

# AZSTARYS- serdexmethylphenidate and dexamethylphenidate capsule

## Corium, Inc

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### HIGHLIGHTS OF PRESCRIBING INFORMATION

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

AZSTARYS (serdexmethylphenidate and dexamethylphenidate) capsules, for oral use, CII  
Initial U.S. Approval: 2021

#### WARNING: ABUSE AND DEPENDENCE

*See full prescribing information for complete boxed warning.*

- **CNS stimulants, including AZSTARYS, 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

AZSTARYS is a central nervous system (CNS) stimulant indicated for the treatment of Attention Deficit Hyperactivity Disorder (ADHD) in patients 6 years of age and older. (1)

#### DOSAGE AND ADMINISTRATION

- Pediatric Patients 6 to 12 years: Recommended starting dosage is 39.2 mg/7.8 mg orally once daily in the morning. Dosage may be increased to 52.3 mg/10.4 mg daily or decreased to 26.1 mg/5.2 mg daily after one week. Maximum recommended dosage is 52.3 mg/10.4 mg once daily. (2.2)
- Adults and Pediatric Patients 13 to 17 years: Recommended starting dosage is 39.2 mg/7.8 mg orally once daily in the morning. Increase the dosage after one week to 52.3 mg/10.4 mg once daily. (2.2)
- Administer with or without food. (2.3)
- Swallow capsules whole or open and sprinkle onto applesauce or add to water. (2.3)
- To avoid substitution errors and overdosage, do not substitute for other methylphenidate products on a milligram-per-milligram basis. (2.4)

#### DOSAGE FORMS AND STRENGTHS

- Capsules (serdexmethylphenidate/dexamethylphenidate): 26.1 mg/5.2 mg, 39.2 mg/7.8 mg, 52.3 mg/10.4 mg. (3)

#### CONTRAINDICATIONS

- Known hypersensitivity to serdexmethylphenidate, methylphenidate, or product components. (4)
- Concurrent treatment with a monoamine oxidase inhibitor (MAOI), or use of an MAOI within the preceding 14 days. (4)

#### WARNINGS AND PRECAUTIONS

- *Serious Cardiovascular Events*: 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 arrhythmias, or coronary artery disease. (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 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 AZSTARYS 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 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

Based on accumulated data from other methylphenidate products, the most common (>5% and twice the rate of placebo) adverse reactions are appetite decreased, insomnia, nausea, vomiting, dyspepsia, abdominal pain, weight decreased, anxiety, dizziness, irritability, affect lability, tachycardia, and blood pressure increased. (6)

To report SUSPECTED ADVERSE REACTIONS, contact Corium, Inc. at 1-800-910-8432 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. (7.1)
- Halogenated Anesthetics: Avoid use of AZSTARYS on the day of surgery if halogenated anesthetics will be used. (7.1)

See 17 for PATIENT COUNSELING INFORMATION and Medication Guide.

Revised: 6/2021

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## FULL PRESCRIBING INFORMATION

### WARNING: ABUSE AND DEPENDENCE

**CNS stimulants, including AZSTARYS, 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 *Warning and Precautions (5.1), Drug Abuse and Dependence (9.2, 9.3)*].**

## 1 INDICATIONS AND USAGE

AZSTARYS is indicated for the treatment of Attention Deficit Hyperactivity Disorder (ADHD) in patients 6 years of age and older.

## 2 DOSAGE AND ADMINISTRATION

### 2.1 Pretreatment Screening

Prior to initiating treatment with AZSTARYS, assess for the presence of cardiac disease (i.e., perform a careful history, family history of sudden death or ventricular arrhythmia, and physical exam) [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 AZSTARYS use [see *Boxed Warning, Warnings and Precautions (5.1), and Drug Abuse and Dependence (9)*].

### 2.2 Recommended Dosage

#### Pediatric Patients 6 to 12 years of age

- The recommended starting dosage of AZSTARYS is 39.2 mg serdexmethylphenidate/7.8 mg dexamethylphenidate once daily in the morning.
- The dosage may be increased after one week to a dosage of 52.3 mg serdexmethylphenidate/10.4 mg dexamethylphenidate per day, or decreased after one week to a dosage of 26.1 mg serdexmethylphenidate/5.2 mg dexamethylphenidate per day, depending on response and tolerability.
- Maximum recommended dosage is 52.3 mg serdexmethylphenidate/10.4 mg dexamethylphenidate once daily.

#### Adults and Pediatric Patients 13 to 17 years of age

- The recommended starting dosage of AZSTARYS is 39.2 mg serdexmethylphenidate/7.8 mg dexamethylphenidate once daily in the morning.
- Increase the dosage after one week to a dosage of 52.3 mg serdexmethylphenidate/10.4 mg dexamethylphenidate per day.
- Maximum recommended dosage is 52.3 mg serdexmethylphenidate/10.4 mg

dexmethylphenidate once daily.

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

### **2.3 Administration Information**

Administer AZSTARYS orally once daily in the morning with or without food [see *Clinical Pharmacology* (12.3)].

AZSTARYS capsules may be taken whole, or opened and the entire contents sprinkled into 50 mL of water or over 2 tablespoons of applesauce. Consume all the drug/food mixture immediately or within 10 minutes of mixing; do not store for future use [see *Clinical Pharmacology* (12.3)].

### **2.4 Switching from Other Methylphenidate Products**

If switching from other methylphenidate products, discontinue that treatment, and titrate with AZSTARYS using the titration schedule described above.

Do not substitute AZSTARYS for other methylphenidate products on a milligram-per-milligram basis because these products have different pharmacokinetic profiles from AZSTARYS and may have different methylphenidate base composition [see *Description* (11), *Clinical Pharmacology* (12.3)].

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

If paradoxical aggravation of symptoms or other adverse reactions occur; the dosage should be reduced, or, if necessary, the drug should be discontinued. AZSTARYS should be periodically discontinued to assess the pediatric patient's condition. If improvement is not observed after appropriate dosage adjustment over a one-month period, the drug should be discontinued.

## **3 DOSAGE FORMS AND STRENGTHS**

AZSTARYS capsules are available as:

- 26.1 mg/5.2 mg (serdexmethylphenidate/dexmethylphenidate) – blue cap/grey body, imprinted with "286" on cap and "KP415" on the body
- 39.2 mg/7.8 mg (serdexmethylphenidate/dexmethylphenidate) – dark blue cap/grey body, imprinted with "429" on cap and "KP415" on the body
- 52.3 mg/10.4 mg (serdexmethylphenidate/dexmethylphenidate) – orange cap/grey body, imprinted with "5612" on cap and "KP415" on the body

## **4 CONTRAINDICATIONS**

AZSTARYS is contraindicated in patients:

- with known hypersensitivity to serdexmethylphenidate, methylphenidate, or other components of AZSTARYS. Bronchospasm, rash, and pruritus have been reported in patients who received AZSTARYS. Hypersensitivity reactions such as angioedema and anaphylactic reactions have been reported in patients treated with other methylphenidate products [see *Adverse Reactions* (6.2)].
- receiving 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* (7.1)].

## **5 WARNINGS AND PRECAUTIONS**

## **5.1 Potential for Abuse and Dependence**

CNS stimulants, including AZSTARYS, 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 *Boxed Warning and 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 AZSTARYS 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 beats per minute). 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 mood 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 AZSTARYS. 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 used to treat ADHD, including AZSTARYS, 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. In a long-term, open-label safety study with AZSTARYS conducted in pediatric patients 6 to 12 years of age with ADHD, there was a lower than expected increase in height and weight compared to pediatric patients of the same age and sex, on average [see Adverse Reactions (6.1)].

Closely monitor growth (weight and height) in pediatric patients treated with CNS stimulants, including AZSTARYS. 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 Boxed Warning, Warnings and Precautions (5.1), and Drug Abuse and Dependence (9.2, 9.3)]
- Known hypersensitivity to methylphenidate or other ingredients of AZSTARYS [see Contraindications (4)]
- Hypertensive Crisis with Concomitant Use of Monoamine Oxidase Inhibitors [see Contraindications (4)]
- 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 clinical practice.

#### Clinical Trials Experience with Other Methylphenidate Products in Pediatric Patients and Adults with ADHD

Commonly reported ( $\geq 5\%$  of the methylphenidate group and at least twice the rate of the placebo group) adverse reactions from placebo-controlled trials of methylphenidate products include: decreased appetite, decreased weight, nausea, abdominal pain, dyspepsia, vomiting, insomnia, anxiety, affect lability, irritability, dizziness, increased blood pressure, and tachycardia.

#### Clinical Trials Experience with AZSTARYS in Pediatric Patients (6 to 12 years) with ADHD

##### *Short-Term Study*

A short-term study conducted in pediatric patients 6 to 12 years of age with ADHD was comprised of a 3-week, open-label, dose optimization phase in which all patients received AZSTARYS (n=155), followed by a 1-week, double-blind, controlled phase in which patients were randomized to continue AZSTARYS (n=74) or switch to placebo (n=76).

Because of the study design, the reported adverse reaction rates cannot be used to predict the rates that may be expected in clinical practice.

### *Long-Term Study*

A long-term, open-label safety study was conducted in pediatric patients 6 to 12 years of age with ADHD who either completed the short-term study or were de novo patients. This study was comprised of a 3-week dose optimization phase for patients not recently treated with AZSTARYS followed by a 12-month treatment phase for all patients during which 238 patients received open-label AZSTARYS and had evaluable safety data. A total of 154 patients were treated for 12 months. Because of the open-label, uncontrolled design of this study, the reported adverse reaction rates cannot be assessed in terms of a causal relationship to AZSTARYS treatment.

To adjust for normal growth, z-scores were derived (measured in standard deviations [SD]); z-scores normalize for the natural growth of children and adolescents by comparisons to age- and sex-matched population standards. A z-score change less than 0.5 SD is considered not clinically significant.

In this study, the mean increase in weight from baseline to Month 12 was 3.4 kg among study completers. The mean change in z-score from baseline to Month 12 was -0.20, indicating a lower than expected increase in body weight compared to children of the same age and sex, on average. Most of the weight z-score decline occurred in the first 4 months of treatment.

The mean increase in height from baseline to Month 12 was 4.9 cm among completers. Using the same z-score analysis for height, the mean change in z-score from baseline to Month 12 was -0.21, indicating a lower than expected increase in height compared to pediatric patients of the same age and sex, on average.

## **6.2 Postmarketing Experience**

The following adverse reactions have been identified during post approval use of methylphenidate 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. These adverse reactions are as follows:

*Blood and Lymphatic System Disorders:* pancytopenia, thrombocytopenia, thrombocytopenic purpura

*Cardiac Disorders:* angina pectoris, bradycardia, extrasystole, supraventricular tachycardia, ventricular extrasystole, palpitations, increased heart rate

*Eye Disorders:* diplopia, mydriasis, visual impairment, blurred vision

*General Disorders:* chest pain, chest discomfort, hyperpyrexia

*Gastrointestinal Disorders:* dry mouth

*Hepatobiliary disorders:* hepatocellular injury, acute hepatic failure

*Immune System Disorders:* hypersensitivity reactions such as angioedema, anaphylactic reactions, auricular swelling, bullous conditions, exfoliative conditions, urticarias, pruritus NEC, rashes, eruptions, and exanthemas NEC

*Investigations:* alkaline phosphatase increased, bilirubin increased, hepatic enzyme increased, platelet count decreased, white blood cell count abnormal

*Musculoskeletal, Connective Tissue and Bone Disorders:* arthralgia, myalgia, muscle twitching, rhabdomyolysis, muscle cramps

*Nervous System Disorders:* convulsion, grand mal convulsion, dyskinesia, serotonin syndrome in combination with serotonergic drugs, nervousness, headache, tremor, drowsiness, vertigo

*Psychiatric Disorders:* disorientation, libido changes, hallucination, hallucination auditory, hallucination visual, logorrhea, mania, restlessness, agitation

*Skin and Subcutaneous Tissue Disorders:* alopecia, erythema, hyperhidrosis

*Urogenital System:* priapism

*Vascular Disorders:* Raynaud's phenomenon

## 7 DRUG INTERACTIONS

### 7.1 Clinically Important Interactions with AZSTARYS

Table 1 presents clinically important drug interactions with AZSTARYS.

**Table 1: Clinically Important Drug Interactions with AZSTARYS**

<b>Monoamine Oxidase Inhibitors (MAOIs)</b>	
<i>Clinical Impact</i>	Concomitant use of MAOIs and CNS stimulants, including AZSTARYS, 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>	Do not administer AZSTARYS concomitantly with MAOIs or within 14 days after discontinuing MAOI treatment [see <i>Contraindications (4)</i> ]
<i>Examples</i>	Selegiline, tranylcypromine, isocarboxazid, phenelzine, linezolid, methylene blue
<b>Antihypertensive Drugs</b>	
<i>Clinical Impact</i>	AZSTARYS may decrease the effectiveness of drugs used to treat hypertension [see <i>Warnings and Precautions (5.3)</i> ].
<i>Intervention</i>	Monitor blood pressure and adjust the dosage of the antihypertensive drug, as needed.
<i>Examples</i>	Potassium-sparing and thiazide diuretics, calcium channel blockers, angiotensin-converting-enzyme (ACE) inhibitors, angiotensin II receptor blockers (ARBs), beta blockers, centrally acting alpha-2 receptor agonists.
<b>Halogenated Anesthetics</b>	
<i>Clinical Impact</i>	Concomitant use of halogenated anesthetics and AZSTARYS may increase the risk of sudden blood pressure and heart rate increase during surgery.
<i>Intervention</i>	Avoid use of AZSTARYS in patients being treated with anesthetics on the day of surgery.
<i>Examples</i>	Halothane, isoflurane, enflurane, desflurane, sevoflurane.
<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

Pregnancy Exposure Registry



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

### Risk Summary

There are no available data on AZSTARYS use in pregnant women to evaluate for a drug-associated risk of major birth defects, miscarriage or other adverse maternal or fetal outcomes; however, AZSTARYS contains dexamethylphenidate and serdexmethylphenidate, a prodrug of dexamethylphenidate. Dexamethylphenidate is the d-threo enantiomer of racemic methylphenidate. 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*). Embryo-fetal development studies in rats showed delayed fetal skeletal ossification at doses up to 3 times the maximum recommended human dose (MRHD) of 40 mg/day dexamethylphenidate hydrochloride given to adults based on plasma levels. A decrease in pup weight in males was observed in a pre- and post-natal development study with oral administration of dexamethylphenidate to rats throughout pregnancy and lactation at doses 3 times the MRHD of 40 mg/day dexamethylphenidate hydrochloride given to adults based on plasma levels (*see Data*).

No evidence of developmental effects were found in an embryo-fetal development study with oral administration of serdexmethylphenidate to rabbits during organogenesis at doses up to approximately 49 times the MRHD of 52 mg/day serdexmethylphenidate given to adults based on plasma levels (*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 AZSTARYS, 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.

### Data

#### *Animal Data*

In embryo-fetal development studies conducted in rats and rabbits, dexamethylphenidate hydrochloride was administered orally at doses of up to 20 and 100 mg/kg/day, respectively, during the period of organogenesis. No evidence of malformations was found in either the rat or rabbit study; however, delayed fetal skeletal ossification was observed at the highest dose level in rats. When dexamethylphenidate hydrochloride was administered to rats throughout pregnancy and lactation at doses of up to 20 mg/kg/day, post-weaning body weight gain was decreased in male offspring at the highest dose, but no other effects on postnatal development were observed. At the highest doses tested, plasma levels [area under the curves (AUCs)] of dexamethylphenidate in pregnant rats and rabbits were approximately 3 and 1 times, respectively, those in adults dosed with 40 mg/day dexamethylphenidate hydrochloride.

Racemic methylphenidate hydrochloride has been shown to cause malformations (increased incidence of fetal spina bifida) in rabbits when given in doses of 200 mg/kg/day throughout organogenesis.

No evidence of developmental effects were found in an embryo-fetal development study with oral administration of serdexmethylphenidate in rabbits during organogenesis at doses of up to 374 mg/kg/day. At the highest dose tested, the plasma level [area under the curve (AUC)] of serdexmethylphenidate in pregnant rabbits was approximately 49 times that in adults dosed with 52 mg/day serdexmethylphenidate.

## **8.2 Lactation**

### Risk Summary

There are no available data on the presence of serdexmethylphenidate in human milk, effects on the breastfed infant, or effects on milk production. Dexmethylphenidate is the d-threo enantiomer of racemic methylphenidate. 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 AZSTARYS and any potential adverse effects on the breastfed infant from AZSTARYS or from the underlying maternal condition.

### Clinical Considerations

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

## **8.4 Pediatric Use**

The safety and effectiveness of AZSTARYS have been established in pediatric patients ages 6 to 17 years of age for the treatment of ADHD. Use of AZSTARYS in patients 6 to 12 years of age is supported by a randomized, double-blind, placebo-controlled, parallel group trial in 155 pediatric patients with ADHD and a 12-month open-label long term safety trial in 238 patients [see *Adverse Reactions (6.1)*, *Clinical Studies (14)*]. Use of AZSTARYS in pediatric patients 13 to 17 years of age is supported by additional pharmacokinetics analysis showing similar plasma concentration-time profiles of dexmethylphenidate in adolescents and adults after administration of the same dose of AZSTARYS [see *Clinical Studies (14)*].

The long-term efficacy of methylphenidate in pediatric patients has not been established.

The safety and effectiveness of AZSTARYS in pediatric patients less than 6 years have not been established.

### Long Term Suppression of Growth

Growth should be monitored during treatment with stimulants, including AZSTARYS. Pediatric patients who are not growing or gaining weight as expected may need to have their treatment interrupted [see *Warnings and Precautions (5.7)* and *Adverse Reactions (6.1)*].

### Juvenile Animal Toxicity Data

Rats treated with racemic methylphenidate early in the postnatal period through sexual maturation demonstrated a decrease in spontaneous locomotor activity in adulthood. A deficit in acquisition of a specific learning task was observed in females only. The doses at which these findings were observed are at least 3 times the MRHD of 40 mg/day dexmethylphenidate hydrochloride given to children on a mg/m<sup>2</sup> basis.

In a study conducted in young rats, racemic methylphenidate hydrochloride 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 racemic methylphenidate hydrochloride [approximately 3 times the maximum recommended human dose (MRHD) of 40 mg of dexamethylphenidate hydrochloride given to children 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 (6 times the MRHD of 40 mg of dexamethylphenidate hydrochloride given to children on a mg/m<sup>2</sup> basis). The no effect level for juvenile neurobehavioral development in rats was 5 mg/kg/day racemic methylphenidate hydrochloride (less than the MRHD of 40 mg of dexamethylphenidate hydrochloride given to children on a mg/m<sup>2</sup> basis). The clinical significance of the long-term behavioral effects observed in rats is unknown.

Serdexmethylphenidate was administered orally to juvenile rabbits at doses up to 280 mg/kg/day (approximately 50 times the MRHD of 52 mg/day serdexmethylphenidate given to children on a mg/m<sup>2</sup> basis), respectively, for 6 months, starting at postnatal Day 28 and continuing through sexual maturity (postnatal Day 196). No adverse findings were observed at the highest dose of serdexmethylphenidate.

## **8.5 Geriatric Use**

Clinical trials of AZSTARYS did not include any patients aged 65 years and over.

## **9 DRUG ABUSE AND DEPENDENCE**

### **9.1 Controlled Substance**

AZSTARYS contains dexamethylphenidate hydrochloride, a Schedule II controlled substance, and serdexmethylphenidate, a Schedule IV controlled substance.

### **9.2 Abuse**

CNS stimulants including AZSTARYS, 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 physiological 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 AZSTARYS 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, suicidal or homicidal ideation have also been observed. Individuals who abuse 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 AZSTARYS, 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, monitor for signs of abuse while on therapy, and re-evaluate the need for AZSTARYS use.

### **9.3 Dependence**

## Physical Dependence

AZSTARYS may produce physical dependence from continued therapy. Physical dependence is a state of adaptation manifested by a withdrawal syndrome produced by abrupt cessation, rapid dose reduction, or administration of an antagonist. Withdrawal symptoms after abrupt cessation following prolonged high-dosage administration of CNS stimulants include dysphoric mood; depression; fatigue; vivid, unpleasant dreams; insomnia or hypersomnia; increased appetite; and psychomotor retardation or agitation.

## Tolerance

AZSTARYS may produce tolerance from continued therapy. Tolerance is a state of adaptation in which exposure to a drug results in a reduction of the drug's desired and/or undesired effects over time.

## **10 OVERDOSAGE**

### **10.1 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: 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.

### **10.2 Management of Overdose**

Consult with a Certified Poison Control Center (1-800-222-1222) for up-to-date guidance and advice on the management of overdose with methylphenidate. Provide supportive care, including close medical 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 overdoses. Ensure an adequate airway, oxygenation, and ventilation. Monitor cardiac rhythm and vital signs. Use supportive and symptomatic measures.

## **11 DESCRIPTION**

AZSTARYS (serdexmethylphenidate and dexamethylphenidate) capsules contain dexamethylphenidate, a CNS stimulant, and serdexmethylphenidate, a prodrug of dexamethylphenidate.

AZSTARYS capsules are intended for oral administration and each capsule contains a fixed molar ratio of 30% dexamethylphenidate and 70% serdexmethylphenidate.

AZSTARYS contains 26.1/5.2, 39.2/7.8, or 52.3/10.4 mg of serdexmethylphenidate/dexamethylphenidate (equivalent to 28/6, 42/9, or 56/12 mg of serdexmethylphenidate chloride/dexamethylphenidate hydrochloride, respectively). The combined molar dose of serdexmethylphenidate and dexamethylphenidate in each dosage strength of AZSTARYS is equivalent to 20, 30, or 40 mg dexamethylphenidate hydrochloride, respectively (equivalent to 17.3, 25.9 or 34.6 mg dexamethylphenidate free base, respectively).

The chemical name of serdexmethylphenidate chloride is 3-(((1*S*)-1-carboxy-2-hydroxyethyl)carbamoyl)-1-(((2*R*)-2-(2-(1*R*)-methoxy-2-oxo-1-phenylethyl)piperidine-1-carbonyl)oxy)methyl)pyridinium chloride. Its molecular formula is  $C_{25}H_{30}N_3O_8^+ \cdot Cl^-$ , and its structural formula is:



of AZSTARYS (52.3/10.4 mg base equivalent), serdexmethylphenidate does not prolong the QT interval to any clinically relevant extent.

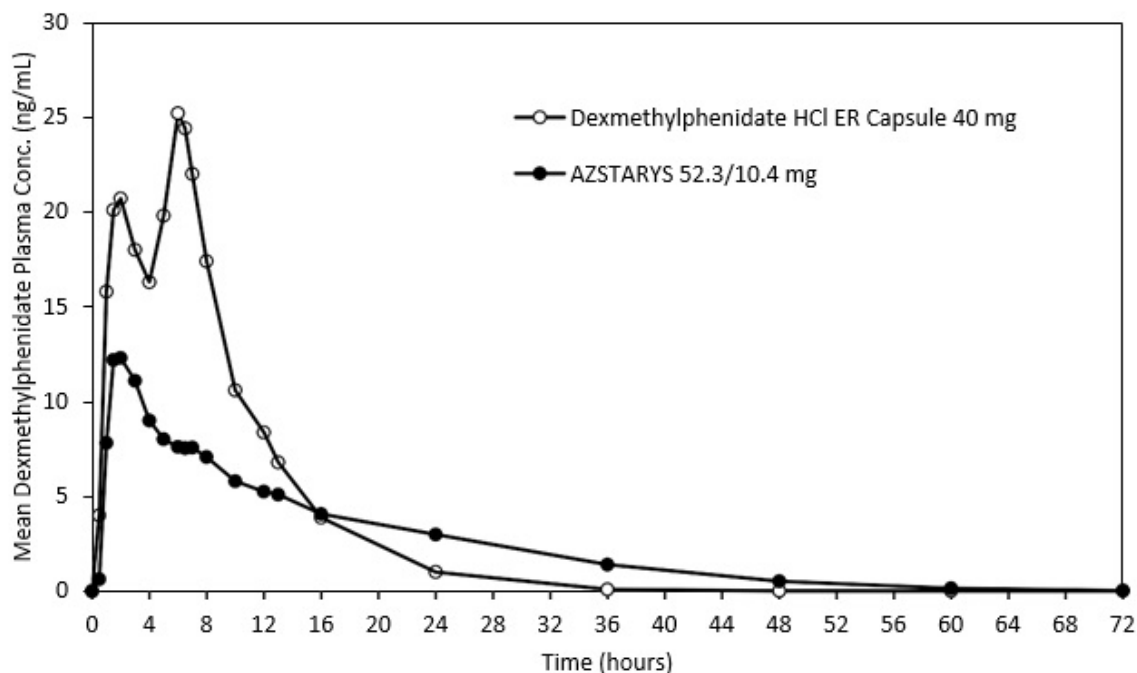
### 12.3 Pharmacokinetics

Serdexmethylphenidate is a prodrug of dexamethylphenidate. Following a single dose administration of 52.3 mg/10.4 mg AZSTARYS and 40 mg of a dexamethylphenidate hydrochloride extended-release (ER) capsule in healthy volunteers under fasted conditions:

- The mean peak plasma concentration ( $C_{max}$ ) of dexamethylphenidate was 14.0 ng/mL and 28.2 ng/mL, respectively;
- The mean area under concentration curve (AUC) of dexamethylphenidate was 186 hour\*ng/mL and 248 hour\*ng/mL, respectively.

The plasma PK profiles of dexamethylphenidate following administration of AZSTARYS or dexamethylphenidate hydrochloride extended-release (ER) capsule are presented in Figure 1.

**Figure 1: Mean Dexamethylphenidate Plasma Concentration-Time Profiles After A Single Dose Administration of AZSTARYS or Dexamethylphenidate Hydrochloride Extended-Release (ER) Capsule in Healthy Adults Under Fasted Conditions**



Approximate linear PK was demonstrated for dexamethylphenidate following single dose administration of AZSTARYS in the dose range of 26.1 mg/5.2 mg to 52.3 mg/10.4 mg. Steady state of dexamethylphenidate was approached after the third once-daily dose. At steady-state, dexamethylphenidate mean exposures ( $C_{max}$  and  $AUC_{0-24h}$ ) were approximately 37% higher relative to a single-dose administration of AZSTARYS. No accumulation of serdexmethylphenidate was observed after once-daily administration of AZSTARYS. The mean relative exposure of serdexmethylphenidate to dexamethylphenidate based on molar concentrations for  $C_{max}$ ,  $C_{min}$ , and  $AUC_{0-24hr}$  was about 101%, 8.5%, and 55.7%, respectively, following multiple once-daily oral dosing under fasted conditions.

#### Absorption

Cross-study calculation estimated an absolute oral bioavailability for serdexmethylphenidate of less than 3%. The median time to reach  $C_{max}$  of

serdexmethylphenidate and dexamethylphenidate ( $T_{max}$ ) is about 2 hours following a single dose administration of AZSTARYS under fasted conditions. Following oral administration of serdexmethylphenidate single moiety alone, dexamethylphenidate  $T_{max}$  is reached at about 8 hours post dose.

### Effect of Food

No clinically meaningful differences in the exposure of dexamethylphenidate were observed when administered after an overnight fast, with a high-fat, high-caloric meal, or sprinkled onto applesauce or water. The median time to peak plasma concentration ( $T_{max}$ ) was lengthened from 2 to 4-4.5 hours in the presence of food.

### Distribution

Plasma protein binding of serdexmethylphenidate and dexamethylphenidate is approximately 56% and 47%, respectively, at 5  $\mu$ M (about 60-fold higher than the therapeutic concentrations at the highest recommended dose). The mean apparent volume of distribution for serdexmethylphenidate was about 29.3 L/kg after AZSTARYS administration. Dexamethylphenidate shows a mean volume of distribution of 2.65 L/kg after intravenous administration.

### Elimination

The mean plasma terminal elimination half-life of serdexmethylphenidate and dexamethylphenidate in healthy adult subjects was about 5.7 hours and 11.7 hours, respectively, following a single dose of 52.3 mg/10.4 mg AZSTARYS. The mean apparent clearance for serdexmethylphenidate was about 3.6 L/hr/kg after AZSTARYS administration. Dexamethylphenidate was eliminated with a mean clearance of 0.40 L/hr/kg after intravenous administration.

### Metabolism

Serdexmethylphenidate is a prodrug of dexamethylphenidate and is likely converted to dexamethylphenidate mainly in the lower gastrointestinal tract. Enzymes involved in the conversion process are not identified.

Dexamethylphenidate is metabolized primarily via de-esterification to *d*- $\alpha$ -phenyl-piperidine acetic acid (also known as *d*-ritalinic acid). Ritalinic acid has little or no pharmacological activity. There is no *in vivo* interconversion to the *l*-*threo*-enantiomer observed.

### Excretion

After oral dosing of radiolabeled serdexmethylphenidate in humans, about 62% and 37% of the radioactivity was recovered in urine and feces, respectively. Metabolite ritalinic acid accounted for approximately 63% of the total recovered dose in urine and feces. About 0.4% and 11% of the dose was excreted as unchanged serdexmethylphenidate in the urine and feces, respectively.

After oral dosing of radiolabeled racemic methylphenidate in humans, about 90% of the radioactivity was recovered in urine. The main urinary metabolite of racemic *d,l*-methylphenidate was *d,l*-ritalinic acid, accountable for approximately 80% of the dose. Urinary excretion of unchanged methylphenidate accounted for 0.5% of an intravenous dose.

### Specific Populations

#### Sex

No significant pharmacokinetic differences based on sex have been observed for AZSTARYS.

#### Race

There is insufficient experience with the use of AZSTARYS to detect ethnic variations in pharmacokinetics.

## Age

The shapes of the plasma concentration time profiles for dexamethylphenidate were similar in pediatric patients (6 to 17 years of age) with ADHD and healthy adults. After the same dose administration of AZSTARYS, dexamethylphenidate exposure in pediatric patients (13 to 17 years of age) and adults was about half of that in pediatric patients 6 to 12 years of age. Plasma concentrations of dexamethylphenidate when adjusted for dose and body weight were similar across all age groups.

## Renal Impairment

There is no experience with the use of AZSTARYS in patients with renal impairment. Since renal clearance is not an important route of serdexmethylphenidate or methylphenidate elimination, renal impairment is expected to have little effect on the pharmacokinetics of AZSTARYS.

## Hepatic Impairment

There is no experience with the use of AZSTARYS in patients with hepatic impairment.

## Drug Interaction Studies

### *Clinical Studies*

*CYP2D6 substrate:* No clinically significant differences in desipramine (CYP2D6 substrate) were observed when coadministered with methylphenidate.

### *In Vitro Studies*

*Alcohol:* No clinically significant differences in the rate or amount of release of either serdexmethylphenidate or methylphenidate were observed with alcohol concentrations of 5% and 40%.

*Cytochrome P450 (CYP) enzymes:* Serdexmethylphenidate and methylphenidate do not appear to be substrates, inducers or inhibitors of CYP1A2, 2C8, 2C9, 2C19, 2D6, 2E1 or 3A.

*Transporters:* Serdexmethylphenidate does not appear to be a substrate or inhibitor of P-gp, BCRP, OATP1B1/3, OAT1/3, OCT2, or MATE1/2-K.

## **13 NONCLINICAL TOXICOLOGY**

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

#### Carcinogenesis

Lifetime studies to evaluate the carcinogenic potential of serdexmethylphenidate have not been conducted.

Lifetime carcinogenicity studies have not been carried out with dexamethylphenidate hydrochloride.

In a lifetime carcinogenicity study carried out in B6C3F1 mice, racemic methylphenidate caused an increase in hepatocellular adenomas, and in males only, an increase in hepatoblastomas was seen at a daily dose of approximately 60 mg/kg/day. This dose is approximately 4 times the MRHD of 40 mg of dexamethylphenidate hydrochloride 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.

Racemic methylphenidate hydrochloride did not cause any increase 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 5 times the MRHD of 40 mg of dexamethylphenidate hydrochloride on a mg/m<sup>2</sup> basis.

In a 24-week carcinogenicity study with racemic methylphenidate 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 concentrations as in the lifetime carcinogenicity study; the high-dose group was exposed to 60 to 74 mg/kg/day of racemic methylphenidate hydrochloride.

#### Mutagenesis

Serdexmethylphenidate was not mutagenic in the in vitro Ames reverse mutation assay, in the in vitro mammalian cell micronucleus assay using human peripheral blood lymphocytes, in the in vivo rat bone marrow micronucleus assay, or in the in vivo rat alkaline comet assay.

Dexamethylphenidate 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 vivo mouse bone marrow micronucleus test. In an in vitro assay using cultured Chinese Hamster Ovary (CHO) cells treated with racemic methylphenidate, sister chromatid exchanges and chromosome aberrations were increased, indicative of a weak clastogenic response.

#### Impairment of Fertility

Racemic methylphenidate hydrochloride 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 of up to 160 mg/kg/day, approximately 10-times the MRHD of 40 mg of dexamethylphenidate hydrochloride on a mg/m<sup>2</sup> basis.

## **14 CLINICAL STUDIES**

### Pediatric Patients 6 to 12 years of age with ADHD

The efficacy of AZSTARYS for the treatment of ADHD in pediatric patients 6 to 12 years of age was evaluated in a randomized, double-blind, placebo-controlled, parallel group, analog classroom study (Study 1; NCT# 03292952). That study was conducted in 150 pediatric patients 6 to 12 years of age who met Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5) criteria for a primary diagnosis of ADHD (combined, inattentive, or hyperactive/impulsive presentation) confirmed by the Mini International Neuropsychiatric Interview for Children and Adolescents (MINI-KID).

Following washout of previous ADHD medication, subjects entered an open-label dose-optimization period (3 weeks) with an initial dosage of 39.2 mg/7.8 mg once daily in the morning. The dose could be titrated on a weekly basis to either 26.1 mg/5.2 mg, 39.2 mg/7.8 mg, or 52.3 mg/10.4 mg, until an optimal dose or the maximum dosage of 52.3 mg/10.4 mg/day was reached. At the end of optimization period, subjects were randomly assigned into a 1-week parallel group treatment period to receive either the individually optimized dose of AZSTARYS (mean dose of 45.6 mg/9.0 mg) or placebo.

At the end of the 1-week treatment period, raters evaluated the attention and behavior of the subjects in a laboratory classroom setting over a period of 13 hours using the Swanson, Kotkin, Agler, M-Flynn, and Pelham (SKAMP) rating scale. SKAMP is a validated 13-item teacher-rated scale that assesses manifestations of ADHD in a classroom setting. On this day, the dose was administered in the morning immediately after breakfast.

The primary efficacy endpoint was the mean change from baseline (pre-dose at randomization visit) of the SKAMP-Combined scores averaged across the test day (not including baseline score), with assessments conducted at 0.5, 1, 2, 4, 8, 10, 12, and 13 hours post-dose.

The mean change from baseline in the SKAMP-Combined scores, averaged across the test day, was statistically significantly lower (indicating improvement) with AZSTARYS compared to placebo (Table 2).

**Table 2: Primary Efficacy Measure: SKAMP-Combined Scores Averaged Over Classroom Day in Pediatric Patients (6 to 12 years) with ADHD**

Study Number	Treatment Group	N	Mean Baseline Score* (SD)	LS Mean Change from Baseline† (SE)	Placebo-subtracted Difference‡ (95% CI)
Study 1	AZSTARYS (26.1 /5.2, 39.2/7.8, 52.3/10.4 mg/day)	74	17.9 (9.2)	-4.87 (0.62)	-5.4 (-7.1, -3.7)
	Placebo	76	17.9 (10.4)	0.54 (0.70)	

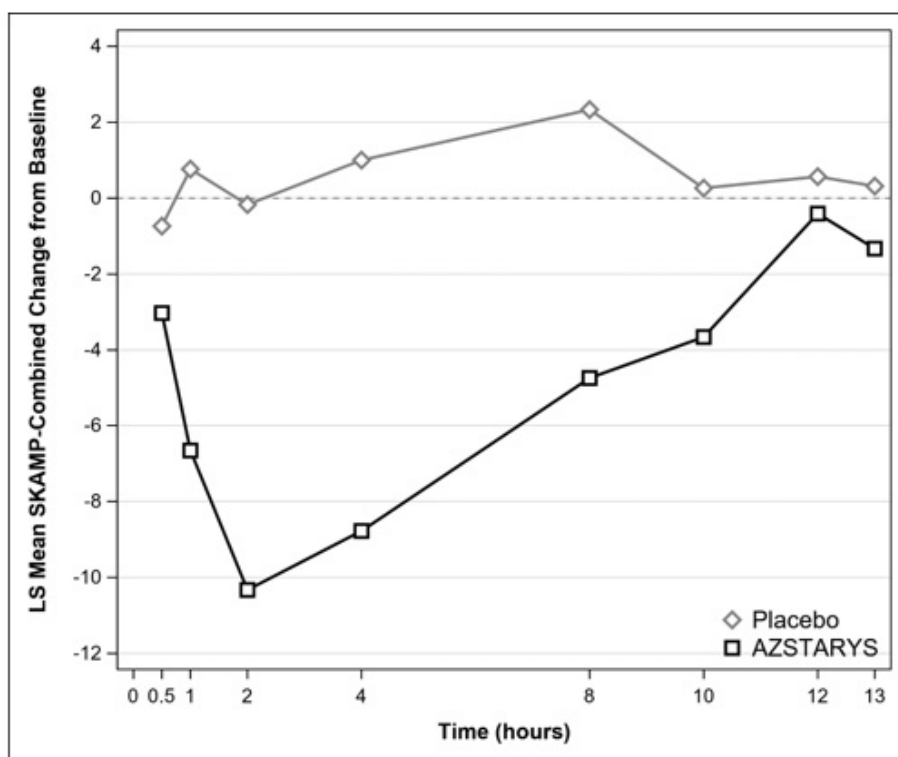
SD: standard deviation; SE: standard error; LS Mean: least-squares mean; CI: confidence interval.

\* Baseline score assessed at pre-dose on the practice classroom day/randomization visit after 2 days of active drug washout.

† Classroom day least-squares mean change from baseline over hours 0.5, 1, 2, 4, 8, 10, 12, and 13.

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

**Figure 2: LS Mean Change in SKAMP-Combined Score from Baseline after Treatment with AZSTARYS or Placebo during Classroom Day in Pediatric Patients (6 to 12 years) with ADHD**



#### Adults and Pediatric Patients 13 to 17 years of age with ADHD

The efficacy of 52.3 mg/10.4 mg AZSTARYS in adults and pediatric patients 13 to 17 years of age was established by pharmacokinetic bridging between AZSTARYS (52.3 mg/10.4 mg) and dexamethylphenidate hydrochloride extended-release capsules [see *Clinical Pharmacology* (12.3)].

#### 16 HOW SUPPLIED/STORAGE AND HANDLING

AZSTARYS (serdexmethylphenidate/dexmethylphenidate) capsules are available as follows:

- **26.1/5.2 mg Capsules** – blue cap/grey body, imprinted with "286" on cap and "KP415" on the body  
Bottles of 100 .....NDC 65038-286-99
- **39.2/7.8 mg Capsules** – dark blue cap/grey body, imprinted with "429" on cap and "KP415" on the body  
Bottles of 100 .....NDC 65038-429-99
- **52.3/10.4 mg Capsules** – orange cap/grey body, imprinted with "5612" on cap and "KP415" on the body  
Bottles of 100 .....NDC 65038-561-99

### Storage

Store at 20°C to 25°C (68°F to 77°F); excursions permitted between 15°C to 30°C (59°F to 86°F). [See USP Controlled Room Temperature]. Protect from moisture.

Dispense in tight container (USP).

### Disposal

Comply with local laws and regulations on drug disposal of CNS stimulants. Dispose of remaining, unused, or expired AZSTARYS 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 AZSTARYS 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 AZSTARYS in the household trash.

## **17 PATIENT COUNSELING INFORMATION**

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

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

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

### Serious Cardiovascular Risks

Advise patients and caregivers that there is a potential for serious cardiovascular risks including sudden death, myocardial infarction, and stroke with AZSTARYS. 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

Advise patients and their caregivers that AZSTARYS can elevate blood pressure and heart rate [see *Warnings and Precautions (5.3)*].

### Psychiatric Risks

Advise patients and their caregivers that AZSTARYS, at recommended doses, can cause psychotic or manic symptoms, even in patients without a prior history or 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 while taking AZSTARYS.
- 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 AZSTARYS can cause slowing of growth and weight loss [see *Warnings and Precautions (5.7)*].

## Administration Instructions

Advise patients and their caregivers to administer AZSTARYS capsules whole or opened and sprinkled over applesauce or added to water. If sprinkled, advise patients and their caregivers to consume all the drug/food mixture immediately or within 10 minutes of mixing and not to store for future use [see *Dosage and Administration (2.3)*].

## Pregnancy Registry

Advise patients that there is a pregnancy exposure registry that monitors pregnancy outcomes in females exposed to AZSTARYS during pregnancy [see *Use in Specific Populations (8.1)*].

## Lactation

Advise nursing mother to monitor infants exposed to AZSTARYS through breastmilk for agitation, poor feeding, and reduced weight gain [see *Use in Specific Populations (8.2)*].

Distributed by:

Corium, Inc.

4558 50th Street, SE

Grand Rapids, MI 49512

<p style="text-align: center;"><b>Medication Guide</b> <b>AZSTARYS™ (az star' is)</b> <b>(serdexmethylphenidate and dexamethylphenidate) capsules, CII</b></p>
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<p><b>What is the most important information I should know about AZSTARYS?</b></p>
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<p><b>AZSTARYS can cause serious side effects, including:</b></p>
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- |   |
|---|
| <ul style="list-style-type: none"><li>• <b>Abuse and dependence.</b> AZSTARYS, other methylphenidate containing medicines, and amphetamines have a high chance for abuse and can cause physical and psychological dependence. Your healthcare provider should check you or your child for signs of abuse and dependence before and during treatment with AZSTARYS<ul style="list-style-type: none"><li>◦ Tell your healthcare provider if you or your child has ever abused or been dependent on alcohol, prescription medicines, or street drugs.</li><li>◦ Your healthcare provider can tell you more about the differences between physical and psychological dependence and drug addiction.</li></ul></li></ul> |
|---|

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

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

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

Your healthcare provider should check you or your child's blood pressure and heart rate regularly during treatment with AZSTARYS.

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

- **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 you or your child have, or about a family history of suicide, bipolar illness, or depression.

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

### **What is AZSTARYS?**

AZSTARYS is a central nervous system stimulant prescription medicine used for the treatment of Attention-Deficit Hyperactivity Disorder (ADHD) in people 6 years of age and older. AZSTARYS may help increase attention and decrease impulsiveness and hyperactivity in people 6 years of age and older with ADHD.

It is not known if AZSTARYS is safe and effective in children younger than 6 years of age.

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

### **Do not take AZSTARYS if you or your child are:**

- allergic to serdexmethylphenidate, methylphenidate, or any of the ingredients in AZSTARYS. See the end of this Medication Guide for a complete list of ingredients in AZSTARYS.
- taking or have stopped taking within the past 14 days a medicine used to treat depression called a monoamine oxidase inhibitor (MAOI).

### **Before taking AZSTARYS, tell your healthcare provider about all medical conditions, including if you or your child:**

- have heart problems, heart defects, high blood pressure
- have mental problems including psychosis, mania, bipolar illness, or depression, or has a family history of suicide, bipolar illness, or depression
- have circulation problems in fingers and toes
- are pregnant or plans to become pregnant. It is not known if AZSTARYS will harm the unborn baby.
  - There is a pregnancy registry for females who are exposed to ADHD medications, including AZSTARYS, during pregnancy. The purpose of the registry is to collect

information about the health of females exposed to AZSTARYS and their baby. If you or your child becomes pregnant during treatment with AZSTARYS, talk to your healthcare provider about registering with the National Pregnancy Registry for Psychostimulants at 1-866-961-2388.

- are breastfeeding or plans to breastfeed. AZSTARYS passes into breast milk. Talk to your healthcare provider about the best way to feed the baby during treatment with AZSTARYS.

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

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

**Especially tell your healthcare provider if you or your child takes:**

- MAOIs
- blood pressure medicines (anti-hypertensive)

Know the medicines that you or your child take. Keep a list of the medicines with you to show your healthcare provider and pharmacist. **Do not start any new medicine during treatment with AZSTARYS without talking to your healthcare provider first.**

**How should AZSTARYS be taken?**

- Take AZSTARYS exactly as prescribed.
- Your healthcare provider may change the dose if needed.
- Take AZSTARYS 1 time each day in the morning with or without food.
- AZSTARYS capsules may be swallowed whole with water or other liquids.
- If AZSTARYS capsules cannot be swallowed whole, the capsule may be opened and the entire contents sprinkled onto 2 tablespoonfuls of applesauce or into 2oz (50mL) of water.
  - Swallow all the applesauce or water mixture right away or within 10 minutes of mixing. **Do not** store applesauce or water and medicine mixture.
- Your healthcare provider may sometimes stop AZSTARYS treatment for a while to check ADHD symptoms.

**In case of poisoning, call your poison control center at 1-800-222-1222, or go to the nearest hospital emergency room right away.**

**What are possible side effects of AZSTARYS?**

**AZSTARYS can cause serious side effects, including:**

- See "**What is the most important information I should know about AZSTARYS?**"
- **Painful and prolonged erections (priapism).** Priapism has happened in males who take products that contain methylphenidate. If you or 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, or painful
  - fingers or toes may change color from pale, to blue, to red

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

Call your healthcare provider right away if you or your child have any signs of unexplained wounds appearing on fingers or toes during treatment with AZSTARYS.

- **Slowing of growth (height and weight) in children.** Children should have their height and weight checked often during treatment with AZSTARYS. AZSTARYS treatment

may be stopped if your child is not growing or gaining weight.

**The most common side effects of AZSTARYS include:**

- decreased appetite
- nausea
- indigestion
- weight loss
- dizziness
- mood swings
- increased blood pressure
- trouble sleeping
- vomiting
- stomach pain
- anxiety
- irritability
- increased heart rate

These are not all the possible side effects of AZSTARYS.

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 AZSTARYS?**

- Store AZSTARYS in a safe place and in a tightly closed container at room temperature between at room temperature between 68°F to 77°F (20°C to 25°C).
- Dispose of remaining, unused, or expired AZSTARYS by a medicine 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 AZSTARYS 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 (discard) AZSTARYS in the household trash.

**Keep AZSTARYS and all medicines out of the reach of children.**

**General information about the safe and effective use of AZSTARYS.**

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

**What are the ingredients in AZSTARYS?**

**Active ingredients:** serdexmethylphenidate and dexmethylphenidate

**Inactive ingredients:** colloidal silicon dioxide, crospovidone, hypromellose, magnesium stearate, microcrystalline cellulose, talc, black iron oxide, titanium dioxide, FD&C Blue No. 1 (26/5.2 mg and 39/7.8 mg), FD&C Red No. 40 (39/7.8 mg and 52/10.4 mg), FD&C Yellow No. 6 (52/10.4 mg)

Distributed by Corium, Inc., 4558 50th Street, SE, Grand Rapids, MI 49512

For more information call 1-800-910-8432 or go to [www.AZSTARYS.com](http://www.AZSTARYS.com)

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

Issued: 6/2021

**PRINCIPAL DISPLAY PANEL - NDC: 65038-286-99 - 26.1/5.2 mg 100 count  
Bottle Label**

EXP: MMM YYYY  
LOT: 7 digit alphanumeric  
SN: 12 digit number  
GTIN: 14 digit number



N 3 65038 28699 5

**Each capsule contains:**  
Serdexmethylphenidate ..... 26.1 mg  
(equivalent to 28 mg of serdexmethylphenidate  
chloride)  
Dexmethylphenidate ..... 5.2 mg  
(equivalent to 6 mg of dexmethylphenidate  
hydrochloride)  
**Storage Statement:** Dispense in a tight,  
light-resistant container. **Keep out of reach of  
children.** Store at 20°C to 25°C (68°F to 77°F).  
Excursions permitted between 15°C to 30°C (59°F  
to 86°F). [See USP Controlled Room Temperature]  
Protect from moisture  
**Dosage:** For dosage and other prescribing  
information, see package insert.  
Distributed By:  
Corium, Inc.  
4558 50th Street, SE  
Grand Rapids, MI 49512  
63337 Rev. 2/2021

**Corium**

NDC 65038-286-99 100 Capsules

**Azstarys™** (II)  
(serdexmethylphenidate and  
dexmethylphenidate) capsules

**26.1 mg / 5.2 mg**

**ATTENTION PHARMACIST:**  
Each Patient is required to receive  
the attached Medication Guide.

Rx Only

**PRINCIPAL DISPLAY PANEL - NDC: 65038-429-99 - 39.2/7.8 mg 100 count  
Bottle Label**

EXP: MMM YYYY  
LOT: 7 digit alphanumeric  
SN: 12 digit number  
GTIN: 14 digit number



N 3 65038 42999 6

**Each capsule contains:**  
Serdexmethylphenidate ..... 39.2 mg  
(equivalent to 42 mg of serdexmethylphenidate  
chloride)  
Dexmethylphenidate ..... 7.8 mg  
(equivalent to 9 mg of dexmethylphenidate  
hydrochloride)  
**Storage Statement:** Dispense in a tight,  
light-resistant container. **Keep out of reach of  
children.** Store at 20°C to 25°C (68°F to 77°F).  
Excursions permitted between 15°C to 30°C (59°F  
to 86°F). [See USP Controlled Room Temperature]  
Protect from moisture  
**Dosage:** For dosage and other prescribing  
information, see package insert.  
Distributed By:  
Corium, Inc.  
4558 50th Street, SE  
Grand Rapids, MI 49512  
63338 Rev. 2/2021

**Corium**

NDC 65038-429-99 100 Capsules

**Azstarys™** (II)  
(serdexmethylphenidate and  
dexmethylphenidate) capsules

**39.2 mg / 7.8 mg**

**ATTENTION PHARMACIST:**  
Each Patient is required to receive  
the attached Medication Guide.

Rx Only

**PPRINCIPAL DISPLAY PANEL - NDC: 65038-561-99 - 52.3/10.4 mg 100 count  
Bottle Label**



EXP: MMM YYYY  
 LOT: 7 digit alphanumeric  
 SN: 12 digit number  
 GTIN: 14 digit number



3  
 N 3  
 65038 56199

**Each capsule contains:**  
 Serdexmethylphenidate ..... 52.3 mg  
 (equivalent to 56 mg of serdexmethylphenidate  
 chloride)  
 Dexmethylphenidate ..... 10.4 mg  
 (equivalent to 12 mg of dexmethylphenidate  
 hydrochloride)  
**Storage Statement:** Dispense in a tight,  
 light-resistant container. **Keep out of reach of  
 children.** Store at 20°C to 25°C (68°F to 77°F).  
 Excursions permitted between 15°C to 30°C (59°F  
 to 86°F). [See USP Controlled Room Temperature]  
 Protect from moisture  
**Dosage:** For dosage and other prescribing  
 information, see package insert.  
 Distributed By:  
 Corium, Inc.  
 4558 50th Street, SE  
 Grand Rapids, MI 49512  
 63339 Rev. 2/2021

NDC 65038-561-99 100 Capsules

**Azstarys™** (CII)

(serdexmethylphenidate and  
 dexmethylphenidate) capsules

**52.3 mg / 10.4 mg**

**ATTENTION PHARMACIST:**  
 Each Patient is required to receive  
 the attached Medication Guide.

**Corium**

Rx Only

**AZSTARYS**

serdexmethylphenidate and dexmethylphenidate capsule

**Product Information**

<b>Product Type</b>	HUMAN PRESCRIPTION DRUG	<b>Item Code (Source)</b>	NDC:65038-286
<b>Route of Administration</b>	ORAL	<b>DEA Schedule</b>	CII

**Active Ingredient/Active Moiety**

Ingredient Name	Basis of Strength	Strength
<b>SERDEXMETHYLPHENIDATE CHLORIDE</b> (UNII: FN54BT298Y) (DEXMETHYLPHENIDATE - UNII:M32RH9MFGP)	SERDEXMETHYLPHENIDATE	26.1 mg
<b>DEXMETHYLPHENIDATE HYDROCHLORIDE</b> (UNII: 1678OK0E08) (DEXMETHYLPHENIDATE - UNII:M32RH9MFGP)	DEXMETHYLPHENIDATE	5.2 mg

**Inactive Ingredients**

Ingredient Name	Strength
<b>MICROCRYSTALLINE CELLULOSE</b> (UNII: OP1R32D61U)	27.35 mg
<b>CROSPVIDONE</b> (UNII: 2S7830E561)	3.34 mg
<b>MAGNESIUM STEARATE</b> (UNII: 70097M6I30)	0.68 mg
<b>TALC</b> (UNII: 7SEV7J4R1U)	0.67 mg
<b>SILICON DIOXIDE</b> (UNII: ETJ7Z6XBU4)	0.67 mg
<b>HYPROMELLOSE, UNSPECIFIED</b> (UNII: 3NXW29V3WO)	
<b>FERROSO FERRIC OXIDE</b> (UNII: XM0M87F357)	
<b>FD&amp;C BLUE NO. 1</b> (UNII: H3R47K3TBD)	
<b>TITANIUM DIOXIDE</b> (UNII: 15FIX9V2JP)	

**Product Characteristics**

<b>Color</b>	GRAY (Body) , BLUE (Cap)	<b>Score</b>	no score
<b>Shape</b>	CAPSULE	<b>Size</b>	16mm
<b>Flavor</b>		<b>Imprint Code</b>	KP415;286
<b>Contains</b>			

**Packaging**

#	Item Code	Package Description	Marketing Start Date	Marketing End Date
1	NDC:65038-286-99	100 in 1 BOTTLE, PLASTIC; Type 0: Not a Combination Product	07/16/2021	

Marketing Information			
Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
NDA	NDA212994	07/16/2021	

## AZSTARYS

serdexmethylphenidate and dexmethylphenidate capsule

Product Information			
Product Type	HUMAN PRESCRIPTION DRUG	Item Code (Source)	NDC:65038-429
Route of Administration	ORAL	DEA Schedule	CII

Active Ingredient/Active Moiety			
Ingredient Name	Basis of Strength	Strength	
SERDEXMETHYLPHENIDATE CHLORIDE (UNII: FN54BT298Y) (DEXMETHYLPHENIDATE - UNII:M32RH9MFGP)	SERDEXMETHYLPHENIDATE	39.2 mg	
DEXMETHYLPHENIDATE HYDROCHLORIDE (UNII: 1678OK0E08) (DEXMETHYLPHENIDATE - UNII:M32RH9MFGP)	DEXMETHYLPHENIDATE	7.8 mg	

Inactive Ingredients		
Ingredient Name	Strength	
MICROCRYSTALLINE CELLULOSE (UNII: OP1R32D61U)	41 mg	
CROSPVIDONE (UNII: 2S7830E561)	5 mg	
MAGNESIUM STEARATE (UNII: 70097M6I30)	1 mg	
TALC (UNII: 7SEV7J4R1U)	1 mg	
SILICON DIOXIDE (UNII: ETJ7Z6XBU4)	1 mg	
HYPROMELLOSE, UNSPECIFIED (UNII: 3NXW29V3WO)		
FERROSFERRIC OXIDE (UNII: XM0M87F357)		
FD&C BLUE NO. 1 (UNII: H3R47K3TBD)		
FD&C RED NO. 40 (UNII: WZB9127XOA)		
TITANIUM DIOXIDE (UNII: 15FIX9V2JP)		

Product Characteristics			
Color	GRAY (Body) , BLUE (Cap)	Score	no score
Shape	CAPSULE	Size	16mm
Flavor		Imprint Code	KP415;429
Contains			

Packaging				
#	Item Code	Package Description	Marketing Start Date	Marketing End Date
1	NDC:65038-429-99	100 in 1 BOTTLE, PLASTIC; Type 0: Not a Combination Product	07/16/2021	

## Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
NDA	NDA212994	07/16/2021	

## AZSTARYS

serdexmethylphenidate and dexmethylphenidate capsule

### Product Information

Product Type	HUMAN PRESCRIPTION DRUG	Item Code (Source)	NDC:65038-561
Route of Administration	ORAL	DEA Schedule	CII

### Active Ingredient/Active Moiety

Ingredient Name	Basis of Strength	Strength
<b>SERDEXMETHYLPHENIDATE CHLORIDE</b> (UNII: FN54BT298Y) (DEXMETHYLPHENIDATE - UNII:M32RH9MFGP)	SERDEXMETHYLPHENIDATE	52.3 mg
<b>DEXMETHYLPHENIDATE HYDROCHLORIDE</b> (UNII: 1678OK0E08) (DEXMETHYLPHENIDATE - UNII:M32RH9MFGP)	DEXMETHYLPHENIDATE	10.4 mg

### Inactive Ingredients

Ingredient Name	Strength
<b>MICROCRYSTALLINE CELLULOSE</b> (UNII: OP1R32D61U)	54.64 mg
<b>CROSPVIDONE</b> (UNII: 2S7830E561)	6.67 mg
<b>MAGNESIUM STEARATE</b> (UNII: 70097M6I30)	1.34 mg
<b>TALC</b> (UNII: 7SEV7J4R1U)	1.33 mg
<b>SILICON DIOXIDE</b> (UNII: ETJ7Z6XBU4)	1.33 mg
<b>HYPROMELLOSE, UNSPECIFIED</b> (UNII: 3NXW29V3WO)	
<b>FERROSFERRIC OXIDE</b> (UNII: XM0M87F357)	
<b>FD&amp;C RED NO. 40</b> (UNII: WZB9127XOA)	
<b>FD&amp;C YELLOW NO. 6</b> (UNII: H77VEI93A8)	
<b>TITANIUM DIOXIDE</b> (UNII: 15FIX9V2JP)	

### Product Characteristics

Color	GRAY (Body) , ORANGE (Cap)	Score	no score
Shape	CAPSULE	Size	16mm
Flavor		Imprint Code	KP415;5612
Contains			

### Packaging

#	Item Code	Package Description	Marketing Start Date	Marketing End Date
1	NDC:65038-561-99	100 in 1 BOTTLE, PLASTIC; Type 0: Not a Combination Product	07/16/2021	

## Marketing Information

Marketing	Application Number or Monograph	Marketing Start	Marketing End
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Category	Citation	Date	Date
NDA	NDA212994	07/16/2021	

**Labeler** - Corium, Inc (098238541)

**Registrant** - Commave Therapeutics SA (480219666)

Revised: 11/2022

Corium, Inc