

#### HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use METADATE CD® safely and effectively. See full prescribing information for METADATE CD.

METADATE CD (methylphenidate hydrochloride) extended-release capsules, CII  
Initial U.S. Approval: 1955

#### WARNING: ABUSE AND DEPENDENCE

See full prescribing information for complete boxed warning.

- CNS stimulants, including METADATE CD, other methylphenidate containing products, and amphetamines, have a high potential for abuse and dependence (5.1, 9.2, 9.3)
- Assess the risk of abuse prior to prescribing and monitor for signs of abuse and dependence while on therapy (5.1, 9.2)

#### INDICATIONS AND USAGE

METADATE CD is a central nervous system (CNS) stimulant indicated for the treatment of Attention Deficit Hyperactivity Disorder (ADHD) in pediatric patients 6 to 15 years of age (1)

#### DOSAGE AND ADMINISTRATION

- Take orally once daily in the morning, before breakfast (2.3)
- Swallow whole with the aid of liquids, or sprinkle contents onto a small amount of applesauce and give immediately (2.3)
- Do not crush or chew the capsule or capsule contents (2.3)
- Recommended starting dose is 20 mg once daily. Dosage may be increased 10-20 mg at weekly intervals; do not exceed 60 mg per day (2.2)

#### DOSAGE FORMS AND STRENGTHS

Extended-release capsules: 10 mg, 20 mg, 30 mg, 40 mg, 50 mg, 60 mg (3)

#### CONTRAINDICATIONS

- Known hypersensitivity to methylphenidate or other components of METADATE CD (4)
- Concurrent treatment with a monoamine oxidase inhibitor (MAOI), or use of an MAOI within the preceding 14 days (4)
- Use in patients with patients with hereditary problems of fructose intolerance, glucose-galactose malabsorption, or sucrase-isomaltase insufficiency (4)

#### WARNINGS AND PRECAUTIONS

- **Serious Cardiovascular Reactions:** Sudden death has been reported in association with CNS stimulant treatment at recommended doses in pediatric patients with structural cardiac abnormalities or other serious heart problems. In adults, sudden death, stroke, and myocardial infarction have been reported. Avoid use in patients with known structural cardiac abnormalities, cardiomyopathy, serious heart rhythm abnormalities, coronary artery disease, or other serious heart problems (5.2)
- **Blood Pressure and Heart Rate Increases:** Monitor blood pressure and pulse. Consider the benefits and risks in patients for whom an increase in blood pressure or heart rate would be problematic (5.3)
- **Psychiatric Adverse Reactions:** Use of CNS stimulants may cause psychotic or manic symptoms in patients with no prior history, or exacerbation of symptoms in patients with pre-existing psychiatric illness. Evaluate for bipolar disorder prior to METADATE CD use (5.4)
- **Priapism:** Cases of painful and prolonged penile erections and priapism have been reported with methylphenidate products. Immediate medical attention should be sought if signs or symptoms of painful or prolonged penile erections or priapism are observed (5.5)
- **Peripheral Vasculopathy, including Raynaud's Phenomenon:** Stimulants used to treat ADHD are associated with peripheral vasculopathy, including Raynaud's phenomenon. Careful observation for digital changes is necessary during treatment with ADHD stimulants (5.6)
- **Long-Term Suppression of Growth:** Monitor height and weight at appropriate intervals in pediatric patients (5.7)

#### ADVERSE REACTIONS

The most common adverse reactions ( $\geq 5\%$  and twice the rate of placebo) were anorexia and insomnia (6.1)

To report SUSPECTED ADVERSE REACTIONS, contact Lannett Company, Inc. at 1-844-834-0530 or FDA at 1-800-FDA-1088 or [www.fda.gov/medwatch](http://www.fda.gov/medwatch)

#### DRUG INTERACTIONS

- **Antihypertensive drugs:** Monitor blood pressure. Adjust dosage of antihypertensive drug as needed (7)

See 17 for PATIENT COUNSELING INFORMATION and Medication Guide

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## FULL PRESCRIBING INFORMATION

### WARNING: ABUSE AND DEPENDENCE

CNS stimulants, including METADATE CD, other methylphenidate-containing products, and amphetamines, have a high potential for abuse and dependence. Assess the risk of abuse prior to prescribing and monitor for signs of abuse and dependence while on therapy [see *Warnings and Precautions (5.1), Drug Abuse and Dependence (9.2, 9.3)*].

## 1 INDICATIONS AND USAGE

METADATE CD is indicated for the treatment of Attention Deficit Hyperactivity Disorder (ADHD) in pediatric patients 6 to 15 years of age.

## 2 DOSAGE AND ADMINISTRATION

### 2.1 Pretreatment Screening

Prior to initiating treatment with METADATE CD, assess for the presence of cardiac disease (i.e., perform a careful history including family history of sudden death or ventricular arrhythmia, and physical examination) [see *Warnings and Precautions (5.2)*].

Assess the risk of abuse prior to prescribing, and monitor for signs of abuse and dependence while on therapy. Maintain careful prescription records, educate patients about abuse, monitor for signs of abuse and overdose, and periodically re-evaluate the need for METADATE CD use [see *Boxed Warning, Warnings and Precautions (5.1), Drug Abuse and Dependence (9)*].

### 2.2 Dosage Recommendations

The recommended starting dose of METADATE CD is 20 mg once daily. Dosage may be adjusted in weekly 10 mg to 20 mg increments to the maximum recommended dose of 60 mg per day.

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

Pharmacological treatment of ADHD may be needed for extended periods. Periodically re-evaluate the long-term use of METADATE CD, and adjust the dosage as needed.

### 2.3 Administration Instructions

Administer METADATE CD orally once daily in the morning, before breakfast.

Swallow the capsule whole with the aid of liquids. Alternatively, open the capsule and sprinkle the contents onto a small amount (tablespoon) of applesauce and administer immediately. Do not store for future use. Drink fluids following the intake of the sprinkled capsule contents with applesauce. The capsules and the capsule contents must not be crushed or chewed.

### 2.4 Dose Reduction and Discontinuation

If paradoxical aggravation of symptoms or other adverse reactions occur, reduce dosage or, if necessary, discontinue METADATE CD. If improvement is not observed after appropriate dosage adjustment over a one-month period, discontinue METADATE CD.

## 3 DOSAGE FORMS AND STRENGTHS

METADATE CD extended-release capsules are available in the following dosage strengths (see Table 1):

**Table 1: Strengths and Identifying Characteristics of METADATE CD**

Strength	Capsule Color (cap/body)	Imprinting on Capsule Cap	Imprinting on Capsule Body
10 mg	green/white	“UCB 579” in white letters	“10 mg” in black letters
20 mg	blue/white	“UCB 580” in white letters	“20 mg” in black letters
30 mg	reddish-brown/white	“UCB 581” in white letters	“30 mg” in black letters
40 mg	yellow ivory/white	“UCB 582” in black letters	“40 mg” in black letters
50 mg	purple/white	“UCB 583” in white letters	“50 mg” in black letters
60 mg	white/white capsules	“UCB 584” in black letters	“60 mg” in black letters

## 4 CONTRAINDICATIONS

METADATE CD is contraindicated in patients with:

- known hypersensitivity to methylphenidate or other component of METADATE CD. Angioedema has been reported in patients treated with METADATE CD. Anaphylactic reactions have been reported in patients treated with other methylphenidate products [see *Adverse Reactions (6)*].
- Concomitant treatment with monoamine oxidase inhibitors (MAOIs), or within 14 days following discontinuation of treatment with an MAOI, because of the risk of hypertensive crisis [see *Drug Interactions (7)*].
- METADATE CD contains sucrose. Therefore, patients with hereditary problems of fructose intolerance, glucose-galactose malabsorption, or sucrase-isomaltase insufficiency should not take this medicine.

## 5 WARNINGS AND PRECAUTIONS

### 5.1 Potential for Abuse and Dependence

CNS stimulants, including METADATE CD, other methylphenidate-containing products, and amphetamines, have a high potential for abuse and dependence. Assess the risk of abuse prior to prescribing, and monitor for signs of abuse and dependence while on therapy [see *Drug Abuse and Dependence (9.2, 9.3)*].

### 5.2 Serious Cardiovascular Reactions

Sudden death, stroke and myocardial infarction have been reported in adults with CNS stimulant treatment at recommended doses. Sudden death has been reported in pediatric patients with structural cardiac abnormalities and other serious heart problems taking CNS stimulants at recommended doses for ADHD. Avoid use in patients with known structural cardiac abnormalities, cardiomyopathy, serious heart rhythm abnormalities, coronary artery disease, and other serious heart problems. Further evaluate patients who develop exertional chest pain, unexplained syncope, or arrhythmias during METADATE CD treatment.

### 5.3 Blood Pressure and Heart Rate Increases

CNS stimulants cause an increase in blood pressure (mean increase approximately 2 to 4 mmHg) and heart rate (mean increase approximately 3 to 6 bpm). Individuals may have larger increases. Monitor all patients for hypertension and tachycardia.

### 5.4 Psychiatric Adverse Reactions

#### Exacerbation of Pre-Existing Psychosis

CNS stimulants may exacerbate symptoms of behavior disturbance and thought disorder in patients with a pre-existing psychotic disorder.

#### Induction of a Manic Episode in Patients with Bipolar Disorder

CNS stimulants may induce a manic or mixed episode in patients. Prior to initiating treatment, screen patients for risk factors for developing a manic episode (e.g., comorbid or history of depressive symptoms or a family history of suicide, bipolar disorder, or depression).

#### New Psychotic or Manic Symptoms

CNS stimulants, at recommended doses, may cause psychotic or manic symptoms (e.g., hallucinations, delusional thinking, or mania) in patients without a prior history of psychotic illness or mania. If such symptoms occur, consider discontinuing METADATE CD. In a pooled analysis of multiple short-term, placebo-controlled studies of CNS stimulants, psychotic or manic symptoms occurred in approximately 0.1% of CNS stimulant-treated patients, compared to 0 in placebo-treated patients.

### 5.5 Priapism

Prolonged and painful erections, sometimes requiring surgical intervention, have been reported with methylphenidate products in both pediatric and adult patients. Priapism was not reported with drug initiation but developed after some time on the drug, often subsequent to an increase in dose. Priapism has also appeared during a period of drug withdrawal (drug holidays or during discontinuation). Patients who develop abnormally sustained or frequent and painful erections should seek immediate medical attention.

### 5.6 Peripheral Vasculopathy, including Raynaud's Phenomenon

CNS stimulants, including METADATE CD, used to treat ADHD are associated with peripheral vasculopathy, including Raynaud's phenomenon. Signs and symptoms are usually intermittent and mild; however, very rare sequelae include digital ulceration and/or soft tissue breakdown. Effects of peripheral vasculopathy, including Raynaud's phenomenon, were observed in post-marketing reports at different times and at therapeutic doses in all age groups throughout the course of treatment. Signs and symptoms generally improve after reduction in dose or discontinuation of drug. Careful observation for digital changes is necessary during treatment with ADHD stimulants. Further clinical evaluation (e.g., rheumatology referral) may be appropriate for certain patients.

### 5.7 Long-Term Suppression of Growth

CNS stimulants have been associated with weight loss and slowing of growth rate in pediatric patients.

Careful follow-up of weight and height in children ages 7 to 10 years who were randomized to either methylphenidate or non-medication treatment groups over 14 months, as well as in naturalistic subgroups of newly methylphenidate-treated and non-medication treated children over 36 months (to the ages of 10 to 13 years), suggests that consistently medicated children (i.e., treatment for 7 days per week throughout the year) have a temporary slowing in growth rate (on average, a total of about 2 cm less growth in height and 2.7 kg less growth in weight over 3 years), without evidence of growth rebound during this period of development.

Closely monitor growth (weight and height) in pediatric patients treated with CNS stimulants, including METADATE CD. **Patients who are not growing or gaining height or weight as expected may need to have their treatment interrupted.**

## 6 ADVERSE REACTIONS

The following are discussed in more detail in other sections of the labeling:

- Abuse and Dependence [see *Warnings and Precautions (5.1)*, *Drug Abuse and Dependence (9.2, 9.3)*]
- Hypersensitivity to Methylphenidate and Other Component of METADATE CD [see *Contraindications (4)*]
- Hypertensive Crisis when Used Concomitantly with MAOIs [see *Contraindications (4)* and *Drug Interactions (7)*]
- Serious Cardiovascular Reactions [see *Warnings and Precautions (5.2)*]
- Blood Pressure and Heart Rate Increases [see *Warnings and Precautions (5.3)*]
- Psychiatric Adverse Reactions [see *Warnings and Precautions (5.4)*]
- Priapism [see *Warnings and Precautions (5.5)*]
- Peripheral Vasculopathy, including Raynaud's Phenomenon [see *Warnings and Precautions (5.6)*]
- Long-Term Suppression of Growth [see *Warnings and Precautions (5.7)*]

### 6.1 Clinical Trials Experience

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in practice.

Clinical trials experience with METADATE CD included 188 pediatric patients 6 to 15 years old with ADHD exposed to METADATE CD. Patients received METADATE CD 20 mg, 40 mg, and/or 60 mg per day. The 188 patients were evaluated in the following studies: Study 1, a 3-week placebo-controlled clinical study consisting of a total of 314 pediatric patients (ages 6 to 15 years; METADATE CD n=155); Study 2, a placebo-controlled, crossover clinical study consisting of 25 pediatric patients (ages 7 to 12 years); and Study 3, an uncontrolled clinical study consisting of 8 pediatric patients (ages 6 to 10 years).

#### Adverse Reactions Leading to Discontinuation of Treatment

In the 3-week placebo-controlled, parallel-group trial, two METADATE CD-treated patients (1%) and no placebo-treated patients discontinued due to an adverse reaction (rash and pruritus; and headache, abdominal pain, and dizziness, respectively).

#### Most Common Adverse Reactions

The most common adverse reactions that occurred in 5% or more of patients treated with METADATE CD in a pool of Studies 1, 2 and 3 (ages 6 to 15 years) where the incidence in patients treated with METADATE CD was at least twice the incidence in placebo-treated patients were anorexia and insomnia.

Adverse reactions that occurred in  $\geq 5\%$  of patients treated with METADATE CD and greater than placebo in pooled Studies 1, 2, and 3 are presented in Table 2:

**Table 2: Adverse Reactions ( $\geq 5\%$  and Greater than Placebo) in Pediatric Patients Ages 6 to 15 Years Receiving METADATE CD in Pooled Three to Four Week Trials**

Body System	Preferred Term	METADATE CD (n=188) %	Placebo (n=190) %
General	Headache	12	8
	Abdominal Pain (stomachache)	7	4
Digestive System	Anorexia	9	2
Nervous System	Insomnia	5	2

## **6.2 Postmarketing Experience**

The following adverse reactions have been identified during postmarketing use of METADATE CD and other methylphenidate HCl products. Because these reactions are reported voluntarily from a population of uncertain size, it is not possible to reliably estimate their frequency or establish a causal relationship to drug exposure.

### Adverse Reactions with METADATE CD

*Blood and the lymphatic system disorders:* thrombocytopenia

*Cardiac disorders:* cardiac arrest, sudden death

*Immune system disorders:* angioedema

*Musculoskeletal and connective tissue disorders:* rhabdomyolysis

*Psychiatric disorders:* abnormal behavior, aggression, anxiety, irritability, obsessive-compulsive disorder, suicidal behavior (including completed suicide), libido changes, serotonin syndrome in combination with serotonergic drugs

*Nervous System Disorder:* migraine, reversible ischemic neurological deficit, bruxism

*Skin and subcutaneous tissue disorders:* fixed drug eruption

*Vascular disorders:* peripheral coldness, Raynaud's phenomenon

### Adverse Reactions with Other Methylphenidate HCl Products

*Blood and the lymphatic system disorders:* leukopenia, anemia, pancytopenia

*Cardiac disorders:* palpitations; increased blood pressure, tachycardia, angina pectoris, cardiac arrhythmia, myocardial infarction, bradycardia, extrasystole

*Eye disorders:* blurred vision, difficulties in visual accommodation, diplopia, mydriasis

*Gastrointestinal disorders:* nausea, abdominal pain, dry mouth, vomiting, dyspepsia, diarrhea, constipation

*General Disorders:* fatigue, hyperpyrexia

*Hepatobiliary disorders:* abnormal liver function, ranging from transaminase elevation to severe hepatic injury

*Immune system disorders:* hypersensitivity, including anaphylaxis, auricular swelling, bullous conditions, eruptions, exanthemas

*Infections and infestations:* nasopharyngitis

*Metabolism and nutrition disorders:* decreased appetite, reduced weight gain and suppression of growth during prolonged use in pediatric patients

*Musculoskeletal and connective tissue disorders:* arthralgia, muscle cramps, myalgia, muscle twitching

*Nervous System Disorder:* nervousness, dizziness, headache, dyskinesia, including choreoathetoid movements, drowsiness, tremor, convulsions, cerebrovascular disorders (including vasculitis, cerebral hemorrhages and cerebrovascular accidents), serotonin syndrome in combination with serotonergic drugs

*Psychiatric disorders:* depressed mood, restlessness, agitation, psychosis (sometimes with visual and tactile hallucinations), affect liability, mania, disorientation

*Renal and urinary disorders:* hematuria

*Reproductive system and breast disorders:* gynecomastia

*Respiratory, thoracic and mediastinal disorders:* pharyngolaryngeal pain, dyspnea, cough

*Skin and subcutaneous tissue disorders:* scalp hair loss, hyperhidrosis, angioneurotic edema, erythema, exfoliative dermatitis, thrombocytopenic purpura, urticaria, erythema multiforme rash

*Urogenital disorders:* priapism

*Vascular disorders:* isolated cases of cerebral arteritis and/or occlusion

## 7 DRUG INTERACTIONS

Table 3 presents clinically important drug interactions with METADATE CD.

**Table 3: Clinically Important Drug Interactions with METADATE CD**

<b>Monoamine Oxidase Inhibitors (MAOI)</b>	
<i>Clinical Impact:</i>	Concomitant use of MAOIs and CNS stimulants, including METADATE CD, can cause hypertensive crisis. Potential outcomes include death, stroke, myocardial infarction, aortic dissection, ophthalmological complications, eclampsia, pulmonary edema, and renal failure [see <i>Contraindications (4)</i> ].
<i>Intervention:</i>	Concomitant use of METADATE CD with monoamine oxidase inhibitors (MAOIs) or within 14 days after discontinuing MAOI treatment is contraindicated.
<b>Antihypertensive Drugs</b>	
<i>Clinical Impact:</i>	METADATE CD may decrease the effectiveness of drugs used to treat hypertension [see <i>Warnings and Precautions (5.3)</i> ].
<i>Intervention:</i>	Adjust the dosage of the antihypertensive drug as needed.
<b>Risperidone</b>	
<i>Clinical Impact:</i>	Combined use of methylphenidate with risperidone when there is a change, whether an increase or decrease, in dosage of either or both medications, may increase the risk of extrapyramidal symptoms (EPS).
<i>Intervention:</i>	Monitor for signs of EPS.

## 8 USE IN SPECIFIC POPULATIONS

### 8.1 Pregnancy

There is a pregnancy exposure registry that monitors pregnancy outcomes in women exposed to ADHD medications, including METADATE CD, during pregnancy. Healthcare providers are encouraged to register patients by calling the National Pregnancy Registry for Psychostimulants at 1-866-961-2388.

#### Risk Summary

Published studies and postmarketing reports on methylphenidate use during pregnancy have not identified a drug-associated risk of major birth defects, miscarriage or adverse maternal or fetal outcomes. There may be risks to the fetus associated with the use of CNS stimulants use during pregnancy (see *Clinical Considerations*).

No effects on morphological development were observed in embryo-fetal development studies with oral administration of methylphenidate to pregnant rats and rabbits during organogenesis at doses up to 10 and 15 times, respectively, the maximum recommended human dose (MRHD) of 60 mg/day given to adolescents on a mg/m<sup>2</sup> basis. However, spina bifida was observed in rabbits at a dose 53 times the MRHD given to adolescents. A decrease in pup body weight was observed in a pre-and post-natal development study with oral administration of methylphenidate to rats throughout pregnancy and lactation at doses 6 times the MRHD given to adolescents (see *Data*).

The estimated background risk of major birth defects and miscarriage for the indicated population is unknown. All pregnancies have a background risk of birth defect, loss, or other adverse outcomes. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2% to 4% and 15% to 20%, respectively.

#### Clinical Considerations

### *Fetal/Neonatal Adverse Reactions*

CNS stimulants, such as METADATE CD, can cause vasoconstriction and thereby decrease placental perfusion. No fetal and/or neonatal adverse reactions have been reported with the use of therapeutic doses of methylphenidate during pregnancy; however, premature delivery and low birth weight infants have been reported in amphetamine-dependent mothers.

### Animal Data

In embryo-fetal development studies conducted in rats and rabbits, methylphenidate was administered orally at doses of up to 75 and 200 mg/kg/day, respectively, during the period of organogenesis. Malformations (increased incidence of fetal spina bifida) were observed in rabbits at the highest dose, which is approximately 52 times the MRHD of 60 mg/day given to adolescents on a mg/m<sup>2</sup> basis. The no effect level for embryo-fetal development in rabbits was 60 mg/kg/day (15 times the MRHD given to adolescents on a mg/m<sup>2</sup> basis). There was no evidence of morphological development effects in rats, although increased incidences of fetal skeletal variations were seen at the highest dose level (10 times the MRHD of 60 mg/day given to adults on a mg/m<sup>2</sup> basis), which was also maternally toxic. The no effect level for embryo-fetal development in rats was 25 mg/kg/day (3 times the MRHD on a mg/m<sup>2</sup> basis). When methylphenidate was administered to rats throughout pregnancy and lactation at doses of up to 45 mg/kg/day, offspring body weight gain was decreased at the highest dose (6 times the MRHD of 60 mg/day given to adults on a mg/m<sup>2</sup> basis), but no other effects on postnatal development were observed. The no effect level for pre-and postnatal development in rats was 15 mg/kg/day (~2 times the MRHD given to adolescents on a mg/m<sup>2</sup> basis).

## **8.2 Lactation**

### Risk Summary

Limited published literature, based on milk sampling from seven mothers reports that methylphenidate is present in human milk, which resulted in infant doses of 0.16% to 0.7% of the maternal weight-adjusted dosage and a milk/plasma ratio ranging between 1.1 and 2.7. There are no reports of adverse effects on the breastfed infant and no effects on milk production. Long-term neurodevelopmental effects on infants from stimulant exposure are unknown. The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for METADATE CD and any potential adverse effects on the breastfed infant from METADATE CD or from the underlying maternal condition.

### Clinical Considerations

Monitor breastfeeding infants for adverse reactions, such as agitation, insomnia, anorexia, and reduced weight gain.

## **8.4 Pediatric Use**

The safety and effectiveness of METADATE CD for the treatment of ADHD have been established in pediatric patients 6 to 15 years of age. The safety and effectiveness of METADATE CD in pediatric patients younger than 6 years of age have not been established. Long-term efficacy of METADATE CD in pediatric patients have not been established.

### Long-Term Suppression of Growth

Growth should be monitored during treatment with stimulants, including Metadate CD. Pediatric patients who are not growing or gaining weight as expected may need to have their treatment interrupted [*see Warnings and Precautions (5.6)*].

### Juvenile Animal Toxicity Data.

In a study conducted in young rats, methylphenidate was administered orally at doses of up to 100 mg/kg/day for 9 weeks, starting early in the postnatal period (postnatal Day 7) and continuing through sexual maturity (postnatal Week 10). When these animals were tested as adults (postnatal Weeks 13 to 14), decreased spontaneous locomotor activity was observed in males and females previously treated with 50 mg/kg/day (approximately 6 times the MRHD on a mg/m<sup>2</sup> basis) or greater, and a deficit in the acquisition of a specific learning task was seen in females exposed to the highest dose (12 times the MRHD on a mg/m<sup>2</sup> basis). The no effect level for juvenile neurobehavioral development in rats was 5 mg/kg/day (half the MRHD on a mg/m<sup>2</sup> basis). The clinical significance of the long-term behavioral effects observed in rats is unknown.

## **8.5 Geriatric Use**

METADATE CD has not been studied in patients over the age of 65 years.

# **9 DRUG ABUSE AND DEPENDENCE**

## **9.1 Controlled Substance**

METADATE CD contains methylphenidate hydrochloride, a Schedule II controlled substance.

## **9.2 Abuse**

CNS stimulants, including METADATE CD, other methylphenidate-containing products, and amphetamines have a high potential for abuse. Abuse is the intentional non-therapeutic use of a drug, even once, to achieve a desired psychological or physiological effect. Drug addiction is a cluster of behavioral, cognitive, and psychological phenomena that may include a strong

desire to take the drug, difficulties in controlling drug use (e.g., continuing drug use despite harmful consequences, giving a higher priority to drug use than other activities and obligations), and possible tolerance or physical dependence. Both abuse and misuse may lead to addiction, and some individuals may develop addiction even when taking METADATE CD as prescribed.

Signs and symptoms of CNS stimulant abuse include increased heart rate, respiratory rate, blood pressure, and/or sweating, dilated pupils, hyperactivity, restlessness, insomnia, decreased appetite, loss of coordination, tremors, flushed skin, vomiting, and/or abdominal pain. Anxiety, psychosis, hostility, aggression, and suicidal or homicidal ideation have also been observed. Individual who abuser CNS stimulants may chew, snort, inject, or use other unapproved routes of administration which can result in overdose and death [*see Overdosage (10)*].

To reduce the abuse of METADATE CD, assess the risk of abuse prior to prescribing. After prescribing, keep careful prescription records, educate patients and their families about abuse and on proper storage and disposal of CNS stimulants [*see How Supplied/Storage and Handling (16)*], monitor for signs of abuse while on therapy, and re-evaluate the need for METADATE CD use.

### 9.3 Dependence

#### Physical Dependence

Metadate CD may produce physical dependence from continued therapy. Physical dependence is a state that develops as a result of physiological adaptation in response to repeated drug use, manifested by a withdrawal signs and symptoms after abrupt discontinuation or significant dose reduction of a drug. Withdrawal symptoms after abrupt cessation following prolonged high-dosage administration of CNS stimulants include dysphoric mood; fatigue; vivid, unpleasant dreams; insomnia or hypersomnia; increased appetite; and psychomotor retardation or agitation.

#### Tolerance

Metadate CD may produce tolerance from continued therapy. Tolerance is a physiological state characterized by a reduced response to a drug after repeated administration (i.e., a higher dose of a drug is required to produce the same effect that was once obtained at a lower dose).

## 10 OVERDOSAGE

#### Human Experience

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

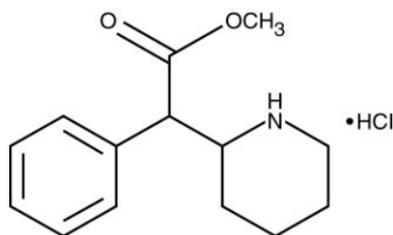
#### Overdose Management

Consult with a Certified Poison Control Center (1-800-222-1222) for guidance and advice on the management of overdose with methylphenidate. Provide supportive care, including close medication supervision and monitoring. Treatment should consist of those general measures employed in the management of overdose with any drug. Consider the possibility of multiple drug overdose.

## 11 DESCRIPTION

METADATE CD contains methylphenidate hydrochloride, a CNS stimulant. The extended-release capsules comprise both immediate-release (IR) and extended-release (ER) beads such that 30% of the dose is provided by the IR component and 70% of the dose is provided by the ER component. METADATE CD is available in six capsule strengths containing 10 mg (3 mg IR; 7 mg ER), 20 mg (6 mg IR; 14 mg ER), 30 mg (9 mg IR; 21 mg ER), 40 mg (12 mg IR; 28 mg ER), 50 mg (15 mg IR; 35 mg ER), or 60 mg (18 mg IR; 42 mg ER) of methylphenidate hydrochloride for oral administration.

Chemically, methylphenidate HCl is *d,l* (racemic)-*threo*-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.

METADATE CD also contains the following inactive ingredients: Dibutyl sebacate, ethylcellulose aqueous dispersion, gelatin, hydroxypropylmethylcellulose, polyethylene glycol, povidone, sugar spheres, and titanium dioxide.

The individual capsules contain the following color agents:

10 mg capsules: FD&C Blue No. 2, FDA/E172 Yellow Iron Oxide

20 mg capsules: FD&C Blue No. 2

30 mg capsules: FD&C Blue No. 2, FDA/E172 Red Iron Oxide

40 mg capsules: FDA/E172 Yellow Iron Oxide

50 mg capsules: FD&C Blue No. 2, FDA/E172 Red Iron Oxide

## 12 CLINICAL PHARMACOLOGY

### 12.1 Mechanism of Action

Methylphenidate hydrochloride is a central nervous system (CNS) stimulant. The mode of therapeutic action in ADHD is not known.

### 12.2 Pharmacodynamics

Methylphenidate is a racemic mixture comprised of the *d*- and *l*-threo enantiomers. The *d*-threo enantiomer is more pharmacologically active than the *l*-threo enantiomer. Methylphenidate blocks the reuptake of norepinephrine and dopamine into the presynaptic neuron and increases the release of these monoamines into the extraneuronal space.

### 12.3 Pharmacokinetics

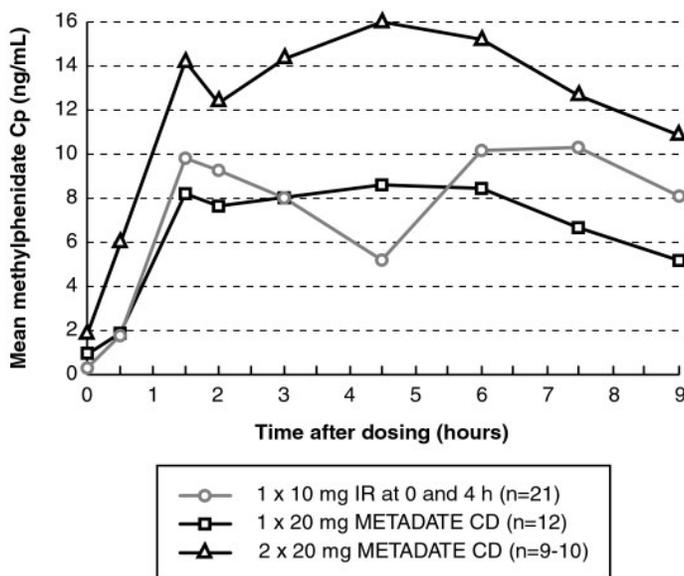
Following one week of once-daily doses of 20 mg or 40 mg METADATE CD to children aged 7 to 12 years old with ADHD,  $C_{max}$  and AUC of methylphenidate were approximately proportional to the administered doses.

#### Absorption

Following administration of METADATE CD in children aged 7 to 12 years old with ADHD, the plasma concentration time profile of methylphenidate showed two phases of drug release with a sharp, initial slope similar to a methylphenidate immediate-release tablet (median  $T_{max1}$  about 1.5 hours post dose), and a second rising portion approximately three hours later (median  $T_{max2}$  about 4.5 hours post dose)\*, followed by a gradual decline (Figure 1). The means for  $C_{max}$  and area under the curve (AUC) following a dose of 20 mg were slightly lower than those seen with 10 mg of the immediate-release formulation, dosed at 0 and 4 hours.

\*25-30% of the subjects had only one observed peak ( $C_{max}$ ) concentration of methylphenidate.

**Figure 1: Comparison of Immediate Release (IR) and METADATE CD Formulations After Repeated Doses of Methylphenidate HCl in Pediatric Patients 7 to 12 Years of Age with ADHD**



#### Effect of Food

Ingestion of a high-fat meal with METADATE CD increased the mean  $C_{max}$  and AUC of methylphenidate by about 30% and 17%, respectively. The presence of food delayed the early peak by approximately 1 hour (range -2 to 5 hours delay). [see Dosage

and Administration (2.1)].

The bioavailability ( $C_{max}$  and AUC) of methylphenidate was unaffected by sprinkling the METADATE CD capsule contents on applesauce as compared to the intact capsule.

#### *Effect of Alcohol*

At an alcohol concentration of 40%, there was an increase in the release rate of methylphenidate in the first hour, resulting in 84% of the methylphenidate being released. The results with the 60 mg capsule are considered to be representative of the other available capsule strengths [see Drug Interactions (7)].

#### Distribution

Plasma protein binding is 10% to 33%. The volume of distribution was  $2.65 \pm 1.11$  L/kg for d- methylphenidate and  $1.80 \pm 0.91$  L/kg for l- methylphenidate.

#### Elimination

The mean terminal half-life ( $t_{1/2}$ ) of methylphenidate following administration of METADATE CD ( $t_{1/2}$ =6.8 hours) is longer than the mean terminal  $t_{1/2}$  following administration of methylphenidate hydrochloride immediate-release tablets ( $t_{1/2}$ =2.9 hours) and methylphenidate hydrochloride extended-release tablets ( $t_{1/2}$ =3.4 hours) in healthy adult volunteers.

#### *Metabolism*

*In vitro* studies showed that methylphenidate was not metabolized by cytochrome P450 isoenzymes. Methylphenidate is metabolized primarily by deesterification to alpha-phenyl-piperidine acetic acid (ritalinic acid), which has little or no pharmacologic activity.

#### *Excretion*

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

#### Specific Populations

##### *Male and Female Patients*

The pharmacokinetics of methylphenidate after a single dose of METADATE CD were similar between adult men and women.

##### *Racial or Ethnic Groups*

The influence of race on the pharmacokinetics of methylphenidate after METADATE CD administration has not been studied.

##### *Pediatric Patients*

The pharmacokinetics of methylphenidate after METADATE CD administration has not been studied in children less than 6 years of age.

##### *Patients with Renal Impairment*

METADATE CD has not been studied in patients with renal insufficiency. Since renal clearance is not an important route of methylphenidate clearance, and the major metabolite (ritalinic acid), has little or no pharmacologic activity, renal insufficiency is expected to have minimal effect on the pharmacokinetics of METADATE CD.

##### *Patients with Hepatic Impairment*

METADATE CD has not been studied in patients with hepatic insufficiency. Hepatic impairment is expected to have minimal effect on the pharmacokinetics of methylphenidate since it is metabolized primarily to ritalinic acid by nonmicrosomal hydrolytic esterases that are widely distributed throughout the body

#### Drug Interaction Studies

*In vitro* studies showed that methylphenidate did not inhibit cytochrome P450 isoenzymes at clinically observed plasma drug concentrations.

## **13 NONCLINICAL TOXICOLOGY**

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

#### Carcinogenesis

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 per day. This dose is approximately 2 times the maximum recommended human dose (MRHD) of 60 mg/day given to children on a mg/m<sup>2</sup> basis. 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 4 times the MRHD (children) on a mg/m<sup>2</sup> basis.

In a 24-week carcinogenicity study in the transgenic mouse strain p53<sup>+/-</sup>, 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 per day of methylphenidate.

#### Mutagenesis

Methylphenidate was not mutagenic in the *in vitro* Ames reverse mutation assay, in the *in vitro* mouse lymphoma cell forward mutation assay, or in the *in vitro* chromosomal aberration assay using human lymphocytes. 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.

#### Impairment of Fertility

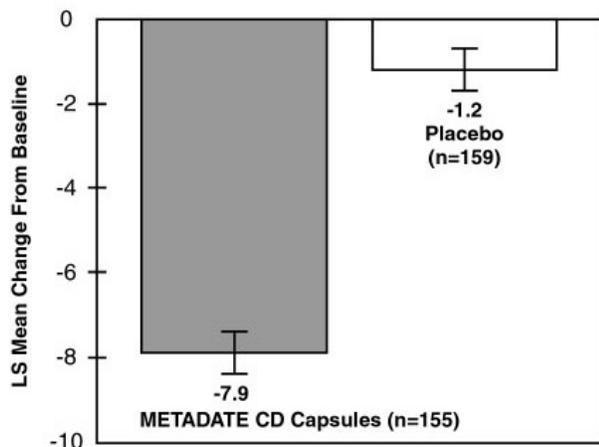
Methylphenidate did not impair fertility in male or female mice that were fed diets containing the drug in an 18-week continuous breeding study. The study was conducted at doses up to 160 mg/kg per day, approximately 10 times the maximum recommended human dose of 60 mg/day given to adolescents on a mg/m<sup>2</sup> basis.

### 14 CLINICAL STUDIES

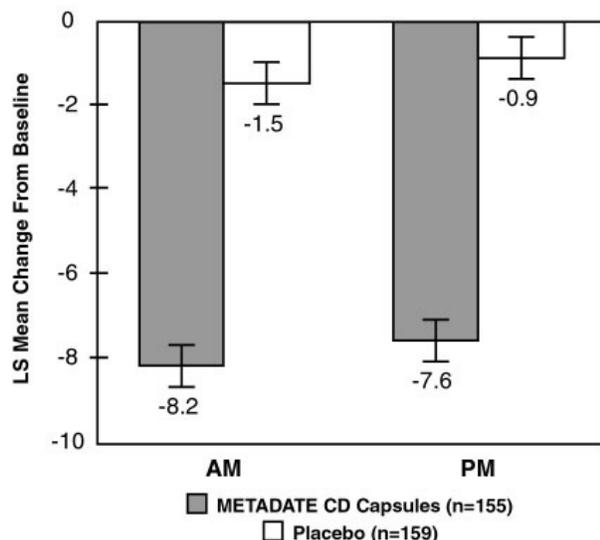
METADATE CD was evaluated in a double-blind, parallel-group, placebo-controlled trial in which 321 untreated or previously treated pediatric patients with a DSM-IV diagnosis of Attention Deficit Hyperactivity Disorder (ADHD), 6 to 15 years of age, received a single morning dose for up to 3 weeks. Patients were required to have the combined or predominantly hyperactive-impulsive subtype of ADHD; patients with the predominantly inattentive subtype were excluded. Patients randomized to the METADATE CD group received 20 mg daily for the first week. Their dosage could be increased weekly to a maximum of 60 mg by the third week, depending on individual response to treatment.

The patient's regular school teacher completed the teachers' version of the Conners' Global Index Scale (TCGIS), a scale for assessing ADHD symptoms, in the morning and again in the afternoon on three alternate days of each treatment week. The primary efficacy endpoint was determined by the average of the total scores for the 10-item TCGIS completed by the classroom teacher in the morning and again in the afternoon on the three observation days during the last week of double-blind therapy. Patients treated with METADATE CD showed a statistically significant improvement in symptom scores from baseline over patients who received placebo (See Figure 2). Separate analyses of TCGIS scores in the morning and afternoon revealed superiority in improvement with METADATE CD over placebo during both time periods (See Figure 3).

**Figure 2: Least Squares Mean Change from Baseline in TCGIS Total Score in Pediatric Patients 6 to 15 years of Age with ADHD**



**Figure 3: Least Squares Mean Change from Baseline in TCGIS Total Score in Pediatric Patients 6 to 15 years of Age with ADHD: Morning (AM) and Afternoon (PM)**



\* FIGURES 2 & 3: Last observation carried forward analysis at week 3.  
Error bars represent the standard error of the mean.

## 16 HOW SUPPLIED/STORAGE AND HANDLING

### How Supplied

METADATE CD (methylphenidate HCl, USP) extended-release capsules are available in six strengths (see Table 4):

**Table 4: Strengths, Identifying Characteristics, and Packaging Configurations of METADATE CD**

Strength	Capsule Color (cap/body)	Imprinting on Capsule Cap	Imprinting on Capsule Body	Capsules per Bottle	NDC Number
10 mg	green/white	“UCB 579” in white letters	“10 mg” in black letters	100	NDC 53014-579-07
20 mg	blue/white	“UCB 580” in white letters	“20 mg” in black letters	100	NDC 53014-580-07
30 mg	reddish-brown/white	“UCB 581” in white letters	“30 mg” in black letters	100	NDC 53014-581-07
40 mg	yellow ivory/white	“UCB 582” in black letters	“40 mg” in black letters	100	NDC 53014-582-07
50 mg	purple/white	“UCB 583” in white letters	“50 mg” in black letters	100	NDC 53014-583-07
60 mg	white/white capsules	“UCB 584” in black letters	“60 mg” in black letters	100	NDC 53014-584-07

### Storage and Handling

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

### Disposal

Comply with local laws and regulations on drug disposal of CNS stimulants. Dispose of remaining, unused, or expired METADATE CD by a medicine take-back program or by an authorized collector registered with the Drug Enforcement Administration. If no take-back program or authorized collector is available, mix METADATE CD with an undesirable, nontoxic substance to make it less appealing to children and pets. Place the mixture in a container such as a sealed plastic bag and discard METADATE CD in the household trash.

## 17 PATIENT COUNSELING INFORMATION

Advise the patient to read the FDA-approved patient labeling (Medication Guide).

### Controlled Substance Status/Potential for Abuse and Dependence

Advise patients and their caregivers that METADATE CD is a federally controlled substance, and it can be abused and lead to dependence [see *Drug Abuse and Dependence (9.1, 9.2, and 9.3)*]. Instruct patients that they should not give METADATE CD to anyone else. Advise patients to store METADATE CD in a safe place, preferably locked, to prevent abuse. Advise patients to comply with laws and regulations on drug disposal. Advise patients to dispose of remaining, unused, or expired METADATE CD by a medicine take-back program if available [see *Warnings and Precautions (5.1), Drug Abuse and Dependence (9), How Supplied/Storage and Handling (16)*].

### Administration Instructions

Instruct patients and their caregivers that the METADATE CD capsules and the capsule contents must not be crushed or chewed. Instruct patients that the capsule may be swallowed whole, or alternatively, the capsule may be opened and the capsule contents sprinkled onto a small amount (teaspoon) of applesauce and given immediately, and not stored for future use [see *Dosage and Administration (2.3)*].

### Serious Cardiovascular Risks

Advise patients and their caregivers that there is a potential for serious cardiovascular risks including sudden death, myocardial infarction, stroke, and hypertension with METADATE CD use. Instruct patients to contact a healthcare provider immediately if they develop symptoms such as exertional chest pain, unexplained syncope, or other symptoms suggestive of cardiac disease [see *Warnings and Precautions (5.2)*].

### Blood Pressure and Heart Rate Increases

Instruct patients and their caregivers that METADATE CD can cause elevations of their blood pressure and pulse rate [see *Warnings and Precautions (5.3)*].

### Psychiatric Risks

Advise patients and their caregivers that METADATE CD, at recommended doses, can cause psychotic or manic symptoms, even in patients without a prior history of psychotic symptoms or mania [see *Warnings and Precautions (5.4)*].

### Priapism

Advise patients and their caregivers of the possibility of painful or prolonged penile erections (priapism). Instruct the patient to seek immediate medical attention in the event of priapism [see *Warnings and Precautions (5.5)*].

### Circulation Problems in Fingers and Toes (peripheral vasculopathy, including Raynaud's phenomenon)

- Instruct patients about the risk of peripheral vasculopathy, including Raynaud's phenomenon, and associated signs and symptoms: fingers or toes may feel numb, cool, painful, and/or may change color from pale, to blue, to red.
- Instruct patients to report to their physician any new numbness, pain, skin color change, or sensitivity to temperature in fingers or toes.
- Instruct patients to call their physician immediately with any signs of unexplained wounds appearing on fingers or toes. Further clinical evaluation (e.g., rheumatology referral) may be appropriate for certain patients [see *Warnings and Precautions (5.6)*].

### Suppression of Growth

Advise patients and their caregivers that METADATE CD can cause slowing of growth and weight loss [see *Warnings and Precautions (5.7)*].

### Pregnancy Registry

Inform patients that there is a pregnancy exposure registry that monitors pregnancy outcomes in women exposed to METADATE CD during pregnancy [see *Use in Specific Populations (8.1)*].

### Alcohol Use

Advise patients to avoid alcohol while taking METADATE CD. Consumption of alcohol while taking METADATE CD may result in a more rapid release of the dose of methylphenidate [see *Drug Interactions (7)*].

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**This label may not be the latest approved by FDA.  
For current labeling information, please visit <https://www.fda.gov/drugsatfda>**

Philadelphia, PA 19136

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**MEDICATION GUIDE**  
**METADATE CD® (meh·tuh·dayt CD)**  
**(methylphenidate hydrochloride)**  
**extended-release capsules, CII**

**What is the most important information I should know about METADATE CD?**

**METADATE CD can cause serious side effects, including:**

- **Abuse and dependence.** METADATE CD, other methylphenidate containing medicines, and amphetamines have a high chance for abuse and can cause physical and psychological dependence. Your healthcare provider should check your child for signs of abuse and dependence before and during treatment with METADATE CD.
  - Tell your healthcare provider if your child has ever abused or been dependent on alcohol, prescription medicines, or street drugs.
  - Your healthcare provider can tell you more about the differences between physical and psychological dependence and drug addiction.

- **Heart-related problems, including:**

- sudden death in children who have heart problems or heart defects
- increased blood pressure and heart rate

Your healthcare provider should check your child carefully for heart problems before starting treatment with METADATE CD. Tell your healthcare provider if your child has any heart problems, heart defects, high blood pressure, or has a family history of these problems.

Your healthcare provider should check your child's blood pressure and heart rate regularly during treatment with METADATE CD.

**Call your healthcare provider or go to the nearest hospital emergency room right away if your child has any signs of heart problems such as chest pain, shortness of breath, or fainting during treatment with METADATE CD.**

- **Mental (psychiatric) problems, including:**

- new or worse behavior and thought problems
- new or worse bipolar illness
- new psychotic symptoms (such as hearing voices, or seeing or believing things that are not real) or new manic symptoms

Tell your healthcare provider about any mental problems your child has, or about a family history of, suicide, bipolar illness, or depression.

**Call your healthcare provider right away if your child has any new or worsening mental symptoms or problems during treatment with METADATE CD, especially hearing voices, seeing or believing things that are not real, or new manic symptoms.**

**What is METADATE CD?**

METADATE CD is a prescription medicine used for the treatment of Attention Deficit Hyperactivity Disorder (ADHD) in children 6 to 15 years of age. METADATE CD may help increase attention and decrease impulsiveness and hyperactivity in people with ADHD.

It is not known if METADATE CD is safe and effective for use in children younger than 6 years of age or older than 15 years of age.

**METADATE CD is a federally controlled substance (CII) because it contains methylphenidate that can be a target for people who abuse prescription medicines or street drugs.** Keep METADATE CD in a safe place to protect it from theft. Never give your METADATE CD to anyone else, because it may cause death or harm them. Selling or giving away METADATE CD may harm others and is against the law.

**Who should not take METADATE CD?**

**Your child should not take METADATE CD if your child:**

- is allergic to methylphenidate hydrochloride or any of the ingredients in METADATE CD. See the end of this Medication Guide for a complete list of ingredients in METADATE CD.
- has a rare inherited problem with the breaking down, absorbing, and processing of certain types of sugar in the body. METADATE CD contains a type of sugar called sucrose.
- is taking, or has stopped taking within the past 14 days, a medicine called a monoamine oxidase inhibitor (MAOI).

**Before starting METADATE CD tell your healthcare provider about all your child's medical conditions, including: if your child:**

- has heart problems, heart defects, or high blood pressure
- has mental problems including psychosis, mania, bipolar illness, or depression or has a family history of suicide, bipolar illness, or depression
- has circulation problems in fingers and toes
- is pregnant or plan to become pregnant. It is not known if METADATE CD will harm the unborn baby.
  - There is a pregnancy registry for females who are exposed to METADATE CD during pregnancy. The purpose of the registry is to collect information about the health of females exposed to METADATE CD and their baby. If you or your child becomes pregnant during treatment with METADATE CD, talk to your healthcare provider about registering with the National Pregnancy Registry for Psychostimulants at 1-866-961-2388.
- is breastfeeding or plan to breastfeed. METADATE CD passes into breast milk. Talk to your healthcare provider about the best way to feed the baby during treatment with METADATE CD.

**Tell your healthcare provider about all the medicines that your child takes**, including prescription and over-the-counter medicines, vitamins, and herbal supplements.

METADATE CD and some medicines may interact with each other and cause serious side effects. Sometimes the doses of other medicines will need to be changed during treatment with METADATE CD. Your healthcare provider will decide whether METADATE CD can be taken with other medicines.

**Especially tell your healthcare provider if your child takes** a medicine used to treat depression called a monoamine oxidase inhibitor (MAOI).

Know the medicines that your child takes. Keep a list of the medicines with you to show your healthcare provider and pharmacist. **Your child should not start taking any new medicines during treatment with METADATE CD without talking to your healthcare provider first.**

#### **How should METADATE CD be taken?**

- Take METADATE CD exactly as prescribed by your healthcare provider.
- Your healthcare provider may change the dose if needed.
- Take METADATE CD 1 time each day in the morning before breakfast.
- Swallow METADATE CD capsules whole with water or other liquids.
- If METADATE CD capsules cannot be swallowed whole, the capsule may be opened and the contents sprinkled onto a tablespoonful of applesauce.
  - Follow with a drink of water or other liquid.
  - **Do not** chew the applesauce and medicine mixture.
  - Swallow all the applesauce and medicine mixture right away. **Do not** store the applesauce and medicine mixture.
- Your healthcare provider may sometimes stop METADATE CD treatment for a while to check ADHD symptoms.
- **If your child takes too much METADATE CD, call your poison control center at 1-800-222-1222 or go to your nearest hospital emergency room right away.**

#### **What should be avoided during treatment with METADATE CD?**

Avoid drinking alcohol during treatment with METADATE CD. This may cause a faster release of the METADATE CD medicine.

#### **What are the possible side effects of METADATE CD?**

**METADATE CD can cause serious side effects, including:**

- See “**What is the most important information I should know about METADATE CD?**”
- **Painful and prolonged erections (priapism).** Priapism has happened in males who take products that contain methylphenidate. **If your child develops priapism, get medical help right away.**
- **Circulation problems in fingers and toes (peripheral vasculopathy, including Raynaud’s phenomenon).** Signs and symptoms may include:
  - fingers or toes may feel numb, cool, painful
  - fingers or toes may change color from pale, to blue, to red

Tell your healthcare provider if your child has numbness, pain, skin color change, or sensitivity to temperature in the fingers or toes.

**Call your healthcare provider right away** if your child has any signs of unexplained wounds appearing on the fingers or toes during treatment with METADATE CD.

- **Slowing of growth (height and weight) in children.** Children should have their height and weight checked often during treatment with METADATE CD. METADATE CD treatment may be stopped if your child is not growing or gaining weight.

**The most common side effects of METADATE CD include** anorexia and trouble sleeping.

These are not all the possible side effects of METADATE CD.

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

#### **How should I store METADATE CD?**

- Store METADATE CD at room temperature between 68°F to 77°F (20°C to 25°C).
- Store METADATE CD in a safe place, like a locked cabinet. Protect from light and moisture.
- Dispose of remaining, unused, or expired METADATE CD by a medication take-back program at authorized collection sites such as retail pharmacies, hospital or clinic pharmacies, and law enforcement locations. If no take-back program or authorized collector is available, mix METADATE CD with an undesirable, nontoxic substance such as dirt, cat litter, or used coffee grounds to make it less appealing to children and pets. Place the mixture in a container such as a sealed plastic bag and throw away METADATE CD in the household trash.

**Keep METADATE CD and all medicines out of the reach of children**

#### **General information about the safe and effective use of METADATE CD.**

Medicines are sometimes prescribed for purposes other than those listed in a Medication Guide. Do not use METADATE CD for a condition for which it was not prescribed. Do not give METADATE CD to other people, even if they have the same symptoms. It may harm them and it is against the law. You can ask your healthcare provider or pharmacist for information about METADATE CD that was written for healthcare professionals.

#### **What are the ingredients in METADATE CD?**

**Active Ingredient:** methylphenidate hydrochloride

**Inactive Ingredients:** sugar spheres, povidone, hydroxypropylmethylcellulose and polyethylene glycol, ethylcellulose aqueous dispersion, dibutyl sebacate, gelatin, and titanium dioxide.

The individual capsules contain the following coloring agents:

10 mg capsules: FD&C Blue No. 2, FDA/E172 Yellow Iron Oxide

20 mg capsules: FD&C Blue No. 2

30 mg capsules: FD&C Blue No. 2, FDA/E172 Red Iron Oxide

40 mg capsules: FDA/E172 Yellow Iron Oxide

50 mg capsules: FD&C Blue No. 2, FDA/E172 Red Iron Oxide

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**For more information about METADATE CD call 1-844-834-0530.**