

# Control these symptoms.

Take the next step of  
your recovery journey.



All photos in this guide are actor portrayals.

**LUCEMYRA® is the only FDA-approved, non-opioid, non-addictive treatment for relief of multiple symptoms of opioid withdrawal that may happen when you stop taking an opioid suddenly¹**

**Lucemyra®**  
(lofexidine) tablets 0.18 mg

*Relieve the symptoms,  
retake control*

## What is LUCEMYRA?

LUCEMYRA is a non-opioid prescription medicine used in adults to help with the symptoms of opioid withdrawal that may happen when you stop taking an opioid suddenly.

LUCEMYRA will not completely prevent the symptoms of opioid withdrawal and is not a treatment for opioid use disorder.

**Please see the full Important Safety Information on back cover and distributed full Prescribing Information and Patient Information.**

A man with a beard and mustache, wearing a grey zip-up hoodie over a blue polo shirt and dark pants, sits on a black metal bench. He is holding a white envelope or folder in his lap and has his hand to his chin in a thoughtful pose. The background is a dimly lit room with a brick wall, a water cooler, and a white water bottle on a table.

## ***Don't let opioid withdrawal prevent you from achieving your recovery goals***

### **Most common opioid withdrawal symptoms include<sup>2</sup>:**

- Aches and pains
- Stomach cramps
- Feeling sick (nausea, vomiting, diarrhea)
- Muscle spasms/twitching
- Insomnia/problems sleeping
- Feelings of coldness/chills
- Muscular tension
- Heart pounding
- Runny eyes
- Yawning

### **Recognizing the causes and symptoms of opioid withdrawal**

Withdrawal symptoms include both mental distress and physical discomfort.<sup>3</sup> Sometimes it's hard to tell the difference between withdrawal symptoms of physical discomfort and the original pain your healthcare provider prescribed the opioid to treat.<sup>4</sup>

Symptoms are often caused when patients stop using opioids of any kind, which includes prescription pain pills, illicit opioids, fentanyl, methadone, and buprenorphine.

The safety of LUCEMYRA was supported by three randomized, double-blind, placebo-controlled clinical trials, an open-label study, and clinical pharmacology studies with concomitant administration of either methadone, buprenorphine, or naltrexone. Lucemyra has no contraindications.

#### **Important Safety Information (continued)**

When your treatment is complete, you will need to stop taking LUCEMYRA gradually, or your blood pressure could increase.

After a period of not using opioid drugs, you can become more sensitive to the effects of opioids if you start using them again. This may increase your risk of overdose and death.

## **LUCEMYRA<sup>®</sup> can help you get through withdrawal**

### **What is LUCEMYRA?**

LUCEMYRA is the only FDA-approved, non-opioid, non-addictive prescription medicine for relief of multiple symptoms of opioid withdrawal that may happen when you stop taking an opioid suddenly.<sup>1</sup>

### **Provided the biggest improvement in symptom relief on Day 2 and Day 3 of opioid withdrawal—when symptoms were often most severe\*<sup>1,5,6</sup>**

LUCEMYRA has been studied in people with physical opioid dependence who stopped taking opioids suddenly and were in active withdrawal.<sup>1</sup> These studies showed that LUCEMYRA helped relieve symptoms on the first day of treatment and greatly improved symptom relief by Day 3.<sup>1,5,6</sup>

#### **What to expect from LUCEMYRA treatment<sup>1,5,6</sup>**

##### **DAY 1**



Patients started to feel some symptom relief **within hours**

##### **DAY 2**



Patients **experienced an improvement** in symptom relief\*

##### **DAY 3**



Patients **continued to feel improvement** in symptom relief, as withdrawal symptoms continued to decrease

**LUCEMYRA continued to be effective through Day 7 of treatment.<sup>5</sup>**

\*Compared to placebo.

**LUCEMYRA is not a treatment for Opioid Use Disorder (OUD), which is also called opioid addiction.** If you have been diagnosed with OUD, your healthcare provider may prescribe LUCEMYRA as part of a complete treatment program for your OUD. This program continues after LUCEMYRA treatment is completed and may also include maintenance medications combined with behavioral counseling.

**Please see the full Important Safety Information on back cover and the distributed full Prescribing Information and Patient Information.**



## ***LUCEMYRA® helps correct a chemical imbalance that causes withdrawal symptoms<sup>1,7</sup>***

**Your healthcare provider can tell you about how opioids can affect the chemical balance in your brain and how LUCEMYRA can help.**

### **Important Safety Information (continued)**

Before taking LUCEMYRA, tell your healthcare provider about all your medical conditions, including if you have low blood pressure, slow heart rate, any heart problems including history of heart attack or a condition called long QT syndrome, liver or kidney problems, or if you drink alcohol. Tell your healthcare provider if you are pregnant, plan on becoming pregnant, or are breastfeeding; it is not known if LUCEMYRA can harm your unborn baby or whether LUCEMYRA passes into your breast milk.

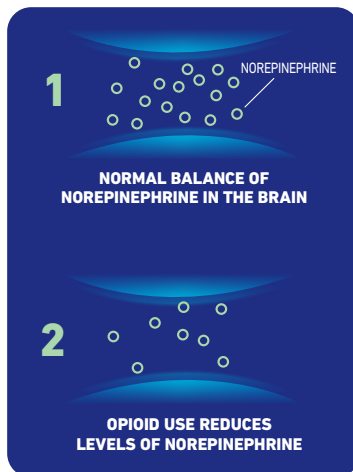
Especially tell your healthcare provider if you take benzodiazepines, barbiturates, tranquilizers, or sleeping pills, as taking these with LUCEMYRA can cause serious side effects.

The most common side effects of LUCEMYRA include low blood pressure or symptoms of low blood pressure such as lightheadedness, slow heart rate, dizziness, sleepiness, and dry mouth.

## How does LUCEMYRA work?

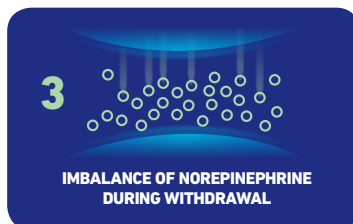
### Long-term opioid use changes the way nerve cells work in the brain<sup>7</sup>

- When opioids are initially taken, the brain produces lower levels of a naturally occurring hormone, called norepinephrine, that can affect breathing, muscle tension, and ability to sleep
- Over time, your nerve cells become used to having opioids around. Because opioids reduce the levels of norepinephrine, your body responds by adjusting these levels



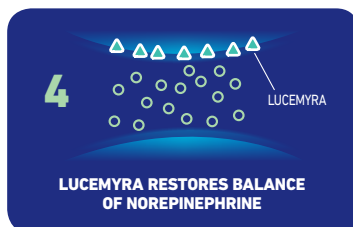
### When opioids are taken away suddenly, there is an imbalance of norepinephrine<sup>7</sup>

- The person will begin to feel lots of very unpleasant feelings and reactions; these are known as withdrawal symptoms



### LUCEMYRA helps adjust the balance of norepinephrine in the areas of your brain that cause withdrawal symptoms<sup>1</sup>

- This helps restore the chemical balance and helps relieve the symptoms that occur during opioid withdrawal



**Please see the full Important Safety Information on back cover and the distributed full Prescribing Information and Patient Information.**

## Possible Side Effects

### Most commonly experienced side effects with LUCEMYRA®<sup>1</sup>:

- Low blood pressure or symptoms of low blood pressure, such as lightheadedness
- Slow heart rate
- Dizziness
- Sleepiness
- Dry mouth

These are not all the possible side effects of LUCEMYRA.<sup>1</sup>

Call your healthcare provider for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088. You may also report side effects to US WorldMeds at 1-833-LUCEMYRA.

### You may still experience symptoms of withdrawal<sup>1</sup>

- LUCEMYRA may mitigate, but not completely prevent, the symptoms associated with opioid withdrawal syndrome, which may include feeling sick (nausea, vomiting, diarrhea), stomach cramps, muscle spasms (twitching), feelings of coldness (chills), heart pounding, muscular tension, aches and pains, yawning, runny eyes, and sleep problems (insomnia)<sup>1</sup>

**References:** **1.** LUCEMYRA® (lofexidine) [Prescribing Information]. USWM, LLC; 2020. **2.** Vernon MK, Reinders S, Mannix S, et al. Psychometric evaluation of the 10-item Short Opiate Withdrawal Scale-Gossop (SOWS-Gossop) in patients undergoing opioid detoxification. *Addict Behav.* 2016;60:109-116. **3.** Shigakova F. Clinical manifestations of the opiate withdrawal syndrome. *Int J Biomed.* 2015;5(3):151-154. **4.** Rosenblum A, Marsch LA, Joseph H, Portenoy RK. Opioids and the treatment of chronic pain: controversies, current status, and future directions. *Exp Clin Psychopharmacol.* 2008;16(5):405-416. **5.** Fishman M, Tirado C, Alam D, et al. Safety and efficacy of lofexidine for medically managed opioid withdrawal: a randomized controlled clinical trial. *J Addict Med.* 2019;13(3): 169-176. **6.** Gorodetzky CW, Walsh SL, Martin PR, Saxon AJ, Gullo KL, Biswas K. A phase III, randomized, multi-center, double blind, placebo controlled study of safety and efficacy of lofexidine for relief of symptoms in individuals undergoing inpatient opioid withdrawal. *Drug Alcohol Depend.* 2017;176:79-88. **7.** Kosten TR, George TP. The neurobiology of opioid dependence: implications for treatment. *Sci Pract Perspect.* 2002;13-20.

### Important Safety Information (continued)

LUCEMYRA can cause serious side effects, including low blood pressure, slow heart rate, and fainting. Watch for symptoms of low blood pressure or heart rate, including dizziness, lightheadedness, or feeling faint at rest or when quickly standing up; if you experience these symptoms, call your healthcare provider right away and do not take your next dose of LUCEMYRA until you have talked to your healthcare provider. Avoid becoming dehydrated or overheated and be careful not to stand up too suddenly from lying or sitting, as these may increase your risk of low blood pressure and fainting.

When your treatment is complete, you will need to stop taking LUCEMYRA gradually, or your blood pressure could increase.

After a period of not using opioid drugs, you can become more sensitive to the effects of opioids if you start using them again. This may increase your risk of overdose and death.

Before taking LUCEMYRA, tell your healthcare provider about all your medical conditions, including if you have low blood pressure, slow heart rate, any heart problems including history of heart attack or a condition called long QT syndrome, liver or kidney problems, or if you drink alcohol. Tell your healthcare provider if you are pregnant, plan on becoming pregnant, or are breastfeeding; it is not known if LUCEMYRA can harm your unborn baby or whether LUCEMYRA passes into your breast milk.

## Taking LUCEMYRA

Dosing is flexible and should be guided by symptoms and side effects<sup>1</sup>

**1-4** TABLETS **4** TIMES PER DAY **7-14 DAYS**

- LUCEMYRA dosing is usually three tablets taken orally, four times a day, for 5-7 days, followed by a gradual reduction in dosing over 2-4 days
  - **Make sure you follow the exact dosing instructions provided by your healthcare provider**
- Be sure to **wait 5 to 6 hours** between each dose
- LUCEMYRA can be taken **with or without food**
- LUCEMYRA can be **taken for up to 14 days** if you and your healthcare provider decide that you need continued symptom relief
- **Do not** stop taking LUCEMYRA without first talking to your healthcare provider



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“Lofexidine should therefore be the **preferred** choice for withdrawal management in an outpatient setting...”

-American Society of Addiction Medicine, 2020

### What is LUCEMYRA?

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Especially tell your healthcare provider if you take benzodiazepines, barbiturates, tranquilizers, or sleeping pills, as taking these with LUCEMYRA can cause serious side effects.

The most common side effects of LUCEMYRA include low blood pressure or symptoms of low blood pressure such as lightheadedness, slow heart rate, dizziness, sleepiness, and dry mouth.

**To report SUSPECTED ADVERSE REACTIONS or product complaints, contact US WorldMeds at 1-833-LUCEMYRA. You may also report SUSPECTED ADVERSE REACTIONS to the FDA at 1-800-FDA-1088 or [www.fda.gov/medwatch](http://www.fda.gov/medwatch).**

US WorldMeds®

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USWMLUC-00566 07/22

**Lucemyra**<sup>®</sup>  
(lofexidine) tablets 0.18 mg

**Relieve the symptoms, retake control**

**Please see the full Important Safety Information,  
full Prescribing Information and Patient Information.**



# LUCEMYRA® (lofexidine) tablets

## HIGHLIGHTS OF PRESCRIBING INFORMATION

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

**LUCEMYRA® (lofexidine) tablets, for oral use Initial Initial U.S. Approval: 2018**

### INDICATIONS AND USAGE

LUCEMYRA is a central alpha-2 adrenergic agonist indicated for mitigation of opioid withdrawal symptoms to facilitate abrupt opioid discontinuation in adults. (1)

### DOSAGE AND ADMINISTRATION

- The usual LUCEMYRA dosage is three 0.18 mg tablets taken orally 4 times daily at 5- to 6-hour intervals. LUCEMYRA treatment may be continued for up to 14 days with dosing guided by symptoms. (2.1)
- Discontinue LUCEMYRA with a gradual dose reduction over 2 to 4 days. (2.1)
- **Hepatic or Renal Impairment:** Dosage adjustments are recommended based on degree of impairment. (2.2, 2.3)

### DOSAGE FORMS AND STRENGTHS

Tablets: 0.18 mg. (3)

### CONTRAINDICATIONS

None. (4)

### WARNINGS AND PRECAUTIONS

- **Risk of Hypotension, Bradycardia, and Syncope:** May cause a decrease in blood pressure, a decrease in pulse, and syncope. Monitor vital signs before dosing and advise patients on how to minimize the risk of these cardiovascular effects and manage symptoms, should they occur. Monitor symptoms related to bradycardia and orthostasis. When using in outpatients, ensure that patients are capable of self-monitoring for signs and symptoms. Avoid use in patients with severe coronary insufficiency, recent myocardial infarction, cerebrovascular disease, or chronic renal failure, as well as in patients with marked bradycardia. (5.1)
- **Risk of QT Prolongation:** LUCEMYRA prolongs the QT interval. Avoid use in patients with congenital long QT syndrome. Monitor ECG in patients with

electrolyte abnormalities, congestive heart failure, bradyarrhythmias, hepatic or renal impairment, or in patients taking other medicinal products that lead to QT prolongation. (5.2)

- **Increased Risk of CNS Depression with Concomitant use of CNS Depressant Drugs:** LUCEMYRA potentiates the CNS depressant effects of benzodiazepines and may potentiate the CNS depressant effects of alcohol, barbiturates, and other sedating drugs. (5.3)
- **Increased Risk of Opioid Overdose after Opioid Discontinuation:** Patients who complete opioid discontinuation are at an increased risk of fatal overdose should they resume opioid use. Use in conjunction with a comprehensive management program for treatment of opioid use disorder and inform patients and caregivers of increased risk of overdose. (5.4)
- **Risk of Discontinuation Symptoms:** Instruct patients not to discontinue therapy without consulting their healthcare provider. When discontinuing therapy, reduce dose gradually. (5.5)

### ADVERSE REACTIONS

Most common adverse reactions (incidence  $\geq$  10% and notably more frequent than placebo) are orthostatic hypotension, bradycardia, hypotension, dizziness, somnolence, sedation, and dry mouth. (6.1)

To report SUSPECTED ADVERSE REACTIONS, contact US WorldMeds at 1-833-LUCEMYRA or FDA at 1-800-FDA-1088 or [www.fda.gov/medwatch](http://www.fda.gov/medwatch)

### DRUG INTERACTIONS

- **Methodone:** Methodone and LUCEMYRA both prolong the QT interval. ECG monitoring is recommended when used concomitantly. (7.1)
- **Oral Naltrexone:** Concomitant use may reduce efficacy of oral naltrexone. (7.2)
- **CYP2D6 Inhibitors:** Concomitant use of paroxetine resulted in increased plasma levels of LUCEMYRA. Monitor for symptoms of orthostasis and bradycardia with concomitant use of a CYP2D6 inhibitor. (7.4)

See 17 for PATIENT COUNSELING INFORMATION and FDA-approved patient labeling

Revised: 09/2020

## FULL PRESCRIBING INFORMATION: CONTENTS\*

### 1 INDICATIONS AND USAGE

### 2 DOSAGE AND ADMINISTRATION

- 2.1 Dosing Information
- 2.2 Dosage Recommendations for Patients with Hepatic Impairment
- 2.3 Dosage Recommendations for Patients with Renal Impairment

### 3 DOSAGE FORMS AND STRENGTHS

### 4 CONTRAINDICATIONS

### 5 WARNINGS AND PRECAUTIONS

- 5.1 Risk of Hypotension, Bradycardia, and Syncope
- 5.2 Risk of QT Prolongation

### 7.3 CNS Depressant Drugs

### 7.4 CYP2D6 Inhibitor - Paroxetine

### 8 USE IN SPECIFIC POPULATIONS

#### 8.1 Pregnancy

#### 8.2 Lactation

#### 8.3 Females and Males of Reproductive Potential

#### 8.4 Pediatric Use

#### 8.5 Geriatric Use

#### 8.6 Hepatic Impairment

#### 8.7 Renal Impairment

#### 8.8 CYP2D6 Poor Metabolizers

### 10 OVERDOSAGE

### 11 DESCRIPTION

- 5.3 Increased Risk of CNS Depression with Concomitant use of CNS Depressant Drugs
  - 5.4 Increased Risk of Opioid Overdose after Opioid Discontinuation
  - 5.5 Risk of Discontinuation Symptoms
  - 6 ADVERSE REACTIONS**
    - 6.1 Clinical Trials Experience
    - 6.2 Postmarketing Experience
  - 7 DRUG INTERACTIONS**
    - 7.1 Methadone
    - 7.2 Oral Naltrexone
  - 12 CLINICAL PHARMACOLOGY**
    - 12.1 Mechanism of Action
    - 12.2 Pharmacodynamics
    - 12.3 Pharmacokinetics
  - 13 NONCLINICAL TOXICOLOGY**
    - 13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility
  - 14 CLINICAL STUDIES**
  - 16 HOW SUPPLIED/STORAGE AND HANDLING**
  - 17 PATIENT COUNSELING INFORMATION**
- \*Sections or subsections omitted from the full prescribing information are not listed.

## FULL PRESCRIBING INFORMATION

### 1 INDICATIONS AND USAGE

LUCEMYRA is indicated for mitigation of opioid withdrawal symptoms to facilitate abrupt opioid discontinuation in adults.

### 2 DOSAGE AND ADMINISTRATION

#### 2.1 Dosing Information

The usual LUCEMYRA starting dosage is three 0.18 mg tablets taken orally 4 times daily during the period of peak withdrawal symptoms (generally the first 5 to 7 days following last use of opioid) with dosing guided by symptoms and side effects. There should be 5 to 6 hours between each dose. The total daily dosage of LUCEMYRA should not exceed 2.88 mg (16 tablets) and no single dose should exceed 0.72 mg (4 tablets).

LUCEMYRA treatment may be continued for up to 14 days with dosing guided by symptoms.

Discontinue LUCEMYRA with a gradual dose reduction over a 2- to 4-day period to mitigate LUCEMYRA withdrawal symptoms (e.g., reducing by 1 tablet per dose every 1 to 2 days) [see *Warnings & Precautions (5.5)*]. The LUCEMYRA dose should be reduced, held, or discontinued for individuals who demonstrate a greater sensitivity to LUCEMYRA side effects [see *Warnings and Precautions (5.1), Adverse Reactions (6.1)*]. Lower doses may be appropriate as opioid withdrawal symptoms wane.

LUCEMYRA can be administered in the presence or absence of food.

#### 2.2 Dosage Recommendations for Patients with Hepatic Impairment

Recommended dosage adjustments based on the degree of hepatic impairment are shown in Table 1. [see *Use in Specific Populations (8.6), Clinical Pharmacology (12.3)*].

**Table 1: Dosage Recommendations in Patients with Hepatic Impairment**

	Mild Impairment	Moderate Impairment	Severe Impairment
Child-Pugh score	5-6	7-9	> 9
Recommended dose	3 tablets 4 times daily (2.16 mg per day)	2 tablets 4 times daily (1.44 mg per day)	1 tablet 4 times daily (0.72 mg per day)

#### 2.3 Dosage Recommendations for Patients with Renal Impairment

Recommended dosage adjustments based on the degree of renal impairment are shown in Table 2. LUCEMYRA may be administered without regard to the timing of dialysis [see *Use in Specific Populations (8.7), Clinical Pharmacology (12.3)*].

**Table 2: Dosage Recommendations in Patients with Renal Impairment**

	Moderate Impairment	Severe Impairment, End-Stage Renal Disease, or on Dialysis
Estimated GFR, mL/min/1.73 m <sup>2</sup>	30-89.9	< 30
Recommended dose	2 tablets 4 times daily (1.44 mg per day)	1 tablet 4 times daily (0.72 mg per day)

### 3 DOSAGE FORMS AND STRENGTHS

LUCEMYRA is available as round, peach-colored, film-coated tablets, imprinted with “LFX” on one side and “18” on the other side. Each tablet contains 0.18 mg lofexidine (equivalent to 0.2 mg of lofexidine hydrochloride).

### 4 CONTRAINDICATIONS

None.

## 5 WARNINGS AND PRECAUTIONS

### 5.1 Risk of Hypotension, Bradycardia, and Syncope

LUCEMYRA can cause a decrease in blood pressure, a decrease in pulse, and syncope [see *Adverse Reactions* (6.1), *Clinical Pharmacology* (12.2)]. Monitor vital signs before dosing. Monitor symptoms related to bradycardia and orthostasis.

Patients being given LUCEMYRA in an outpatient setting should be capable of and instructed on self-monitoring for hypotension, orthostasis, bradycardia, and associated symptoms. If clinically significant or symptomatic hypotension and/or bradycardia occur, the next dose of LUCEMYRA should be reduced in amount, delayed, or skipped.

Inform patients that LUCEMYRA may cause hypotension and that patients moving from a supine to an upright position may be at increased risk for hypotension and orthostatic effects. Instruct patients to stay hydrated, on how to recognize symptoms of low blood pressure, and on how to reduce the risk of serious consequences should hypotension occur (e.g., sit or lie down, carefully rise from a sitting or lying position). Instruct outpatients to withhold LUCEMYRA doses when experiencing symptoms of hypotension or bradycardia and to contact their healthcare provider for guidance on how to adjust dosing.

Avoid using LUCEMYRA in patients with severe coronary insufficiency, recent myocardial infarction, cerebrovascular disease, chronic renal failure, and in patients with marked bradycardia.

Avoid using LUCEMYRA in combination with medications that decrease pulse or blood pressure to avoid the risk of excessive bradycardia and hypotension.

### 5.2 Risk of QT Prolongation

LUCEMYRA prolongs the QT interval.

Avoid using LUCEMYRA in patients with congenital long QT syndrome.

Monitor ECG in patients with congestive heart failure, bradyarrhythmias, hepatic impairment, renal impairment, or patients taking other medicinal products that lead to QT prolongation (e.g., methadone). In patients with electrolyte abnormalities (e.g., hypokalemia or hypomagnesemia), correct these abnormalities first, and monitor ECG upon initiation of LUCEMYRA [see *Dosing and Administration* (2.1), *Adverse Reactions* (6.1), *Special Populations* (8.6, 8.7), *Clinical Pharmacology* (12.2)].

### 5.3 Increased Risk of Central Nervous System Depression with Concomitant use of CNS Depressant Drugs

LUCEMYRA potentiates the CNS depressive effects of benzodiazepines and can also be expected to potentiate the CNS depressive effects of alcohol, barbiturates, and other sedating drugs. Advise patients to inform their healthcare provider of other medications they are taking, including alcohol.

Advise patients using LUCEMYRA in an outpatient setting that, until they learn how they respond to LUCEMYRA, they should be careful or avoid doing activities such as driving or operating heavy machinery.

### 5.4 Increased Risk of Opioid Overdose after Opioid Discontinuation

LUCEMYRA is not a treatment for opioid use disorder. Patients who complete opioid discontinuation are likely to have a reduced tolerance to opioids and are at increased risk of fatal overdose should they resume opioid use. Use LUCEMYRA in patients with opioid use disorder only in conjunction with a comprehensive management program for the treatment of opioid use disorder and inform patients and caregivers of this increased risk of overdose.

### 5.5 Risk of Discontinuation Symptoms

Stopping LUCEMYRA abruptly can cause a marked rise in blood pressure. Symptoms including diarrhea, insomnia, anxiety, chills, hyperhidrosis, and extremity pain have also been observed with LUCEMYRA discontinuation. Instruct patients not to discontinue therapy without consulting their healthcare provider. When discontinuing therapy with LUCEMYRA, gradually reduce the dose [see *Dosing and Administration* (2.1)].

Symptoms related to discontinuation can be managed by administration of the previous LUCEMYRA dose and subsequent taper.

## 6 ADVERSE REACTIONS

The following serious adverse reactions are described elsewhere in labeling:

- Hypotension, Bradycardia, and Syncope [see *Warnings and Precautions* (5.1)]
- QT Prolongation [see *Warnings and Precautions* (5.2)]
- Central Nervous System Depression [see *Warnings and Precautions* (5.3)]
- Opioid Overdose [see *Warnings and Precautions* (5.4)]
- Discontinuation Symptoms [see *Warnings and Precautions* (5.5)]

### 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 adverse reaction rates observed for another drug and may not reflect the rates observed in practice.

The safety of LUCEMYRA was supported by three randomized, double-blind, placebo-controlled clinical trials, an open-label study, and clinical pharmacology studies with concomitant administration of either methadone, buprenorphine, or naltrexone.

The three randomized, double-blind, placebo-controlled clinical trials enrolled 935 subjects dependent on short-acting opioids undergoing abrupt opioid withdrawal. Patients were monitored before each dose in an inpatient setting. Table 3 presents the incidence, rounded to the nearest percent, of adverse events that occurred in at least 10% of subjects treated with LUCEMYRA and for which the incidence in patients treated with LUCEMYRA was greater than the incidence in subjects treated with placebo in a study that tested two doses of LUCEMYRA, 2.16 mg per day and 2.88 mg per day, and placebo. The overall safety profile in the combined dataset was similar.

Orthostatic hypotension, bradycardia, hypotension, dizziness, somnolence, sedation, and dry mouth were notably more common in subjects treated with LUCEMYRA than subjects treated with placebo.

**Table 3: Adverse Reactions Reported by ≥10% of LUCEMYRA-Treated Patients and More Frequently than Placebo**

Adverse Reaction	LUCEMYRA 2.16 mg <sup>1</sup> (%) N=229	LUCEMYRA 2.88 mg <sup>1</sup> (%) N=222	Placebo (%) N=151
Insomnia	51	55	48
Orthostatic Hypotension	29	42	5
Bradycardia	24	32	5
Hypotension	30	30	1
Dizziness	19	23	3
Somnolence	11	13	5
Sedation	13	12	5
Dry Mouth	10	11	0

<sup>1</sup> Assigned dose; mean average daily dose received was 79% of assigned dose due to dose-holds for out-of-range vital signs.

Other notable adverse reactions associated with the use of LUCEMYRA but reported in <10% of patients in the LUCEMYRA group included:

- Syncope: 0.9%, 1.4% and 0% for LUCEMYRA 2.16 mg/day and 2.88 mg/day and placebo, respectively
- Tinnitus: 0.9%, 3.2% and 0% for LUCEMYRA 2.16 mg/day and 2.88 mg/day and placebo, respectively

#### Blood pressure changes and adverse reactions after LUCEMYRA cessation

Elevations in blood pressure above normal values (≥140 mmHg systolic) and above a subject's pre-treatment baseline are associated with discontinuing LUCEMYRA, and peaked on the second day after discontinuation, as shown in Table 4. Blood pressure values were evaluated for 3 days following the last dose of a 5-day course of LUCEMYRA 2.88 mg/day.

**Table 4: Blood Pressure Elevations after Stopping Treatment**

	Abrupt LUCEMYRA Discontinuation 2.88 mg (N = 134)		Placebo (N = 129)	
	N at risk	n (%)	N at risk	n (%)
Systolic Blood Pressure on Day 2 after Discontinuation				
≥ 140 mmHg and ≥ 20 mmHg increase from baseline	58	23 (39.7)	37	6 (16.2)
≥ 170 mmHg and ≥ 20 mmHg increase from baseline	58	5 (8.6)	37	0

Blood pressure elevations of a similar magnitude and incidence were observed in a small number of patients (N=10) that had a one-day, 50% dose reduction prior to discontinuation.

After stopping treatment, subjects who were taking LUCEMYRA also had a higher incidence of diarrhea, insomnia, anxiety, chills, hyperhidrosis, and extremity pain compared to subjects who were taking placebo.

#### Sex-specific adverse event findings

Four out of 101 females (4%) had serious cardiovascular adverse events compared to 3 out of 289 (1%) males assigned to receive LUCEMYRA 2.88 mg/day.

Discontinuations and dose-holds due to bradycardia and orthostatic hypotension, which are the most common adverse reactions associated with LUCEMYRA, occurred with a greater incidence in females assigned to receive the highest studied dose of LUCEMYRA, 2.88 mg/day as shown in Table 5.

**Table 5: Discontinuations and Dose-Holds for Bradycardia and Orthostatic Hypotension by LUCEMYRA Dose and Sex**

	LUCEMYRA 2.16 mg	LUCEMYRA 2.88 mg
Male	22/162 (14%)	29/158 (18%)
Female	9/67 (13%)	20/64 (31%)

## 6.2 Postmarketing Experience

Lofexidine is marketed in other countries for relief of opioid withdrawal symptoms. The following events have been identified during postmarketing use of lofexidine. Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to drug exposure.

Since lofexidine's initial market introduction in 1992, the most frequently reported postmarketing adverse event with lofexidine has been hypotension [see *Warnings and Precautions* (5.1)]. There has been one report of QT prolongation, bradycardia, torsades de pointes, and cardiac arrest with successful resuscitation in a patient who received lofexidine, and three reports of clinically significant QT prolongation in subjects concurrently receiving methadone with lofexidine.

## 7 DRUG INTERACTIONS

### 7.1 Methadone

LUCEMYRA and methadone both prolong the QT interval. ECG monitoring is recommended in patients receiving methadone and LUCEMYRA concomitantly [see *Warnings and Precautions* (5.2), *Clinical Pharmacology* (12.3)].

### 7.2 Oral Naltrexone

Coadministration of LUCEMYRA and oral naltrexone resulted in statistically significant differences in the steady-state pharmacokinetics of naltrexone. It is possible that oral naltrexone efficacy may be reduced if used concomitantly within 2 hours of LUCEMYRA. This interaction is not expected if naltrexone is administered by non-oral routes [see *Clinical Pharmacology* (12.3)].

### 7.3 CNS Depressant Drugs

LUCEMYRA potentiates the CNS depressant effects of benzodiazepines and may potentiate the CNS depressant effects of alcohol, barbiturates, and other sedating drugs. Advise patients to inform their healthcare provider of other medications they are taking, including alcohol [see *Warnings and Precautions* (5.3)].

### 7.4 CYP2D6 Inhibitor - Paroxetine

Coadministration of LUCEMYRA and paroxetine resulted in a 28% increase in the extent of absorption of LUCEMYRA. Monitor for orthostatic hypotension and bradycardia when an inhibitor of CYP2D6 is used concomitantly with LUCEMYRA [see *Clinical Pharmacology* (12.3)].

## 8 USE IN SPECIFIC POPULATIONS

### 8.1 Pregnancy

#### Risk Summary

The safety of LUCEMYRA in pregnant women has not been established. In animal reproduction studies, oral administration of lofexidine during organogenesis to pregnant rats and rabbits caused a reduction in fetal weights, increases in fetal resorptions, and litter loss at exposures below that in humans. When oral lofexidine was administered from the beginning of organogenesis through lactation, increased stillbirths and litter loss were noted along with decreased viability and lactation indices. The offspring exhibited delays in sexual maturation, auditory startle, and surface righting. These effects occurred at exposures below that in humans [see *Animal Data*].

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

#### Data

##### *Animal Data*

Increased incidence of resorptions, decreased number of implantations, and a concomitant reduction in the number of fetuses were observed when pregnant rabbits were orally administered lofexidine hydrochloride during organogenesis (from gestation day [GD] 7 to 19) at a daily dose of 5.0 mg/kg/day (approximately 0.08 times the maximum recommended human dose [MRHD] of 2.88 mg lofexidine base on an AUC basis). Maternal toxicity evidenced by increased mortality was noted at the highest tested dose of 15 mg/kg/day (approximately 0.4 times the MRHD on an AUC basis).

Decreased implantations per dam and decreased mean fetal weights were noted in a study in which pregnant rats were treated with oral lofexidine hydrochloride during organogenesis (from GD 7 to 16) at a daily dose of 3.0 mg/kg/

day (approximately 0.9 times the MRHD on an AUC basis). This dose was associated with maternal toxicity (decreased body weight gain and mortality). No malformations or evidence of developmental toxicity were evident at 1.0 mg/kg/day (approximately 0.2 times the MRHD on an AUC basis).

A dose-dependent increase in pup mortality was noted in all doses of lofexidine hydrochloride administered orally to pregnant rats from GD 6 through lactation at an exposure less than the human exposure based on AUC comparisons. Doses higher than 1.0 mg/kg/day (approximately 0.2 times the MRHD on an AUC basis) resulted in incidences of total litter loss and maternal toxicity (piloerection and decreased body weight gain). At the highest dose tested of 2.0 mg/kg/day (approximately 0.6 times the MRHD on an AUC basis), increased stillbirths as well as decreased viability and lactation indices were reported. Surviving offspring exhibited lower body weights, developmental delays, and increased delays in auditory startle at doses of 1.0 mg/kg/ day or higher. Sexual maturation was delayed in male offspring (preputial separation) at 2.0 mg/kg/day and in female offspring (vaginal opening) at 1.0 mg/kg/day or higher.

## **8.2 Lactation**

### Risk Summary

There is no information regarding the presence of LUCEMYRA or its metabolites in human milk, the effects on the breastfed infant, or the effects on milk production. Caution should be exercised when LUCEMYRA is administered to a nursing woman.

The developmental and health benefits should be considered along with the mother's clinical need for LUCEMYRA and any other potential adverse effects on breastfed children from LUCEMYRA or from the underlying maternal condition.

## **8.3 Females and Males of Reproductive Potential**

In animal studies that included some fertility endpoints, lofexidine decreased breeding rate and increased resorptions at exposures below human exposures. The impact of lofexidine on male fertility has not been adequately characterized in animal studies [see *Impairment of Fertility* (13.1)].

## **8.4 Pediatric Use**

The safety and effectiveness of LUCEMYRA have not been established in pediatric patients.

## **8.5 Geriatric Use**

No studies have been performed to characterize the pharmacokinetics of LUCEMYRA or to establish its safety and effectiveness in geriatric patients. Caution should be exercised when LUCEMYRA is administered to patients over 65 years of age. Dosing adjustments similar to those recommended in patients with renal impairment should be considered [see *Dosage and Administration* (2.3), *Use in Specific Populations* (8.7)].

## **8.6 Hepatic Impairment**

Hepatic impairment slows the elimination of LUCEMYRA but exhibits less effect on the peak plasma concentration than on AUC values following a single dose. Dosage adjustments are recommended based on the degree of hepatic impairment. [see *Dosage and Administration* (2.2), *Clinical Pharmacology* (12.3)].

Clinically relevant QT prolongation may occur in subjects with hepatic impairment [see *Warnings and Precautions* (5.2), *Clinical Pharmacology* (12.2)].

## **8.7 Renal Impairment**

Renal impairment slows the elimination of LUCEMYRA but exhibits less effect on the peak plasma concentration than on AUC values following a single dose. Dosage adjustments are recommended based on the degree of renal impairment [see *Dosage and Administration* (2.3), *Clinical Pharmacology* (12.3)].

Only a negligible fraction of the LUCEMYRA dose is removed during a typical dialysis session, so no additional dose needs to be administered after a dialysis session; LUCEMYRA may be administered without regard to the timing of dialysis [see *Dosage and Administration* (2.3), *Clinical Pharmacology* (12.3)].

Clinically relevant QT prolongation may occur in subjects with renal impairment [see *Warnings and Precautions* (5.2), *Clinical Pharmacology* (12.2)].

## **8.8 CYP2D6 Poor Metabolizers**

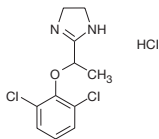
Although the pharmacokinetics of LUCEMYRA have not been systematically evaluated in patients who do not express the drug metabolizing enzyme CYP2D6, it is likely that the exposure to LUCEMYRA would be increased similarly to taking strong CYP2D6 inhibitors (approximately 28%). Monitor adverse events such as orthostatic hypotension and bradycardia in known CYP2D6 poor metabolizers. Approximately 8% of Caucasians and 3 to 8% of Black/ African Americans cannot metabolize CYP2D6 substrates and are classified as poor metabolizers (PM) [see *Clinical Pharmacology* (12.3)].

## **10 OVERDOSAGE**

Overdose with LUCEMYRA may manifest as hypotension, bradycardia, and sedation. In the event of acute overdose, perform gastric lavage where appropriate. Dialysis will not remove a substantial portion of the drug. Initiate general symptomatic and supportive measures in cases of overdose.

## 11 DESCRIPTION

LUCEMYRA tablets contain lofexidine, a central alpha-2 adrenergic agonist, as the hydrochloride salt. Lofexidine hydrochloride is chemically designated as 2-[1-(2,6-dichlorophenoxy)ethyl]-4,5 dihydro-1H- imidazole monohydrochloride with a molecular formula of  $C_{11}H_{12}Cl_2N_2O \cdot HCl$ . Its molecular weight is 295.6 g/mole and its structural formula is:



Lofexidine hydrochloride is a white to off-white crystalline powder freely soluble in water, methanol, and ethanol. It is slightly soluble in chloroform and practically insoluble in n-hexane and benzene.

LUCEMYRA is available as round, convex-shaped, peach-colored, film-coated tablets for oral administration. Each tablet contains 0.18 lofexidine, equivalent to 0.2 mg of lofexidine hydrochloride, and the following inactive ingredients: 92.6 mg lactose, 12.3 mg citric acid, 1.1 mg povidone, 5.7 mg microcrystalline cellulose, 1.4 mg calcium stearate, 0.7 mg sodium lauryl sulphate, and Opadry OY S 9480 (contains indigo carmine and sunset yellow).

## 12 CLINICAL PHARMACOLOGY

### 12.1 Mechanism of Action

Lofexidine is a central alpha-2 adrenergic agonist that binds to receptors on adrenergic neurons. This reduces the release of norepinephrine and decreases sympathetic tone.

### 12.2 Pharmacodynamics

#### Cardiac Electrophysiology

Single LUCEMYRA doses of 1.44 mg to 1.8 mg produced maximum mean change from baseline in QTcF ( $\Delta$ QTcF) of 14.4 msec (upper two-sided 90% CI: 22.3 msec) and 13.6 msec (17.4 msec) for 1.44 mg and 1.8 mg respectively in healthy normal volunteers.

In a Phase 3 placebo-controlled, dose response study in opioid dependent subjects, LUCEMYRA was associated with a maximum mean prolongation of the QTcF interval 7.3 (8.8) msec and 9.3 (10.9) msec at doses of 2.16 mg/day and 2.88 mg/day, respectively.

#### Patients with hepatic impairment

Administration of LUCEMYRA to subjects with hepatic impairment was associated with prolongation of the QTc interval, which was more pronounced in subjects with severe hepatic impairment [see Use in Specific Populations (8.6)].

#### Patients with renal impairment

Administration of LUCEMYRA to subjects with renal impairment was associated with prolongation of the QTc interval, which was more pronounced in subjects with severe renal impairment [see Use in Specific Populations (8.7)].

#### LUCEMYRA coadministered with methadone

LUCEMYRA (2.88 mg/day) coadministered with methadone in 18 methadone-maintained patients (80 to 120 mg/day) resulted in a maximum mean increase from methadone-alone baseline in QTcF of 9.1 (14.2) msec.

#### LUCEMYRA coadministered with buprenorphine

LUCEMYRA (2.88 mg/day) coadministered with buprenorphine in 21 buprenorphine-maintained patients (16 to 24 mg/day) resulted in a maximum mean QTcF increase of 1.5 (5.6) msec compared to a buprenorphine-alone baseline.

#### In Vitro Binding

LUCEMYRA exhibits in vitro binding affinity and functional agonist activity with alpha-2A and alpha-2C adrenoceptors at concentrations within clinical exposure plasma levels ( $K_i$  values of approximately 7.2 nM and 12 nM, and  $EC_{50}$  values of 4.9 nM and 0.9 nM, respectively).

### 12.3 Pharmacokinetics

#### Absorption

LUCEMYRA is well absorbed and achieves peak plasma concentration 3 to 5 hours after administration of a single dose.

LUCEMYRA shows approximately dose-proportional pharmacokinetics. Administration of LUCEMYRA with food does not alter its pharmacokinetics.

The absolute bioavailability of a single oral LUCEMYRA dose (0.36 mg in solution) compared with an intravenous infusion (0.2 mg infused for 200 minutes) was 72%. Mean LUCEMYRA  $C_{max}$  after the oral dose and intravenous infusion was 0.82 ng/mL (at median  $T_{max}$  of 3 hours) and 0.64 ng/mL (at median  $T_{max}$  of 4 hours), respectively. Mean estimates of overall systemic exposure ( $AUC_{inf}$ ) were 14.9 ng•h/mL and 12.0 ng•h/mL, respectively.

### Distribution

Mean LUCEMYRA apparent volume of distribution and volume of distribution values following the administration of an oral dose and an intravenous dose were 480.0 L and 297.9 L, respectively, which are appreciably greater than total body volume, suggesting extensive LUCEMYRA distribution into body tissue.

LUCEMYRA protein binding is approximately 55%.

LUCEMYRA is not preferentially taken up by blood cells. In a study comparing LUCEMYRA concentrations in plasma and whole blood at the time of peak LUCEMYRA concentrations in human volunteers, it was determined that red blood cells contain approximately 27% the LUCEMYRA concentration of the plasma.

### Elimination

#### *Metabolism*

From absolute bioavailability results, approximately 30% of the administered LUCEMYRA dose is converted to inactive metabolites during the first pass effect associated with drug absorption from the gut.

LUCEMYRA and its major metabolites did not induce or inhibit any CYP450 isoforms, with the exception of a slight inhibition of CYP2D6 by LUCEMYRA, with an  $IC_{50}$  of 4551 nM (approximately 225 times the steady-state  $C_{max}$  for LUCEMYRA with 0.72 mg 4 times daily dosing). Any LUCEMYRA interaction with CYP2D6 substrates is not expected to be clinically significant.

LUCEMYRA is metabolized when incubated *in vitro* with human liver microsomes, the major contributor to the hepatic metabolism of LUCEMYRA is CYP2D6, with CYP1A2 and CYP2C19 also capable of metabolizing LUCEMYRA.

#### *Excretion*

The elimination half-life is approximately 12 hours and mean clearance is 17.6 L/h following an IV infusion.

LUCEMYRA has a terminal half-life of approximately 11 to 13 hours following the first dose. At steady-state, the terminal half-life is approximately 17 to 22 hours. Accumulation occurs up to 4 days with repeat dosing, following the recommended dosing regimen.

A mass balance study of LUCEMYRA showed nearly complete recovery of radiolabel in urine (93.5%) over 144 hours postdose, with an additional 0.92% recovered in the feces over 216 hours postdose. Thus, it appears that all, or nearly all, of the dose was absorbed, and that the primary route of elimination of the parent drug and its metabolites is via the kidney. Renal elimination of unchanged drug accounts for approximately 15% to 20% of the administered dose.

### Specific Populations

#### *Hepatic Impairment*

Hepatic impairment slows the elimination of LUCEMYRA but exhibits less effect on the peak plasma concentration following a single dose. In a study comparing the pharmacokinetics of LUCEMYRA (0.36 mg) in mild, moderate, and severe hepatically impaired subjects to subjects with normal hepatic function (6 subjects in each hepatic function group), mean  $C_{max}$  values were similar for subjects with normal, mild, and moderate hepatic impairment as shown in Table 6.

**Table 6: LUCEMYRA Pharmacokinetics in Subjects with Hepatic Impairment**

	<b>Normal</b>	<b>Mild Impairment</b>	<b>Moderate Impairment</b>	<b>Severe Impairment</b>
Child-Pugh Class & Score	Normal Function	Class A 5-6	Class B 7-9	Class C 10-15
$C_{max}$ % of normal	100	114	117	166
$AUC_{last}$ % of normal	100	127	190	304
$AUC_{\infty}$ % of normal	100	117	185	260
$t_{1/2}$ % of normal	100	139	281	401

#### *Renal Impairment*

Renal impairment slows the elimination of LUCEMYRA but exhibits less effect on the peak plasma concentration following a single dose. In a study comparing the pharmacokinetics of LUCEMYRA (0.36 mg) in 8 end-stage renal disease subjects on 3 times weekly hemodialysis to 8 subjects with normal renal function matched for sex, age, and body mass index, mean  $C_{max}$  values were similar for end-stage renal disease and normal renal function subjects, indicating no change in maximum LUCEMYRA exposure with renal impairment as shown in Table 7.

The impact of dialysis on the overall pharmacokinetics of LUCEMYRA during a typical 4-hour dialysis was minimal; the drop in LUCEMYRA plasma concentrations produced during the dialysis session was transient, with a rebound to nearly predialysis concentrations after re-equilibration within a few hours following completion of the dialysis cycle [see Dosage and Administration (2.3), Use in Specific Populations (8.7)].



In a study comparing the pharmacokinetics of LUCEMYRA (0.36 mg) in 6 subjects each with normal renal function, mild renal impairment, and moderate renal impairment as well as 5 subjects with severe renal impairment but not requiring dialysis, there were similar increases in mean  $C_{max}$  values in subjects with mild and moderate renal impairment in comparison to subjects with normal renal function, with additional increases in mean  $C_{max}$  values in subjects with severe renal impairment. Mean  $AUC_{last}$ ,  $AUC_{\infty}$ , and  $t_{1/2}$  increased with severity of renal impairment as shown in Table 7.

**Table 7: LUCEMYRA Pharmacokinetics in Subjects with Renal Impairment**

	Normal	Mild Impairment	Moderate Impairment	Severe Impairment	ESRD or on dialysis
eGFR (mL/min/1.73 m <sup>2</sup> )	≥ 90	60-89	30-59	15-29	< 15
$C_{max}$ % of normal	100	124	117	154	104
$AUC_{last}$ % of normal	100	157	187	272	181
$AUC_{\infty}$ % of normal	100	144	173	243	171
$t_{1/2}$ % of normal	100	101	145	157	137

#### Drug Interaction Studies

##### *LUCEMYRA coadministered with methadone*

In a double-blind placebo-controlled study of 23 patients maintained on methadone (80 to 120 mg/day) concomitantly administered LUCEMYRA up to 2.88 mg/day, LUCEMYRA did not alter the pharmacokinetics of methadone. LUCEMYRA concentrations may be slightly increased when coadministered with methadone; however, the increase at concentrations expected with recommended dosing is not clinically meaningful [see *Drug Interactions* (7.1)].

##### *LUCEMYRA coadministered with buprenorphine*

In a double-blind placebo-controlled study of 30 subjects maintained on buprenorphine (16 to 24 mg/day) concomitantly administered LUCEMYRA up to 2.88 mg/day, no pharmacokinetic or pharmacodynamic interactions between LUCEMYRA and buprenorphine were seen.

##### *LUCEMYRA coadministered with oral naltrexone*

In an open-label, single-arm study of 24 healthy subjects, oral naltrexone (50 mg/day) did not significantly alter the single-dose pharmacokinetics of LUCEMYRA (0.36 mg). The alteration in steady-state pharmacokinetics of oral naltrexone was statistically significant in the presence of LUCEMYRA. The  $T_{max}$  was delayed for both naltrexone and 6β-naltrexol (2 to 3 hours), and overall exposure was slightly reduced when naltrexone was administered with LUCEMYRA [see *Drug Interactions* (7.2)].

##### *LUCEMYRA coadministered with paroxetine*

In an open-label, single-sequence study of 24 healthy subjects, the strong CYP2D6 inhibitor paroxetine (40 mg/day) increased LUCEMYRA (0.36 mg)  $C_{max}$  and  $AUC_{\infty}$  by approximately 11% and 28%, respectively [see *Drug Interactions* (7.4)].

### **13 NONCLINICAL TOXICOLOGY**

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

##### Carcinogenesis

No adequate long-term animal studies have been completed to evaluate the carcinogenic potential of lofexidine.

##### Mutagenesis

Lofexidine tested positive in the *in vitro* mouse lymphoma assay. Lofexidine tested negative in the *in vitro* bacterial reverse mutation assay (Ames assay) and in the *in vivo* rat micronucleus assay.

##### Impairment of Fertility

In a female fertility study in rabbits, fertility was not adversely impacted by administration of lofexidine hydrochloride up to 6.4 mg/kg/day (approximately 0.1 times the MRHD of 2.88 mg on an AUC basis) when administered orally starting 2 weeks prior to mating and through gestation and lactation. However, decreased breeding rate and higher post-implantation loss was observed at this dose, which correlated with higher resorptions and reduced litter size. Maternal toxicity, which included increased mortality rate, reduced body weight gain, and moderate sedation was observed at 6.4 mg/kg/day. The NOAEL for female fertility was 6.4 mg/kg/day and the NOAEL for female-mediated developmental parameters was 0.4 mg/kg/day (approximately 0.005 times the MRHD on an AUC basis).

In a fertility study in rats, fertility was unaffected by administration of lofexidine up to 0.88 mg/kg/day (approximately 0.2 times the MRHD on an AUC basis) via diet to male and female rats prior to mating and to the dams through gestation and lactation. No evidence of maternal toxicity was observed. However, no assessment of sperm or reproductive organs were performed in this study.

Reduced testes, epididymis, and seminiferous tubule weights, as well as delayed sexual maturation of males and females and decreases in the number of corpora lutea and implantations after mating, were noted in offspring of pregnant rats administered lofexidine hydrochloride orally from GD 6 through lactation at exposures less than the human exposure based on AUC comparisons.

## 14 CLINICAL STUDIES

Two randomized, double-blind, placebo-controlled trials supported the efficacy of LUCEMYRA.

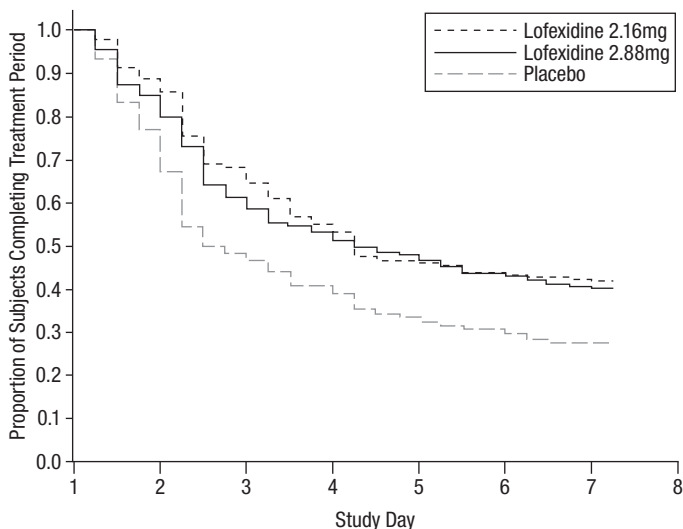
### Study 1, NCT01863186

Study 1 was a 2-part efficacy, safety, and dose-response study conducted in the United States in patients meeting DSM-IV criteria for opioid dependence who were physically dependent on short-acting opioids (e.g., heroin, hydrocodone, oxycodone). The first part of the study was an inpatient, randomized, double-blind, placebo-controlled design consisting of 7 days of inpatient treatment (Days 1 – 7) with LUCEMYRA 2.16 mg total daily dose (0.54 mg 4 times daily) (n=229), LUCEMYRA 2.88 mg total daily dose (0.72 mg 4 times daily) (n=222), or matching placebo (n=151). Patients also had access to a variety of support medications for withdrawal symptoms (guaifenesin, antacids, dioctyl sodium sulfosuccinate, psyllium hydrocolloid suspension, bismuth sulfate, acetaminophen, and zolpidem). The second part of the study (Days 8 – 14) was an open-label design where all patients who successfully completed Days 1 – 7 were eligible to receive open-label treatment with variable dose LUCEMYRA treatment (as determined by the investigator, but not to exceed 2.88 mg total daily dose) for up to an additional 7 days (Days 8 – 14) in either an inpatient or outpatient setting as determined by the investigator and the patient. No patient received LUCEMYRA for more than 14 days.

The two endpoints to support efficacy were the mean Short Opiate Withdrawal Scale of Gossop (SOWS-Gossop) total score on Days 1 – 7 of treatment and the proportion of patients who completed 7 days of treatment. The SOWS-Gossop, a patient-reported outcome (PRO) instrument, evaluates the following opioid withdrawal symptoms: feeling sick, stomach cramps, muscle spasms/twitching, feeling of coldness, heart pounding, muscular tension, aches and pains, yawning, runny eyes and insomnia/problems sleeping. For each opioid withdrawal symptom, patients are asked to rate their symptom severity using four response options (none, mild, moderate, and severe). The SOWS-Gossop total score ranges from 0 to 30, where a higher score indicates greater withdrawal symptom severity. The SOWS-Gossop was administered at baseline and once daily 3.5 hours after the first morning dose on Days 1 – 7.

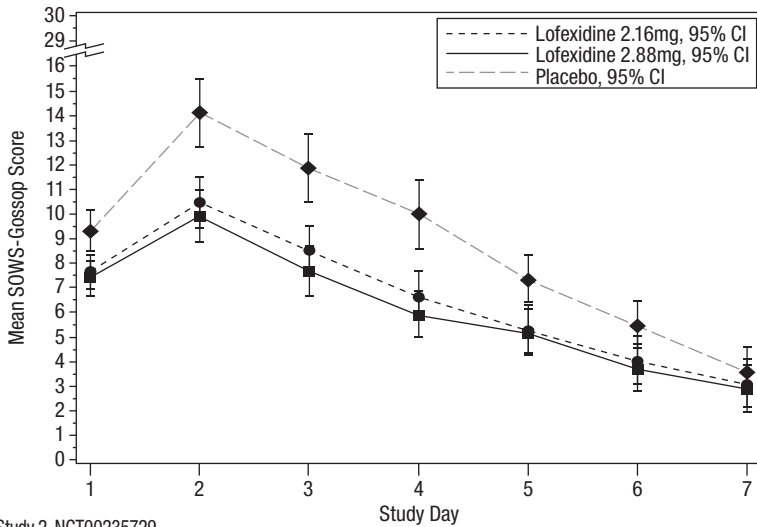
Of the randomized and treated patients, 28% of placebo patients, 41% of LUCEMYRA 2.16 mg and 40% of LUCEMYRA 2.88 mg patients completed 7 days of treatment. The difference in proportion in both LUCEMYRA groups was significant compared to placebo. See Figure 1. Patients in the placebo group were more likely to drop out of the study prematurely due to lack of efficacy than patients treated with LUCEMYRA.

**Figure 1: Completion of Treatment Period for Study 1**



The mean SOWS-Gossop scores for Days 1 – 7 were 8.8, 6.5, and 6.1 for placebo, LUCEMYRA 2.16 mg and LUCEMYRA 2.88 mg, respectively. Results are shown in Figure 2. The mean difference between LUCEMYRA 2.16 mg and placebo was -2.3 with a 95% CI of (-3.4, -1.2). The mean difference between LUCEMYRA 2.88 mg and placebo was -2.7 with a 95% CI of (-3.9, -1.6). They were both significant. Symptoms assessed on the SOWS-Gossop were recorded as absent or mild for almost all patients remaining to the end of the assessment period.

**Figure 2: Mean SOWS-Gossop Scores for Days 1 – 7 in Study 1**



**Study 2, NCT00235729**

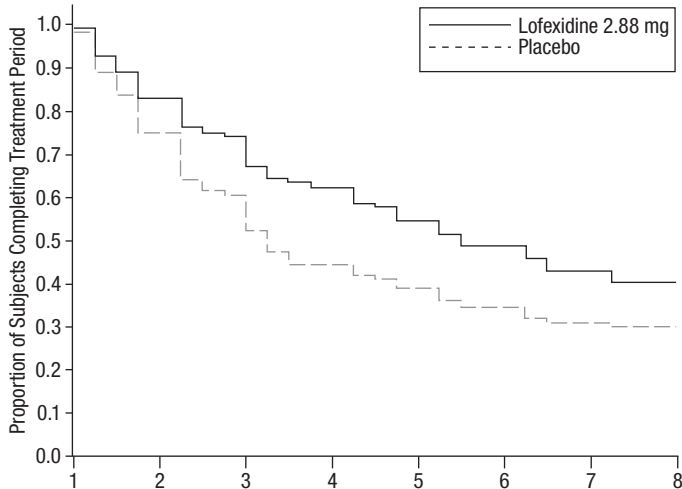
Study 2 was an inpatient, randomized, multicenter, double-blind, placebo-controlled study carried out in the United States in patients meeting DSM-IV criteria for opioid dependence who were physically dependent on short-acting opioids (e.g., heroin, hydrocodone, oxycodone). Patients were treated with LUCEMYRA tablets (2.88 mg/day [0.72 mg 4 times daily]) or matching placebo for 5 days (Days 1 – 5). Patients also had access to a variety of support medications for withdrawal symptoms (guaifenesin, antacids, dioctyl sodium sulfosuccinate, psyllium hydrocolloid suspension, bismuth sulfate, acetaminophen, and zolpidem). All patients then received placebo on Days 6 and 7 and were discharged on Day 8.

The two endpoints to support efficacy were the mean SOWS-Gossop total score on Days 1 – 5 of treatment and the proportion of patients who completed 5 days of treatment. The SOWS-Gossop was administered at baseline and once daily 3.5 hours after the first morning dose on Days 1 – 5.

A total of 264 patients were randomized into the study. Of these, 134 patients were randomized to LUCEMYRA 2.88 mg/day and 130 patients to placebo.

Of the randomized and treated patients, 33% of placebo patients and 49% of LUCEMYRA patients completed 5 days of treatment. The difference in proportion between the two groups was significant. See Figure 3. Patients in the placebo group were more likely to drop out of the study prematurely due to lack of efficacy than patients treated with LUCEMYRA.

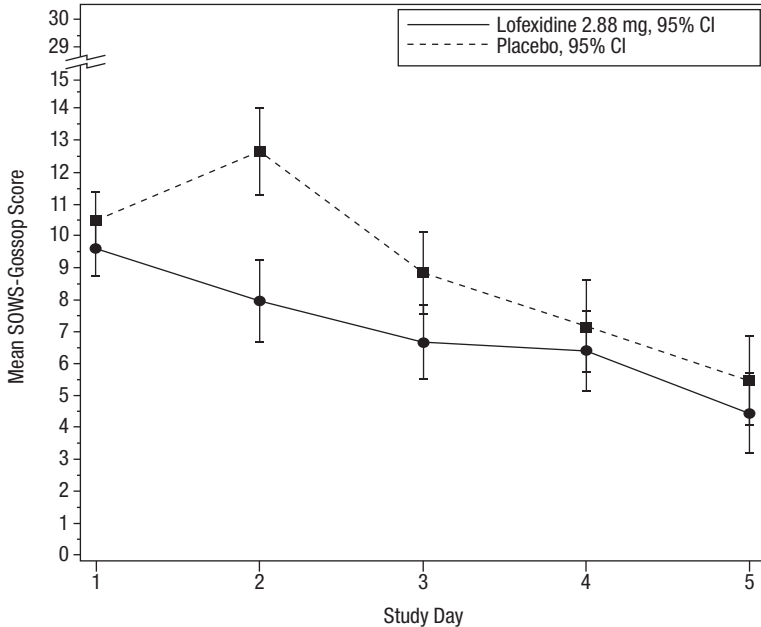
**Figure 3: Completion of Treatment Period in Study 2**



## Study Day

The mean SOWS-Gossop scores for Days 1 – 5 were 8.9 and 7.0 for placebo and LUCEMYRA 2.88 mg, respectively. Results are shown in Figure 4. The mean difference was -1.9 with a 95% CI of (-3.2, -0.6) and was statistically significant.

**Figure 4: Mean SOWS-Gossop Scores for Days 1 – 5 in Study 2**



## 16 HOW SUPPLIED/STORAGE AND HANDLING

### How Supplied

Available as 0.18 mg round, convex-shaped, peach colored, film-coated tablets, imprinted with “LFX” on one side and “18” on the other side; approximately 7 mm in diameter.

Bottles of 36 tablets . . . . . NDC 78670-050-36

Bottles of 96 tablets . . . . . NDC 78670-050-96

### Storage

Store in original container at controlled room temperature, 25°C (77°F); with excursions permitted between 15°C to 30°C (59°F to 86°F) [see USP Controlled Room Temperature]. Keep LUCEMYRA away from excess heat and moisture both in the pharmacy and after dispensing. Do not remove desiccant packs from bottles until all tablets are used. Keep LUCEMYRA and all medicines out of the reach of children.

## 17 PATIENT COUNSELING INFORMATION

Advise patients to read the FDA-approved patient labeling (Patient Information).

LUCEMYRA may mitigate, but not completely prevent, the symptoms associated with opioid withdrawal syndrome, which may include feeling sick, stomach cramps, muscle spasms or twitching, feeling of cold, heart pounding, muscular tension, aches and pains, yawning, runny eyes and sleep problems (insomnia). Patients should be advised that withdrawal will not be easy. Additional supportive measures should be clearly advised, as needed.

### Hypotension and Bradycardia

Inform patients to be alert for any symptoms of low blood pressure or pulse (e.g., dizziness, lightheadedness, or feelings of faintness at rest or upon abruptly standing). Advise patients on how to reduce the risk of serious consequences should hypotension occur (sit or lie down, carefully rise from a sitting or lying position).

Patients being given LUCEMYRA in an outpatient setting should be capable of and instructed on self-monitoring for hypotension, orthostasis, and bradycardia and advised to withhold LUCEMYRA doses and contact their healthcare provider for instructions if they experience these signs or related symptoms [see *Warnings and Precautions (5.1)*].

Advise patients to avoid becoming dehydrated or overheated, which may potentially increase the risks of hypotension and syncope [see *Warnings and Precautions (5.1)*].

#### Concomitant Medications

Review with patients all concomitant medications being taken and request that they immediately inform their healthcare provider of any changes in concomitant medications, including any other medications that may be used to treat individual symptoms of withdrawal.

#### Increased Risk of CNS Depression with Concomitant use of CNS Depressant Drugs

Inform patients of the increased risk of CNS depression with concomitant use of benzodiazepines, alcohol, barbiturates, or other sedating drugs [see *Warnings and Precautions (5.3)*].

Advise patients using LUCEMYRA in an outpatient setting that, until they learn how they respond to LUCEMYRA, they should be careful or avoid doing activities such as driving or operating heavy machinery.

#### Sudden Discontinuation of LUCEMYRA

Inform patients not to discontinue LUCEMYRA without consulting their healthcare provider [see *Warnings and Precautions (5.5)*].

#### Risk of Opioid Overdose After Discontinuation of Opioids

Advise patients that after a period of not using opioid drugs, they may be more sensitive to the effects of opioids and at greater risk of overdosing [see *Warnings and Precautions (5.4)*].

This product's Prescribing Information may have been updated. For current full Prescribing Information, please visit [www.usworldmeds.com](http://www.usworldmeds.com).

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### **PATIENT INFORMATION**

**LUCEMYRA® (LEW-sem-EER-uh)**  
(lofexidine)  
tablets

**What is the most important information I should know about LUCEMYRA and discontinuing opioid drugs?**

**LUCEMYRA can cause serious side effects, including low blood pressure (hypotension), slow heart rate (bradycardia), and fainting.**

If you have any of the following signs or symptoms, tell your healthcare provider right away:

- low blood pressure
- slow heartbeat
- dizziness
- lightheadedness
- feeling faint at rest or when standing up

If you take LUCEMYRA at home and have any of these signs and symptoms, do not take your next dose of LUCEMYRA until you have talked to your healthcare provider. You should avoid becoming dehydrated or overheated during treatment with LUCEMYRA, which may increase your risk of low blood pressure and fainting. You should also be careful not to stand up too suddenly from lying down or sitting.

When your treatment is complete you will need to stop taking LUCEMYRA gradually or your blood pressure could increase. For more information about side effects, see **“What are the possible side effects of LUCEMYRA?”**

**Increased risk of opioid overdose.** After a period of time of not using opioid drugs, you can become more sensitive to the effects of opioids if you start using opioids again. This may increase your risk of overdose and death.

### **What is LUCEMYRA?**

LUCEMYRA is a non-opioid prescription medicine used in adults to help with the symptoms of opioid withdrawal that may happen when you stop taking an opioid suddenly.

LUCEMYRA will not completely prevent the symptoms of opioid withdrawal, which may include feeling sick, stomach cramps, muscle spasms or twitching, feeling of cold, heart pounding, muscular tension, aches and pains, yawning, runny eyes and sleep problems (insomnia).

LUCEMYRA is not a treatment for opioid use disorder. If you have been diagnosed with opioid use disorder (opioid addiction), your healthcare provider may prescribe LUCEMYRA as part of a complete treatment program for your opioid use disorder (opioid addiction).

It is not known if LUCEMYRA is safe and effective in children.

### **Before taking LUCEMYRA, tell your healthcare provider about all of your medical conditions, including if you:**

- have low blood pressure
- have a slow heart rate
- have any heart problems, including history of heart attack or a condition called long QT syndrome
- have liver or kidney problems
- drink alcohol
- are pregnant or plan to become pregnant. It is not known if LUCEMYRA can harm your unborn baby.
- are breastfeeding or plan to breastfeed. It is not known if LUCEMYRA passes into your breast milk. Talk to your healthcare provider about the best way to feed your baby during treatment with LUCEMYRA.

**Tell your healthcare provider about all of the medicines you take**, including prescription and over-the-counter medicines, vitamins, herbal supplements, and any medications you may take for the individual symptoms of opioid withdrawal (such as pain relievers or medications for upset stomach).

Especially tell your healthcare provider if you take benzodiazepines, barbiturates, tranquilizers, or sleeping pills. Taking LUCEMYRA with these medicines can cause serious side effects. Ask your healthcare provider or pharmacist if you are not sure if you are taking any of these medicines.

### **How should I take LUCEMYRA?**

- Take LUCEMYRA exactly as your healthcare provider tells you to take it.
- Your healthcare provider may change your dose if needed.
- Do not change your dose or stop taking LUCEMYRA without talking to your healthcare provider.
- Take LUCEMYRA with or without food.
- If you take too much LUCEMYRA, go to the nearest hospital emergency room right away.

### **What should I avoid while taking LUCEMYRA?**

Do not drive, operate heavy machinery, or perform any other dangerous activities until you know how LUCEMYRA affects you.

### **What are the possible side effects of LUCEMYRA?**

The most common side effects of LUCEMYRA include:

- low blood pressure or symptoms of low blood pressure such as lightheadedness
- slow heart rate
- dizziness
- sleepiness
- dry mouth

These are not all the possible side effects of LUCEMYRA.

Call your healthcare provider for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088. You may also report side effects to US WorldMeds at 1-833-LUCEMYRA.

### **How should I store LUCEMYRA?**

- Store LUCEMYRA at room temperature between 68°F to 77°F (20°C to 25°C).
- Keep LUCEMYRA in its original container.
- Keep LUCEMYRA away from heat and moisture.
- LUCEMYRA bottles contain desiccant packs to help keep the tablets dry. Do not remove the desiccant packs until all the tablets are used.

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

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

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

### **What are the ingredients of LUCEMYRA?**

**Active ingredient:** lofexidine.

**Inactive ingredients:** lactose, citric acid, povidone, microcrystalline cellulose, calcium stearate, sodium lauryl sulphate, and Opadry OY S 9480 (contains indigo carmine and sunset yellow).

US WorldMeds®

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For more information, go to [www.LUCEMYRA.com](http://www.LUCEMYRA.com) or call 1-833-LUCEMYRA

This Patient Information has been approved by the U.S. Food and Drug Administration.

Issued: 09/2020

360-10020.01  
USWMLUC-00394