

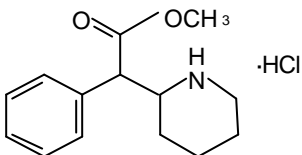
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FINAL DRAFT LABELING FOR CONCERTA™ EXTENDED-RELEASE TABLETS  
Attachment to Approval Letter

CONCERTA CII  
CONCERTA (methylphenidate HCl) Extended-release Tablets

DESCRIPTION

CONCERTA<sup>J</sup> is a central nervous system (CNS) stimulant. CONCERTA<sup>J</sup> is available in two tablet strengths. Each extended-release tablet for once-a-day oral administration contains 18 or 36 mg of methylphenidate HCl USP and is designed to have a 12-hour duration of effect. Chemically, methylphenidate HCl is d,l (racemic) methyl  $\alpha$ -phenyl-2-piperidineacetate hydrochloride. Its empirical formula is  $C_{14}H_{19}NO_2 \cdot HCl$ . Its structural formula is:



Methylphenidate HCl USP is a white, odorless crystalline powder. Its solutions are acid to litmus. It is freely soluble in water and in methanol, soluble in alcohol, and slightly soluble in chloroform and in acetone. Its molecular weight is 269.77.

CONCERTA<sup>J</sup> also contains the following inert ingredients: butylated hydroxytoluene, carnauba wax, cellulose acetate, hydroxypropyl methylcellulose, lactose, phosphoric acid, poloxamer, polyethylene glycol, polyethylene oxides, povidone, propylene glycol, sodium chloride, stearic acid, succinic acid, synthetic iron oxides, titanium dioxide, and triacetin.

**System Components and Performance**

CONCERTA<sup>J</sup> uses osmotic pressure to deliver methylphenidate HCl at a controlled rate. The system, which resembles a

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conventional tablet in appearance, comprises an osmotically active trilayer core surrounded by a semipermeable membrane with an immediate-release drug overcoat. The trilayer core is composed of two drug layers containing the drug and excipients, and a push layer containing osmotically active components. There is a precision-laser drilled orifice on the drug-layer end of the tablet. In an aqueous environment, such as the gastrointestinal tract, the drug overcoat dissolves within one hour, providing an initial dose of methylphenidate. Water permeates through the membrane into the tablet core. As the osmotically active polymer excipients expand, methylphenidate is released through the orifice. The membrane controls the rate at which water enters the tablet core, which in turn controls drug delivery. The biologically inert components of the tablet remain intact during gastrointestinal transit and are eliminated in the stool as a tablet shell along with insoluble core components.

## **CLINICAL PHARMACOLOGY**

### **Pharmacodynamics**

Methylphenidate HCl is a central nervous system (CNS) stimulant. The mode of therapeutic action in Attention Deficit Hyperactivity Disorder (ADHD) is not known. Methylphenidate is thought to block the reuptake of norepinephrine and dopamine into the presynaptic neuron and increase the release of these monoamines into the extraneuronal space. Methylphenidate is a racemic mixture comprised of the d- and l-isomers. The d-isomer is more pharmacologically active than the l-isomer.

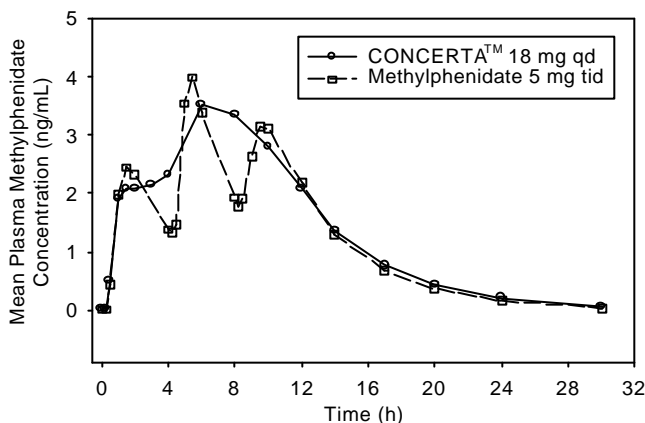
### **Pharmacokinetics**

#### Absorption

Methylphenidate is readily absorbed. Following oral administration of CONCERTA<sup>®</sup> to adults, plasma methylphenidate concentrations increase rapidly reaching an initial maximum at about 1 to 2 hours, then increase gradually over the next several hours. Peak plasma concentrations are achieved at about 6 to 8 hours after which a gradual decrease in plasma levels of methylphenidate begins. CONCERTA<sup>®</sup> qd minimizes the fluctuations between peak and trough concentrations associated with immediate-release methylphenidate tid (see Figure 1). The

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relative bioavailability of CONCERTA<sup>®</sup> qd and methylphenidate tid in adults is comparable.



**Figure 1. Mean methylphenidate plasma concentrations in 36 adults, following a single dose of CONCERTA<sup>®</sup> 18 mg qd and immediate-release methylphenidate 5 mg tid administered every 4 hours.**

The mean pharmacokinetic parameters in 36 adults following the administration of CONCERTA<sup>®</sup> 18 mg qd and methylphenidate 5 mg tid are summarized in Table 1.

**Table 1**  
**Mean ± SD Pharmacokinetic Parameters**

Parameters	CONCERTA <sup>™</sup> (18 mg qd) (n=36)	Methylphenidate (5 mg tid) (n=35)
C <sub>max</sub> (ng/mL)	3.7 ± 1.0	4.2 ± 1.0
T <sub>max</sub> (h)	6.8 ± 1.8	6.5 ± 1.8
AUC <sub>inf</sub> (ng•h/mL)	41.8 ± 13.9	38.0 ± 11.0
t <sub>1/2</sub> (h)	3.5 ± 0.4	3.0 ± 0.5

No differences in the pharmacokinetics of CONCERTA<sup>®</sup> were noted following single and repeated qd dosing indicating no significant drug accumulation. The AUC and t<sub>1/2</sub> following repeated qd dosing are similar to those following the first dose of CONCERTA<sup>®</sup> 18 mg.

Dose Proportionality

Following administration of CONCERTA<sup>®</sup> in single doses of 18, 36,

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and 54 mg/day to adults,  $C_{max}$  and  $AUC_{(0-inf)}$  of d-methylphenidate were proportional to dose, whereas l-methylphenidate  $C_{max}$  and  $AUC_{(0-inf)}$  increased disproportionately with respect to dose. Following administration of CONCERTA<sup>J</sup>, plasma concentrations of the l-isomer were approximately 1/40th the plasma concentrations of the d-isomer.

### Distribution

Plasma methylphenidate concentrations in adults decline biexponentially following oral administration. The half-life of methylphenidate in adults following oral administration of CONCERTA<sup>J</sup> was approximately 3.5 h.

### Metabolism and Excretion

In humans, methylphenidate is metabolized primarily by de-esterification to  $\alpha$ Bphenyl-piperidine acetic acid (PPA) which has little or no pharmacologic activity. In adults the metabolism of CONCERTA<sup>J</sup> qd as evaluated by metabolism to PPA is similar to that of methylphenidate tid. The metabolism of single and repeated qd doses of CONCERTA<sup>J</sup> is similar.

After oral dosing of radiolabeled methylphenidate in humans, about 90% of the radioactivity was recovered in urine. The main urinary metabolite was PPA, accounting for approximately 80% of the dose.

### Food Effects

In patients, there were no differences in either the pharmacokinetics or the pharmacodynamic performance of CONCERTA<sup>J</sup> when administered after a high fat breakfast. There is no evidence of dose dumping in the presence or absence of food.

### Special Populations

#### Gender

In healthy adults, the mean dose-adjusted  $AUC_{(0-inf)}$  values for CONCERTA<sup>J</sup> were 36.7 ng<sub>h</sub>/mL in men and 37.1 ng<sub>h</sub>/mL in women, with no differences noted between the two groups.

#### Race

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In adults receiving CONCERTAJ, dose adjusted  $AUC_{(0-inf)}$  was consistent across ethnic groups; however, the sample size may have been insufficient to detect ethnic variations in pharmacokinetics.

#### Age

The pharmacokinetics of CONCERTAJ has not been studied in children less than 6 years of age.

#### Renal Insufficiency

There is no experience with the use of CONCERTAJ in patients with renal insufficiency. After oral administration of radiolabeled methylphenidate in humans, methylphenidate was extensively metabolized and approximately 80% of the radioactivity was excreted in the urine in the form of PPA. Since renal clearance is not an important route of methylphenidate clearance, renal insufficiency is expected to have little effect on the pharmacokinetics of CONCERTAJ.

#### Hepatic Insufficiency

There is no experience with the use of CONCERTAJ in patients with hepatic insufficiency.

#### **Clinical Studies**

CONCERTAJ was demonstrated to be effective in the treatment of Attention Deficit Hyperactivity Disorder (ADHD) in three double-blind, active- and placebo-controlled studies in 416 children 6 to 12 years old. The controlled studies compared CONCERTAJ given qd (18, 36, or 54 mg), methylphenidate given tid over 12 hours (15, 30, or 45 mg total daily dose), and placebo in two single-center, 3-week crossover studies (Studies 1 and 2) and in a multicenter, 4-week, parallel-group comparison (Study 3). The primary comparison of interest in all three trials was CONCERTAJ versus placebo.

The Diagnostic and Statistical Manual, 4th edition, of the American Psychiatric Association (DSM-IV) provides criteria for three subtypes of ADHD (Combined Type, Predominantly Inattentive Type, or Predominantly Hyperactive-Impulsive Type). These

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criteria were used for diagnosis in all three studies.

Symptoms of ADHD were evaluated by community school teachers using the Inattention/Overactivity with Aggression (IOWA) Conners scale. Statistically significant reduction in the Inattention/Overactivity subscale versus placebo was shown consistently across all three controlled studies for CONCERTA<sup>J</sup> qd. The scores for CONCERTA<sup>J</sup> and placebo for the three studies are presented in Figure 2.

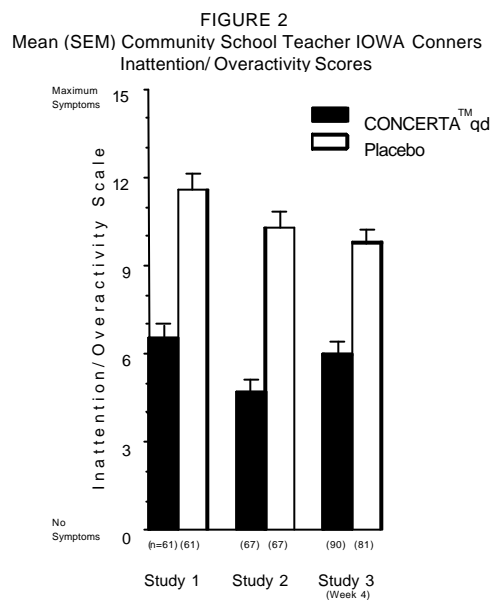


Figure 2: Mean Community School Teacher IOWA Conners Inattention/Overactivity Scores with CONCERTA<sup>TM</sup> qd (18, 36, or 54 mg) and placebo. Studies 1 and 2 involved a 3-way crossover of 1 week per treatment arm. Study 3 involved 4 weeks of parallel group treatments with a Last Observation Carried Forward analysis at week 4. Error bars represent the mean plus standard error of the mean.

## INDICATION AND USAGE

### Attention Deficit Hyperactivity Disorder (ADHD)

CONCERTA<sup>J</sup> is indicated for the treatment of Attention Deficit Hyperactivity Disorder (ADHD).

The efficacy of CONCERTA<sup>J</sup> in the treatment of ADHD was established in three controlled trials of children aged 6 to 12

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who met DSM-IV criteria for ADHD (see Clinical Pharmacology).

A diagnosis of Attention Deficit Hyperactivity Disorder (ADHD; DSM-IV) implies the presence of hyperactive-impulsive or inattentive symptoms that caused impairment and were present before age 7 years. The symptoms must cause clinically significant impairment, e.g., in social, academic, or occupational functioning, and be present in two or more settings, e.g., school (or work) and at home. The symptoms must not be better accounted for by another mental disorder. For the Inattentive Type, at least six of the following symptoms must have persisted for at least 6 months: lack of attention to details/careless mistakes; lack of sustained attention; poor listener; failure to follow through on tasks; poor organization; avoids tasks requiring sustained mental effort; loses things; easily distracted; forgetful. For the Hyperactive-Impulsive Type, at least six of the following symptoms must have persisted for at least 6 months: fidgeting/squirming; leaving seat; inappropriate running/climbing; difficulty with quiet activities; "on the go;" excessive talking; blurting answers; can't wait turn; intrusive. The Combined Types requires both inattentive and hyperactive-impulsive criteria to be met.

#### Special Diagnostic Considerations

Specific etiology of this syndrome is unknown, and there is no single diagnostic test. Adequate diagnosis requires the use not only of medical but of special psychological, educational, and social resources. Learning may or may not be impaired. The diagnosis must be based upon a complete history and evaluation of the child and not solely on the presence of the required number of DSM-IV characteristics.

#### Need for Comprehensive Treatment Program

CONCERTA<sup>J</sup> is indicated as an integral part of a total treatment program for ADHD that may include other measures (psychological, educational, social) for patients with this syndrome. Drug treatment may not be indicated for all children with this syndrome. Stimulants are not intended for use in the child who exhibits symptoms secondary to environmental factors and/or other primary psychiatric disorders, including psychosis. Appropriate educational placement is essential and psychosocial

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intervention is often helpful. When remedial measures alone are insufficient, the decision to prescribe stimulant medication will depend upon the physician's assessment of the chronicity and severity of the child's symptoms.

#### Long-Term Use

The effectiveness of CONCERTA<sup>J</sup> for long-term use, i.e., for more than 4 weeks, has not been systematically evaluated in controlled trials. Therefore, the physician who elects to use CONCERTA<sup>J</sup> for extended periods should periodically re-evaluate the long-term usefulness of the drug for the individual patient (see Dosage and Administration).

### **CONTRAINDICATIONS**

#### **Agitation**

CONCERTA<sup>J</sup> is contraindicated in patients with marked anxiety, tension, and agitation, since the drug may aggravate these symptoms.

#### **Hypersensitivity to Methylphenidate**

CONCERTA<sup>J</sup> is contraindicated in patients known to be hypersensitive to methylphenidate or other components of the product.

#### **Glaucoma**

CONCERTA<sup>J</sup> is contraindicated in patients with glaucoma.

#### **Tics**

CONCERTA<sup>J</sup> is contraindicated in patients with motor tics or with a family history or diagnosis of Tourette's syndrome. (see Adverse Reactions)

#### **Monoamine Oxidase Inhibitors**

CONCERTA<sup>J</sup> is contraindicated during treatment with monoamine oxidase inhibitors, and also within a minimum of 14 days following discontinuation of a monoamine oxidase inhibitor

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(hypertensive crises may result).

**WARNINGS**

**Depression**

CONCERTAJ should not be used to treat severe depression.

**Fatigue**

CONCERTAJ should not be used for the prevention or treatment of normal fatigue states.

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### **Long-Term Suppression of Growth**

Sufficient data on the safety of long-term use of methylphenidate in children are not yet available. Although a causal relationship has not been established, suppression of growth (i.e., weight gain, and/or height) has been reported with the long-term use of stimulants in children. Therefore, patients requiring long-term therapy should be carefully monitored. Patients who are not growing or gaining weight as expected should have their treatment interrupted.

### **Psychosis**

Clinical experience suggests that in psychotic patients, administration of methylphenidate may exacerbate symptoms of behavior disturbance and thought disorder.

### **Seizures**

There is some clinical evidence that methylphenidate may lower the convulsive threshold in patients with prior history of seizures, in patients with prior EEG abnormalities in absence of seizures, and, very rarely, in absence of history of seizures and no prior EEG evidence of seizures. In the presence of seizures, the drug should be discontinued.

### **Potential for Gastrointestinal Obstruction**

Because the CONCERTA<sup>™</sup> tablet is nondeformable and does not appreciably change in shape in the GI tract, CONCERTA<sup>™</sup> should ordinarily not be administered to patients with preexisting severe gastrointestinal narrowing (pathologic or iatrogenic, for example: small bowel inflammatory disease, "short gut" syndrome due to adhesions or decreased transit time, past history of peritonitis, cystic fibrosis, chronic intestinal pseudoobstruction, or Meckel's diverticulum). There have been rare reports of obstructive symptoms in patients with known strictures in association with the ingestion of other drugs in nondeformable controlled-release formulations. Due to the controlled-release design of the tablet, CONCERTA<sup>™</sup> should only be used in patients who are able to swallow the tablet whole (see PRECAUTIONS: Information for Patients).

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### **Hypertension and other Cardiovascular Conditions**

Use cautiously in patients with hypertension. Blood pressure should be monitored at appropriate intervals in patients taking CONCERTAJ, especially patients with hypertension. In the laboratory classroom clinical trials (Studies 1 and 2), both CONCERTAJ and methylphenidate tid increased resting pulse by an average of 2-6 bpm and produced average increases of systolic and diastolic blood pressure of roughly 1-4 mm Hg during the day, relative to placebo. Therefore, caution is indicated in treating patients whose underlying medical conditions might be compromised by increases in blood pressure or heart rate, e.g., those with pre-existing hypertension, heart failure, recent myocardial infarction, or hyperthyroidism.

### **Visual disturbance**

Symptoms of visual disturbances have been encountered in rare cases. Difficulties with accommodation and blurring of vision have been reported.

### **Use in Children Under Six Years of Age**

CONCERTAJ should not be used in children under six years, since safety and efficacy in this age group have not been established.

#### **DRUG DEPENDENCE**

CONCERTA™ should be given cautiously to patients with a history of drug dependence or alcoholism. Chronic abusive use can lead to marked tolerance and psychological dependence with varying degrees of abnormal behavior. Frank psychotic episodes can occur, especially with parenteral abuse. Careful supervision is required during withdrawal from abusive use since severe depression may occur. Withdrawal following chronic therapeutic use may unmask symptoms of the underlying disorder that may require follow-up.

### **PRECAUTIONS**

#### **Hematologic Monitoring**

Periodic CBC, differential, and platelet counts are advised during prolonged therapy.

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### **Information for Patients**

Patients should be informed that CONCERTA<sup>J</sup> should be swallowed whole with the aid of liquids. Tablets should not be chewed, divided, or crushed. The medication is contained within a nonabsorbable shell designed to release the drug at a controlled rate. The tablet shell, along with insoluble core components, is eliminated from the body; patients should not be concerned if they occasionally notice in their stool something that looks like a tablet.

Patient information is printed at the end of this insert. To assure safe and effective use of Concerta, the information and instructions provided in the patient information section should be discussed with patients.

### **Drug Interactions**

Because of possible effects on blood pressure, CONCERTA<sup>J</sup> should be used cautiously with pressor agents.

Human pharmacologic studies have shown that methylphenidate may inhibit the metabolism of coumarin anticoagulants, anticonvulsants (eg, phenobarbital, phenytoin, primidone), and some antidepressants (tricyclics and selective serotonin reuptake inhibitors). Downward dose adjustment of these drugs may be required when given concomitantly with methylphenidate. It may be necessary to adjust the dosage and monitor plasma drug concentrations (or, in the case of coumarin, coagulation times), when initiating or discontinuing concomitant methylphenidate.

Serious adverse events have been reported in concomitant use with clonidine, although no causality for the combination has been established. The safety of using methylphenidate in combination with clonidine or other centrally acting alpha-2 agonists has not been systematically evaluated.

### **Carcinogenesis, Mutagenesis, and Impairment of Fertility**

In a lifetime carcinogenicity study carried out in B6C3F1 mice, methylphenidate caused an increase in hepatocellular adenomas and, in males only, an increase in hepatoblastomas at a daily dose of approximately 60 mg/kg/day. This dose is approximately 30 times and 4 times the maximum recommended human dose of

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CONCERTAJ on a mg/kg and mg/m<sup>2</sup> basis, respectively. Hepatoblastoma is a relatively rare rodent malignant tumor type. There was no increase in total malignant hepatic tumors. The mouse strain used is sensitive to the development of hepatic tumors, and the significance of these results to humans is unknown.

Methylphenidate did not cause any increases in tumors in a lifetime carcinogenicity study carried out in F344 rats; the highest dose used was approximately 45 mg/kg/day, which is approximately 22 times and 5 times the maximum recommended human dose of CONCERTA™ on a mg/kg and mg/m<sup>2</sup> basis, respectively.

In a 24-week carcinogenicity study in the transgenic mouse strain p53+/-, which is sensitive to genotoxic carcinogens, there was no evidence of carcinogenicity. Male and female mice were fed diets containing the same concentration of methylphenidate as in the lifetime carcinogenicity study; the high-dose groups were exposed to 60 to 74 mg/kg/day of methylphenidate.

Methylphenidate was not mutagenic in the in vitro Ames reverse mutation assay or the in vitro mouse lymphoma cell forward mutation assay. Sister chromatid exchanges and chromosome aberrations were increased, indicative of a weak clastogenic response, in an in vitro assay in cultured Chinese Hamster Ovary cells. Methylphenidate was negative in vivo in males and females in the mouse bone marrow micronucleus assay.

Methylphenidate did not impair fertility in male or female mice that were fed diets containing the drug in an 18-week Continuous Breeding study. The study was conducted at doses up to 160 mg/kg/day, approximately 80-fold and 8-fold the highest recommended human dose of CONCERTAJ on a mg/kg and mg/m<sup>2</sup> basis, respectively.

#### **Pregnancy: Teratogenic Effects**

**Pregnancy Category C:** Methylphenidate has been shown to have teratogenic effects in rabbits when given in doses of 200 mg/kg/day, which is approximately 100 times and 40 times the maximum recommended human dose on a mg/kg and mg/m<sup>2</sup> basis, respectively.

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A reproduction study in rats revealed no evidence of harm to the fetus at oral doses up to 30 mg/kg/day, approximately 15-fold and 3-fold the maximum recommended human dose of CONCERTAJ on a mg/kg and mg/m<sup>2</sup> basis, respectively. The approximate plasma exposure to methylphenidate plus its main metabolite PPA in pregnant rats was 2 times that seen in trials in volunteers and patients with the maximum recommended dose of CONCERTAJ based on the AUC.

There are no adequate and well-controlled studies in pregnant women. CONCERTAJ should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

### **Nursing Mothers**

It is not known whether methylphenidate is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised if CONCERTAJ is administered to a nursing woman.

### **Pediatric Use**

The safety and efficacy of CONCERTAJ in children under 6 years old have not been established. Long-term effects of methylphenidate in children have not been well established (See Warnings).

### **ADVERSE REACTIONS**

The premarketing development program for CONCERTAJ included exposures in a total of 755 participants in clinical trials (469 patients, 286 healthy adult subjects). These participants received CONCERTAJ 18, 36, and/or 54 mg/day. The 469 patients (ages 6 to 13) were evaluated in three controlled clinical studies (Studies 1, 2, and 3), two uncontrolled clinical studies (including a long-term safety study), and one clinical pharmacology study in children with ADHD. Of the 469 patients in this program, 68 CONCERTA™-treated patients in one uncontrolled dose-initiation study were naïve to any pharmacologic therapy for their ADHD. Safety data on all patients are included in the discussion that follows. Adverse reactions were assessed by collecting adverse events, results of physical examinations, vital signs, weights, laboratory analyses, and ECGs.

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Adverse events during exposure were obtained primarily by general inquiry and 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 events into a smaller number of standardized event categories. In the tables and listings that follow, COSTART terminology has been used to classify reported adverse events.

The stated frequencies of adverse events represent the proportion of individuals who experienced, at least once, a treatment-emergent adverse event of the type listed. An event was considered treatment emergent if it occurred for the first time or worsened while receiving therapy following baseline evaluation.

#### **Adverse Findings in Clinical Trials with CONCERTA™**

##### Adverse Events Associated with Discontinuation of Treatment

In the 4-week placebo-controlled, parallel-group trial one CONCERTA™-treated patient (0.9%; 1/106) and one placebo-treated patient (1.0%; 1/99) discontinued due to an adverse event (sadness and increase in tics, respectively).

In uncontrolled studies up to 12 months with CONCERTA™, 6.6% (29/441) patients discontinued for adverse events. Those events associated with discontinuation of CONCERTA™ in more than one patient included the following: twitching (tics, 1.8%); anorexia (loss of appetite, 0.9%); aggravation reaction (0.7%); hostility (0.7%); insomnia (0.7%); and somnolence (0.5%).

##### Adverse Events Occurring at an Incidence of 1% or more Among CONCERTA™-Treated Patients

Table 2 enumerates, for a 4-week placebo-controlled, parallel-group trial in children with ADHD at CONCERTA™ doses of 18, 36, or 54 mg/day, the incidence of treatment-emergent adverse events. The table includes only those events that occurred in 1% or more of patients treated with CONCERTA™ where the incidence in patients treated with CONCERTA™ was greater than the incidence in placebo-treated patients.

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The prescriber should be aware that these figures cannot be used to predict the incidence of adverse events 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 non-drug factors to the adverse event incidence rate in the population studied.

**Table 2**  
**Incidence of Treatment-Emergent Events<sup>1</sup> in a 4-Week**  
**Placebo-Controlled Clinical Trial of CONCERTA™**

Body System	Preferred Term	CONCERTA™ (n=106)	Placebo (n= 99)
<b>General</b>	Headache	14 %	10 %
	Abdominal pain (stomach ache)	7 %	1 %
<b>Digestive</b>	Vomiting	4 %	3 %
	Anorexia (loss of appetite)	4 %	0 %
<b>Nervous</b>	Dizziness	2 %	0 %
	Insomnia	4 %	1 %
<b>Respiratory</b>	Upper Respiratory Tract Infection	8 %	5 %
	Cough Increased	4 %	2 %
	Pharyngitis	4 %	3 %
	Sinusitis	3 %	0 %

<sup>1</sup>Events, regardless of causality, for which the incidence for patients treated with CONCERTA™ was at least 1% and greater than the incidence among placebo-treated patients. Incidence greater than 1% has been rounded to the nearest whole number.

### Tics

In a long-term uncontrolled study (n=407 children), the cumulative incidence of new onset of tics was 8% after 10 months of treatment with CONCERTA™.

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### **Adverse Events with Other Methylphenidate HCl Products**

Nervousness and insomnia are the most common adverse reactions reported with other methylphenidate products. Other reactions include hypersensitivity (including skin rash, urticaria, fever, arthralgia, exfoliative dermatitis, erythema multiforme with histopathological findings of necrotizing vasculitis, and thrombocytopenic purpura); anorexia; nausea; dizziness; palpitations; headache; dyskinesia; drowsiness; blood pressure and pulse changes, both up and down; tachycardia; angina; cardiac arrhythmia; abdominal pain; weight loss during prolonged therapy. There have been rare reports of Tourette's syndrome. Toxic psychosis has been reported. Although a definite causal relationship has not been established, the following have been reported in patients taking this drug: instances of abnormal liver function, ranging from transaminase elevation to hepatic coma; isolated cases of cerebral arteritis and/or occlusion; leukopenia and/or anemia; transient depressed mood; a few instances of scalp hair loss. Very rare reports of neuroleptic malignant syndrome (NMS) have been received, and, in most of these, patients were concurrently receiving therapies associated with NMS. In a single report, a ten year old boy who had been taking methylphenidate for approximately 18 months experienced an NMS-like event within 45 minutes of ingesting his first dose of venlafaxine. It is uncertain whether this case represented a drug-drug interaction, a response to either drug alone, or some other cause.

In children, loss of appetite, abdominal pain, weight loss during prolonged therapy, insomnia, and tachycardia may occur more frequently; however, any of the other adverse reactions listed above may also occur.

### **DRUG ABUSE AND DEPENDENCE**

#### **Controlled Substance Class**

CONCERTAJ, like other methylphenidate products, is classified as a Schedule II controlled substance by federal regulation.

#### **Abuse, Dependence, and Tolerance**

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See WARNINGS for boxed warning containing drug abuse and dependence information.

## **OVERDOSAGE**

### **Signs and Symptoms**

Signs and symptoms of acute methylphenidate overdose, resulting principally from overstimulation of the CNS and from excessive sympathomimetic effects, may include the following: vomiting, agitation, tremors, hyperreflexia, muscle twitching, convulsions (may be followed by coma), euphoria, confusion, hallucinations, delirium, sweating, flushing, headache, hyperpyrexia, tachycardia, palpitations, cardiac arrhythmias, hypertension, mydriasis, and dryness of mucous membranes.

### **Recommended Treatment**

Treatment consists of appropriate supportive measures. The patient must be protected against self-injury and against external stimuli that would aggravate overstimulation already present. Gastric contents may be evacuated by gastric lavage as indicated. Before performing gastric lavage, control agitation and seizures if present and protect the airway. Other measures to detoxify the gut include administration of activated charcoal and a cathartic. Intensive care must be provided to maintain adequate circulation and respiratory exchange; external cooling procedures may be required for hyperpyrexia.

Efficacy of peritoneal dialysis or extracorporeal hemodialysis for CONCERTAJ overdose has not been established.

The prolonged release of methylphenidate from CONCERTAJ should be considered when treating patients with overdose.

### **Poison Control Center**

As with the management of all overdose, the possibility of multiple drug ingestion should be considered. The physician may wish to consider contacting a poison control center for up-to-date information on the management of overdose with methylphenidate.

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## **DOSAGE AND ADMINISTRATION**

CONCERTA™ is administered orally once daily in the morning.

CONCERTAJ must be swallowed whole with the aid of liquids, and must not be chewed, divided, or crushed. See PRECAUTIONS: Information for Patients.

CONCERTAJ may be administered with or without food and should be administered once daily in the morning.

Dosage should be individualized according to the needs and responses of the patient.

### **Patients New to Methylphenidate**

The recommended starting dose of CONCERTAJ for patients who are not currently taking methylphenidate, or for patients who are on stimulants other than methylphenidate, is 18 mg once daily.

Dosage may be adjusted in 18 mg increments to a maximum of 54 mg/day taken once daily in the morning. In general, dosage adjustment may proceed at approximately weekly intervals.

### **Patients Currently Using Methylphenidate**

The recommended dose of CONCERTAJ for patients who are currently taking methylphenidate bid, tid, or sustained-release (SR) at doses of 10 to 60 mg/day is provided in Table 3. Dosing recommendations are based on current dose regimen and clinical judgement.

Dosage may be adjusted in 18 mg increments to a maximum of 54 mg/day taken once daily in the morning. In general, dosage adjustment may proceed at approximately weekly intervals.

### **Table 3 Recommended Dose Conversion from Methylphenidate Regimens to CONCERTAJ**

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Previous Methylphenidate Daily Dose	Recommended CONCERTAJ Dose
5 mg Methylphenidate bid or 5 mg Methylphenidate tid or 20 mg Methylphenidate-SR	18 mg q am
10 mg Methylphenidate bid or 10 mg Methylphenidate tid or 40 mg Methylphenidate-SR	36 mg q am
15 mg Methylphenidate bid or 15 mg Methylphenidate tid or 60 mg Methylphenidate-SR	54 mg q am

Other methylphenidate regimens: Clinical judgement should be used when selecting the starting dose.

Daily dosage above 54 mg is not recommended.

#### **Maintenance/Extended Treatment**

There is no body of evidence available from controlled trials to indicate how long the patient with ADHD should be treated with CONCERTAJ. It is generally agreed, however, that pharmacological treatment of ADHD may be needed for extended periods. Nevertheless, the physician who elects to use CONCERTAJ for extended periods in patients with ADHD should periodically re-evaluate the long-term usefulness of the drug for the individual patient with trials off medication to assess the patient's functioning without pharmacotherapy. Improvement may be sustained when the drug is either temporarily or permanently discontinued.

#### **Dose Reduction and Discontinuation**

If paradoxical aggravation of symptoms or other adverse events occur, the dosage should be reduced, or, if necessary, the drug should be discontinued.

If improvement is not observed after appropriate dosage adjustment over a one-month period, the drug should be discontinued.

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**HOW SUPPLIED**

CONCERTA<sup>J</sup> (methylphenidate HCl) Extended-release Tablets are available in 18 mg and 36 mg dosage strengths. The 18 mg tablets are yellow and imprinted with **Aalza 18@**. The 36 mg tablets are white and imprinted with **Aalza 36@**. Both dosage strengths are supplied in bottles containing 100 tablets.

18 mg	100 count bottle	NDC 17314-5850-2
36 mg	100 count bottle	NDC 17314-5851-2

**Storage**

Store at 25°C (77°F); excursions permitted to 15-30°C (59-86°F) [see USP Controlled Room Temperature]. Protect from humidity.

**REFERENCE**

American Psychiatric Association. Diagnosis and Statistical Manual of Mental Disorders. 4th ed. Washington DC: American Psychiatric Association 1994.

**Rx Only**

For more information call 1-888-440-7903 or visit [www.concerta.net](http://www.concerta.net)

Manufactured, distributed, and marketed by ALZA Corporation, Mountain View, CA 94043. Marketed by McNeil Consumer Healthcare, Fort Washington, PA 19034.

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Edition:

**INFORMATION FOR PATIENTS TAKING CONCERTA<sup>TM</sup> OR THEIR PARENTS OR CAREGIVERS**

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CONCERTA™ (methylphenidate HCl) Extended-release Tablets CII

This information is for patients or their parents or caregivers taking CONCERTA™ Extended-release tablets CII for the treatment of Attention Deficit Hyperactivity Disorder.

Please read this before you start taking CONCERTA™. Remember, this information does not take the place of your doctor's instructions. If you have any questions about this information or about CONCERTA™, talk to your doctor or pharmacist.

**What is CONCERTA™?**

CONCERTA™ is a once-a-day treatment for Attention Deficit Hyperactivity Disorder, or ADHD. CONCERTA™ contains the drug methylphenidate, a central nervous system stimulant that has been used to treat ADHD for more than 30 years. CONCERTA™ is taken by mouth, once each day in the morning.

**What is Attention Deficit Hyperactivity Disorder?**

ADHD has three main types of symptoms: inattention, hyperactivity, and impulsiveness. Symptoms of inattention include not paying attention, making careless mistakes, not listening, not finishing tasks, not following directions, and being easily distracted. Symptoms of hyperactivity and impulsiveness include fidgeting, talking excessively, running around at inappropriate times, and interrupting others. Some patients have more symptoms of hyperactivity and impulsiveness while others have more symptoms of inattentiveness. Some patients have all three types of symptoms.

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Many people have symptoms like these from time to time, but patients with ADHD have these symptoms more than others their age. Symptoms must be present for at least 6 months to be certain of the diagnosis.

**How does CONCERTA™ work?**

Part of the CONCERTA™ tablet dissolves right after you swallow it in the morning, giving you an initial dose of methylphenidate. The remaining drug is slowly released during the day to continue to help lessen the symptoms of ADHD. Methylphenidate, the active ingredient in CONCERTA™, helps increase attention and decrease impulsiveness and hyperactivity in patients with ADHD.

**Who should NOT take CONCERTA™?**

You should NOT take CONCERTA™ if:

- You have significant anxiety, tension, or agitation since CONCERTA™ may make these conditions worse.
- You are allergic to methylphenidate or any of the other ingredients in CONCERTA™.
- You have glaucoma, an eye disease.
- You have tics or Tourette's Syndrome, or a family history of Tourette's Syndrome

Talk to your doctor if you believe any of these conditions apply to you.

**How should I take CONCERTA™?**

**Do not chew, crush, or divide the tablets.** Swallow CONCERTA™ tablets whole with the help of water or other liquids, such as milk or juice.

Take CONCERTA™ once each day in the morning.

You may take CONCERTA™ before or after you eat.

Take the dose prescribed by your doctor. Your doctor may adjust the amount of drug you take until it is right for you. From

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time to time, your doctor may interrupt your treatment to check your symptoms while you are not taking the drug.

**What are the possible side effects of CONCERTA™?**

In the clinical studies with patients using CONCERTA™, the most common side effects were headache, stomach pain, sleeplessness, and decreased appetite. Other side effects seen with methylphenidate, the active ingredient in CONCERTA™, include nausea, vomiting, dizziness, nervousness, tics, allergic reactions, increased blood pressure and psychosis (abnormal thinking or hallucinations).

This is not a complete list of possible side effects. Ask your doctor about other side effects. If you develop any side effect, talk to your doctor.

**What must I discuss with my doctor before taking CONCERTA™?**

Talk to your doctor **before** taking CONCERTA™ if you:

- Are being treated for depression or have symptoms of depression such as feelings of sadness, worthlessness, and hopelessness.
- Have motion tics (hard-to-control, repeated twitching of any parts of your body) or verbal tics (hard-to-control repeating of sounds or words).
- Have someone in your family with motion tics, verbal tics, or Tourette's syndrome.
- Have abnormal thoughts or visions, hear abnormal sounds, or have been diagnosed with psychosis.
- Have had seizures (convulsions, epilepsy) or abnormal EEGs (electroencephalograms).
- Have high blood pressure.
- Have a narrowing or blockage of your gastrointestinal tract (your esophagus, stomach, or small or large intestine).

Tell your doctor **immediately** if you develop any of the above conditions or symptoms while taking CONCERTA™.

**Can I take CONCERTA™ with other medicines?**

Tell your doctor about **all** medicines that you are taking. Your doctor should decide whether you can take CONCERTA™ with other

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medicines. These include:

Other medicines that a doctor has prescribed.  
Medicines that you buy yourself without a prescription.  
Any herbal remedies that you may be taking.

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You should not take CONCERTA™ with monoamine oxidase (MAO) inhibitors.

While on CONCERTA™, do not start taking a new medicine or herbal remedy before checking with your doctor.

CONCERTA™ may change the way your body reacts to certain medicines. These include medicines used to treat depression, prevent seizures, or prevent blood clots (commonly called "blood thinners"). Your doctor may need to change your dose of these medicines if you are taking them with CONCERTA™.

#### **Other Important Safety Information**

Abuse of methylphenidate can lead to dependence.

Tell your doctor if you have ever abused or been dependent on alcohol or drugs, or if you are now abusing or dependent on alcohol or drugs.

**Before** taking CONCERTA™, tell your doctor if you are pregnant or plan on becoming pregnant. If you take methylphenidate, it may be in your breast milk. Tell your doctor if you are nursing a baby.

Tell your doctor if you have blurred vision when taking CONCERTA™.

Slower growth (weight gain and/or height) has been reported with long-term use of methylphenidate in children. Your doctor will be carefully watching your height and weight. If you are not growing or gaining weight as your doctor expects, your doctor may stop your CONCERTA™ treatment.

Call your doctor **immediately** if you take more than the amount of CONCERTA™ prescribed by your doctor.

#### **What else should I know about CONCERTA™?**

CONCERTA™ has not been studied in children under 6 years of age.

The CONCERTA™ tablet does not dissolve completely after all the drug has been released, and you may sometimes notice it in your

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stool. This is normal.

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CONCERTA™ may be a part of your overall treatment for ADHD. Your doctor may also recommend that you have counseling or other therapy.

As with all medicines, never share CONCERTA™ with anyone else and take only the number of CONCERTA™ tablets prescribed by your doctor.

CONCERTA™ should be stored in a safe place at room temperature (between 59°-86° F). Do not store this medicine in hot, damp, or humid places.

**Keep out of the reach of children.**

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