disorders[2,5]	10%	0%
	Urinary Frequency	3%	1%
	Urination Disorder[6]	3%	0%
	Female Genital Disorders[3,7]	2%	0%

Events reported by at least 1% of patients treated with Paxil (paroxetine hydrochloride) are included, except the following events which had an incidence on placebo ≥ *Paxil*: 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.

Includes mostly "lump in throat" and "tightness in throat."

Percentage corrected for gender.

Mostly "ejaculatory delay."

Includes "anorgasmia," "erectile difficulties," "delayed ejaculation/orgasm," and "sexual dysfunction," and "impotence."

Includes mostly "difficulty with micturition" and "urinary hesitancy."

Includes mostly "anorgasmia" and "difficulty reaching climax/orgasm."

Obsessive Compulsive Disorder, Panic Disorder and Social Anxiety Disorder

Table 2 enumerates adverse events that occurred at a frequency of 2% or more among OCD patients on *Paxil* 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 panic disorder on *Paxil* who participated in placebo-controlled trials of 10- to 12-weeks duration in which patients were dosed in a range of 10 mg/day or among patients with social anxiety disorder on *Paxil* who participated in placebo-controlled trials of 12-weeks duration in which patients were dosed in a range of 20 to 50 mg/day.

Table 2. Treatment-Emergent Adverse Experience Incidence in Placebo-Controlled Clinical Trials for Obsessive Compulsive Disorder, Panic Disorder and Social Anxiety Disorder[1]

Body System	Preferred Term	Obsessive Compulsive Disorder		Panic Disorder		Social Anxiety Disorder	
		Paxil (n=542)	Placebo (n=265)	*Paxil* (n=449)	Placebo (n=324)	*Paxil* (n=425)	Placebo (n=339)
Body as a Whole	Asthenia	22%	14%	14%	5%	22%	14%
	Abdominal Pain	—	—	4%	3%	—	—
	Chest Pain	3%	2%	—	—	—	—
	Back Pain	—	—	3%	2%	—	—
	Chills	2%	1%	2%	1%	—	—
	Trauma	—	—	—	—	3%	1%
Cardiovascular	Vasodilation	4%	1%	—	—	—	—
	Palpitation	2%	0%	—	—	—	—
Dermatologic	Sweating	9%	3%	14%	6%	9%	2%
	Rash	3%	2%	—	—	—	—
Gastrointestinal	Nausea	23%	10%	23%	17%	25%	7%
	Dry Mouth	18%	9%	18%	11%	9%	3%
	Constipation	16%	6%	8%	5%	5%	2%
	Diarrhea	10%	10%	12%	7%	9%	6%
	Decreased Appetite	9%	3%	7%	3%	8%	2%
	Dyspepsia	—	—	—	—	4%	2%
	Flatulence	—	—	—	—	4%	2%
	Increased Appetite	4%	3%	2%	1%	—	—
	Vomiting	—	—	—	—	2%	1%
Musculoskeletal	Myalgia	—	—	—	—	4%	3%
Nervous System	Insomnia	24%	13%	18%	10%	21%	16%
	Somnolence	21%	7%	19%	11%	22%	5%
	Dizziness	12%	6%	14%	10%	11%	7%
	Tremor	11%	1%	9%	1%	8%	1%
	Nervousness	9%	8%	—	—	8%	2%
	Libido Decreased	7%	4%	9%	1%	12%	1%
	Agitation	—	—	5%	4%	3%	1%
	Anxiety	—	—	5%	4%	5%	4%
	Abnormal Dreams	4%	1%	—	—	—	—
	Concentration Impaired	3%	2%	—	—	4%	1%
	Depersonalization	3%	0%	—	—	—	—
	Myoclonus	3%	0%	3%	2%	2%	1%
	Amnesia	2%	1%	—	—	—	—
Respiratory System	Rhinitis	—	—	3%	0%	—	—
	Pharyngitis	—	—	—	—	4%	2%
	Yawn	—	—	—	—	5%	1%
Special Senses	Abnormal Vision	4%	2%	—	—	4%	1%
	Taste Perversion	2%	0%	—	—	—	—
Urogenital System	Abnormal Ejaculation[2]	23%	1%	21%	1%	28%	1%
	Dysmenorrhea	—	—	—	—	5%	1%
	Female Genital Disorder[3]	3%	0%	9%	1%	9%	1%
	Impotence[2]	8%	1%	5%	0%	5%	1%
	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, panic disorder, and social anxiety disorder *Paxil*-treated patients are included, except the following events which had an incidence on placebo ≥ *Paxil*: (OCD): abdominal pain, agitation, anxiety, back pain, cough increased, depression, headache, hypertonesia, infection, paresthesia, pharyngitis, respiratory disorder, rhinitis and sinusitis. (panic disorder): 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. (social anxiety disorder): abdominal pain, depression, headache, infection, respiratory disorder, and sinusitis.
2. Percentage corrected for gender.

Generalized Anxiety Disorder and Posttraumatic Stress Disorder

Table 3 enumerates adverse events that occurred at a frequency of 2% or more among GAD patients on *Paxil* 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 or among PTSD patients on *Paxil* who participated in placebo-controlled trials of 12-weeks duration in which patients were dosed in a range of 20 mg/day to 50 mg/day.

Table 3. Treatment-Emergent Adverse Experience Incidence in Placebo-Controlled Clinical Trials for Generalized Anxiety Disorder and Posttraumatic Stress Disorder[1]

Body System	Preferred Term	Generalized Anxiety Disorder		Posttraumatic Stress Disorder	
		Paxil (n=735)	Placebo (n=529)	*Paxil* (n=676)	Placebo (n=504)
Body as a Whole	Asthenia	14%	6%	12%	4%
	Headache	17%	14%	—	—
	Infection	6%	3%	5%	4%
	Abdominal Pain			4%	3%
	Trauma			6%	5%
Cardiovascular	Vasodilation	3%	1%	2%	1%
Dermatologic	Sweating	6%	2%	5%	1%
Gastrointestinal	Nausea	20%	5%	19%	8%
	Dry Mouth	11%	5%	10%	5%
	Constipation	10%	2%	5%	3%
	Diarrhea	9%	7%	11%	5%
	Decreased Appetite	5%	1%	6%	3%
	Vomiting	3%	2%	3%	2%
	Dyspepsia	—	—	5%	3%
Nervous System	Insomnia	11%	8%	12%	11%
	Somnolence	15%	5%	16%	5%
	Dizziness	6%	5%	6%	5%
	Tremor	5%	1%	4%	1%
	Nervousness	4%	3%	—	—
	Libido Decreased	9%	2%	5%	2%
	Abnormal Dreams			3%	2%
Respiratory System	Respiratory Disorder	7%	5%	—	—
	Sinusitis	4%	3%	—	—
	Yawn	4%	—	2%	<1%
Special Senses	Abnormal Vision	2%	1%	3%	1%
Urogenital System	Abnormal Ejaculation[2]	25%	2%	13%	2%
	Female Genital Disorder[3]	4%	1%	5%	1%
	Impotence[2]	4%	3%	9%	1%

1. Events reported by at least 2% of GAD and PTSD *Paxil*-treated patients are included, except the following events which had an incidence on placebo ≥ *Paxil*: (GAD): abdominal pain, back pain, trauma, dyspepsia, myalgia, and pharyngitis. (PTSD): back pain, headache, anxiety, depression, nervousness, respiratory disorder, pharyngitis and sinusitis.
2. Percentage corrected for gender.

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

Table 4. Treatment-Emergent Adverse Experience Incidence in a Dose-Comparison Trial in the Treatment of Major Depressive Disorder*

Body System/ Preferred Term	Placebo n=57	*Paxil* 10 mg n=102	*Paxil* 20 mg n=104	*Paxil* 30 mg n=101	*Paxil* 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%	13.2%	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 ≥ twice the placebo incidence for at least one paroxetine group.

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

In a fixed-dose study comparing placebo and *Paxil* 10, 20 and 40 mg in the treatment of panic disorder, there was no clear relationship between adverse events and the dose of *Paxil* 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 *Paxil* 60 mg compared to any of the other treatment groups.

In a fixed-dose study comparing placebo and *Paxil* 20, 40 and 60 mg in the treatment of social anxiety disorder, for most of the adverse events, there was no clear relationship between adverse events and the dose of Paxil (paroxetine hydrochloride) to which patients were assigned.

In a fixed-dose study comparing placebo and *Paxil* 20 and 40 mg in the treatment of generalized anxiety disorder, for most of the adverse events, there was no clear relationship between adverse events and the dose of Paxil (paroxetine hydrochloride) to which

continued

Paxil® (paroxetine hydrochloride) continued

patients were assigned, except for the following adverse events: asthenia, constipation, and abnormal ejaculation.

In a fixed-dose study comparing placebo and *Paxil* 20 and 40 mg in the treatment of posttraumatic stress disorder, for most of the adverse events, there was no clear relationship between adverse events and the dose of *Paxil* to which patients were assigned, except for impotence and abnormal ejaculation.

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

Male and Female Sexual Dysfunction with SSRIs: Although changes in sexual desire, sexual performance and sexual satisfaction can occur as manifestations of a psychiatric disorder, they may also be a consequence of pharmacologic treatment. In particular, some evidence suggests that selective serotonin reuptake inhibitors (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 3,200 patients, the ranges for the reported incidence of sexual side effects in males and females with major depressive disorder, OCD, panic disorder, social anxiety disorder, GAD and PTSD are displayed in Table 5 below.

Table 5. Incidence of Sexual Adverse Events in Controlled Clinical Trials

	Paxil	Placebo
In (males)	**1446**	**1042**
Decreased Libido	6–15%	0–5%
Ejaculatory Disturbance	13–28%	0–2%
Impotence	2–9%	0–3%
In (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 *Paxil* 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 *Paxil* in controlled clinical trials.

ECG Changes: In an analysis of ECGs obtained in 882 patients treated with *Paxil* 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 *Paxil* exhibited abnormal values on liver function tests at no greater rate than that seen in placebo-treated patients. In particular, the *Paxil*-vs.-placebo comparisons for alkaline phosphatase, SGOT, SGPT and bilirubin revealed no differences in the percentage of patients with marked abnormalities.

Other Events Observed During the Premarketing Evaluation of Paxil (paroxetine hydrochloride)

During its premarketing assessment in major depressive disorder, multiple doses of *Paxil* were administered to 6,145 patients in phase 2 and 3 studies. The conditions and duration of exposure to *Paxil* 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, panic disorder, social anxiety disorder, generalized anxiety disorder and posttraumatic stress disorder, 42, 469, 522, 735 and 676 patients, respectively, received multiple doses of *Paxil*. 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 9,089 patients exposed to multiple doses of Paxil (paroxetine hydrochloride) who experienced an event of the type cited on at least one occasion while receiving *Paxil*. All reported events are included except those already listed in Tables 1-3, 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, syncope; *rare:* angina pectoris, arrhythmia nodal, atrial fibrillation, bundle branch block, cerebral ischemia, cerebrovascular accident, congestive heart failure, heart block, low cardiac output, myocardial infarct, 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, 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, hypersensitivity, 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, otitis, 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, polyuria, pyuria, 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 Paxil (paroxetine hydrochloride) 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, toxic epidermal necrolysis, priapism, syndrome of inappropriate ADH secretion, symptoms suggestive of prolactinemia and galactorrhea, neuroleptic malignant syndrome-like events; 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; serotonin syndrome, associated in some cases with concomitant use of serotonergic drugs and with drugs which may have impaired *Paxil* metabolism (symptoms have included agitation, confusion, diaphoresis, hallucinations, hyperreflexia, myoclonus, shivering, tachycardia and tremor), status epilepticus, acute renal failure, pulmonary hypertension, allergic alveolitis, anaphylaxis, eclampsia, laryngismus, optic neuritis, porphyria, ventricular fibrillation, ventricular tachycardia [including torsade de pointes], thrombocytopenia, hemolytic anemia, and events related to impaired hematopoiesis (including aplastic anemia, pancytopenia, bone marrow aplasia, and agranulocytosis). There has been a case report of an elevated phenytoin level after 4 weeks of *Paxil* and phenytoin co-administration. There has been a case report of severe hypotension when *Paxil* was added to chronic metoprolol treatment.

DRUG ABUSE AND DEPENDENCE

Controlled Substance Class: Paxil (paroxetine hydrochloride) is not a controlled substance.

Physical and Psychologic Dependence: *Paxil* 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 *Paxil* misuse or abuse (e.g., development of tolerance, incrementations of dose, drug-seeking behavior).

OVERDOSAGE

Human Experience: Since the introduction of *Paxil* in the U.S., 342 spontaneous cases of deliberate or accidental overdosage 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 146 non-fatal cases with known outcome, most recovered without sequelae. The largest known ingestion involved 2000 mg of paroxetine (33 times the maximum recommended daily dose) in a patient who recovered.

Commonly reported adverse events associated with paroxetine overdosage include somnolence, coma, nausea, tremor, tachycardia, confusion, vomiting, and dizziness. Other notable signs and symptoms observed with overdoses involving paroxetine (alone or with other substances) include mydriasis, convulsions (including status epilepticus), ventricular dysrhythmias (including torsade de pointes), hypertension, aggressive reactions, syncope, hypotension, stupor, bradycardia, dystonia, rhabdomyolysis, symptoms of hepatic dysfunction (including hepatic failure, hepatic necrosis, jaundice, hepatitis, and hepatic steatosis), serotonin syndrome, manic reactions, myoclonus, acute renal failure, and urinary retention.

Overdosage Management: Treatment should consist of those general measures employed in the management of overdosage with any drugs effective in the treatment of major depressive disorder.

Ensure an adequate airway, oxygenation, and ventilation. Monitor cardiac rhythm and vital signs. General supportive and symptomatic measures are also recommended. Induction of emesis is not recommended. Gastric lavage with a large-bore orogastric tube with appropriate airway protection, if needed, may be indicated if performed soon after ingestion, or in symptomatic patients.

Activated charcoal should be administered. Due to the large volume of distribution of this drug, forced diuresis, dialysis, hemoperfusion and exchange transfusion are unlikely to be of benefit. No specific antidotes for paroxetine are known.

A specific caution involves patients who are taking or have recently taken paroxetine who might ingest excessive quantities of a tricyclic antidepressant. In such a case, accumulation of the parent tricyclic and/or an active metabolite may increase the possibility of clinically significant sequelae and extend the time needed for close medical observation (see *Drugs Metabolized by Cytochrome $P_{450}IID_6$* under PRECAUTIONS).

In managing overdosage, consider the possibility of multiple drug involvement. The physician should consider contacting a poison control center for additional information on the treatment of any overdose. Telephone numbers for certified poison control centers are listed in the *Physicians' Desk Reference* (PDR).

DOSAGE AND ADMINISTRATION

Major Depressive Disorder

Usual Initial Dosage: Paxil (paroxetine hydrochloride) should be administered as a single daily dose with or without food, usually in the morning. The recommended initial dose is 20 mg/day. Patients were dosed in a range of 20 to 50 mg/day in the clinical trials demonstrating the effectiveness of *Paxil* in the treatment of major depressive disorder. As with all drugs effective in the treatment of major depressive disorder, the full effect may be delayed. Some patients not responding to a 20 mg dose may benefit from dose increases, in 10 mg/day increments, up to a maximum of 50 mg/day. Dose changes should occur at intervals of at least 1 week.

Maintenance Therapy: There is no body of evidence available to answer the question of how long the patient treated with *Paxil* should remain on it. It is generally agreed that acute episodes of major depressive disorder require several months or longer of sustained pharmacologic therapy. Whether the dose needed to induce remission is identical to the dose needed to maintain and/or sustain euthymia is unknown.

Systematic evaluation of the efficacy of Paxil (paroxetine hydrochloride) has shown that efficacy is maintained for periods of up to 1 year with doses that averaged about 30 mg.

Obsessive Compulsive Disorder

Usual Initial Dosage: Paxil (paroxetine hydrochloride) should be administered as a single daily dose with or without food, usually in the morning. The recommended dose of *Paxil* in the treatment of OCD is 40 mg daily. Patients should be started on 20 mg/day and the dose can be increased in 10 mg/day increments. Dose changes should occur at intervals of at least 1 week. Patients were dosed in a range of 20 to 60 mg/day in the clinical trials demonstrating the effectiveness of *Paxil* in the treatment of OCD. The maximum dosage should not exceed 60 mg/day.

Maintenance Therapy: Long-term maintenance of efficacy was demonstrated in a 6-month relapse prevention trial. In this trial, patients with OCD assigned to paroxetine demonstrated a lower relapse rate compared to patients on placebo (see CLINICAL PHARMACOLOGY). OCD is a chronic condition, and it is reasonable to consider continuation for a responding patient. Dosage adjustments should be made to maintain the patient on the lowest effective dosage, and patients should be periodically reassessed to determine the need for continued treatment.

Panic Disorder

Usual Initial Dosage: *Paxil* should be administered as a single daily dose with or without food, usually in the morning. The target dose of *Paxil* in the treatment of panic disorder is 40 mg/day. Patients should be started on 10 mg/day. Dose changes should occur in 10 mg/day increments and at intervals of at least 1 week. Patients were dosed in a range of 10 to 60 mg/day in the clinical trials demonstrating the effectiveness of *Paxil*. The maximum dosage should not exceed 60 mg/day.

Maintenance Therapy: Long-term maintenance of efficacy was demonstrated in a 3-month relapse prevention trial. In this trial, patients with panic disorder assigned to paroxetine demonstrated a lower relapse rate compared to patients on placebo (see CLINICAL PHARMACOLOGY). Panic disorder is a chronic condition, and it is reasonable to consider continuation for a responding patient. Dosage adjustments should be made to maintain the patient on the lowest effective dosage, and patients should be periodically reassessed to determine the need for continued treatment.

Social Anxiety Disorder

Usual Initial Dosage: *Paxil* should be administered as a single daily dose with or without food, usually in the morning. The recommended and initial dosage is 20 mg/day. In clinical trials the effectiveness of *Paxil* was demonstrated in patients dosed in a range of 20 to 60 mg/day. While the safety of *Paxil* has been evaluated in patients with social anxiety disorder at doses up to 60 mg/day, available information does not suggest any additional benefit for doses above 20 mg/day (see CLINICAL PHARMACOLOGY).

Maintenance Therapy: There is no body of evidence available to answer the question of how long the patient treated with *Paxil* should remain on it. Although the efficacy of *Paxil* beyond 12 weeks of dosing has not been demonstrated in controlled clinical trials, social anxiety disorder is recognized as a chronic condition, and it is reasonable to consider continuation of treatment for a responding patient. Dosage adjustments should be made to maintain the patient on the lowest effective dosage, and patients should be periodically reassessed to determine the need for continued treatment.

Generalized Anxiety Disorder

Usual Initial Dosage: *Paxil* should be administered as a single daily dose with or without food, usually in the morning. In clinical trials the effectiveness of *Paxil* was demonstrated in patients dosed in a range of 20 to 50 mg/day. The recommended starting dosage and the established effective dosage is 20 mg/day. There is not sufficient evidence to suggest a greater benefit to doses higher than 20 mg/day. Dose changes should occur in 10 mg/day increments and at intervals of at least 1 week.

Maintenance Therapy: There is no body of evidence available to answer the question of how long the patient treated with *Paxil* should remain on it. Although the efficacy of *Paxil* beyond 8 weeks of dosing has not been demonstrated in controlled clinical trials, generalized anxiety disorder is recognized as a chronic condition, and it is reasonable to consider continuation of treatment for a responding patient. Dosage adjustments should be made to maintain the patient on the lowest effective dosage, and patients should be periodically reassessed to determine the need for continued treatment.

Posttraumatic Stress Disorder

Usual Initial Dosage: *Paxil* should be administered as a single daily dose with or without food, usually in the morning. The recommended starting dosage and the established effective dosage is 20 mg/day. In one clinical trial, the effectiveness of *Paxil* was demonstrated in patients dosed in a range of 20 to 50 mg/day. However, in a fixed-dose study, there was not sufficient evidence to suggest a greater benefit for a dose of 40 mg/day compared to 20 mg/day. Dose changes, if indicated, should occur in 10 mg/day increments and at intervals of at least 1 week.

Maintenance Therapy: There is no body of evidence available to answer the question of how long the patient treated with *Paxil* should remain on it. Although the efficacy of *Paxil* beyond 12 weeks of dosing has not been demonstrated in controlled clinical trials, PTSD is recognized as a chronic condition, and it is reasonable to consider continuation of treatment for a responding patient. Dosage adjustments should be made to maintain the patient on the lowest effective dosage, and patients should be periodically reassessed to determine the need for continued 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 Patients to or from a Monoamine Oxidase Inhibitor: At least 14 days should elapse between discontinuation of an MAOI and initiation of *Paxil* therapy. Similarly, at least 14 days should be allowed after stopping Paxil (paroxetine hydrochloride) before starting an MAOI.

Discontinuation of Treatment with Paxil: Symptoms associated with discontinuation of *Paxil* have been reported (see PRECAUTIONS). Patients should be monitored for these symptoms when discontinuing treatment, regardless of the indication for which *Paxil* 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.

NOTE: SHAKE SUSPENSION WELL BEFORE USING.

HOW SUPPLIED

Tablets: Film-coated, modified-oval as follows:

10 mg yellow, scored tablets engraved on the front with PAXIL and on the back with 10.
NDC 0029-3210-13 Bottles of 30

20 mg pink, scored tablets engraved on the front with PAXIL and on the back with 20.
NDC 0029-3211-13 Bottles of 30
NDC 0029-3211-20 Bottles of 100
NDC 0029-3211-21 SUP 100s (intended for institutional use only)

30 mg blue tablets engraved on the front with PAXIL and on the back with 30.
NDC 0029-3212-13 Bottles of 30

40 mg green tablets engraved on the front with PAXIL and on the back with 40.
NDC 0029-3213-13 Bottles of 30

Store tablets between 15° and 30°C (59° and 86°F).

Oral Suspension: Orange-colored, orange-flavored, 10 mg/5 mL, in 250 mL white bottles.
NDC 0029-3215-48

Store suspension at or below 25°C (77°F).

DATE OF ISSUANCE DEC. 2001

PAR001986892

GlaxoSmithKline
Research Triangle Park, NC 27709
PX:L21

Printed in U.S.A.

PAR001986892