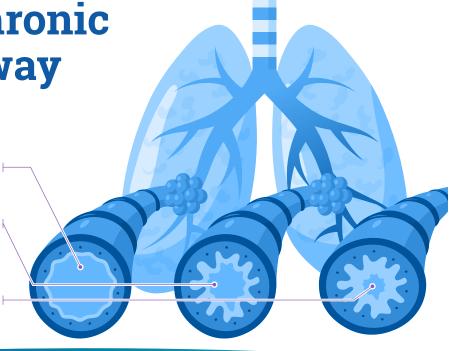
Asthma Is a Chronic Disease of Airway Inflammation<sup>13</sup>

#### **Normal airway**

In patients with asthma, airways may become overly reactive to irritants, leading to inflammation that can make it hard to breathe<sup>3</sup>

**During an asthma attack** or "exacerbation," certain irritants can cause increased inflammation, tightening of the airways, and mucus production that further narrow the airways<sup>2,3</sup>



## **Severe and Uncontrolled Asthma**



**Severe asthma** is asthma that requires medium- to high-dose inhaled corticosteroids plus another asthma controller medication, and may require the addition of oral corticosteroids<sup>4</sup>



#### **Uncontrolled asthma**

occurs when asthma symptoms persist despite following an asthma treatment plan and reducing exposure to triggers<sup>4</sup>



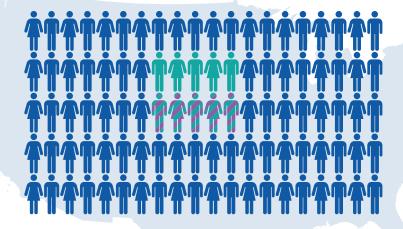
**Indicators** of uncontrolled asthma might include<sup>4</sup>:

- Daytime symptoms more than 2x per week
- Night waking due to asthma
- Use of acute asthma reliever more than 2x per week
- Activity limitation due to asthma

# Up to 2.5 Million People in the US Have Severe Asthma

Asthma affects almost

million
people in the
United States



**5%** to **10%** of them have severe asthma<sup>4,7</sup>

Up to 50% of those with severe asthma are uncontrolled8

# **Airway Irritants Cause Immune Responses** and Exacerbations in People Living With Asthma

**Exposure to** asthma triggers<sup>2</sup>









Immune cells activate9







Airway effects<sup>1,2,9</sup> (signs, symptoms)

- Coughing
- Chest tightness
- Wheezing
- Shortness of breath
- Asthma attacks
- Hospitalizations

In asthma, inhaled irritants and triggers can interact with the surface of the lung (called "epithelium") to activate immune cells9

Different triggers may activate different types of immune cells: the immune response depends on which cells are activated9

Immune responses cause the signs and symptoms of asthma, 1,2 which may require urgent medical attention including emergency room visits and/or hospitalizations<sup>2,8,10,11</sup>

## Get to Know Medicines that May Be Part of a Treatment Plan

## **Short Acting/Rescue**

For increased symptoms including shortness of breath or wheezing<sup>2,4</sup>

### **Long-Acting Controllers**

For daily asthma control; includes inhaled steroids and/or oral anti-leukotriene drugs<sup>2,4</sup>

### **Oral Steroids**

For additional asthma control when needed<sup>2,4</sup>



### **Allergy Medicines**

To help control allergies that may be contributing to asthma<sup>2,4</sup>

### **Biologic Medicines**

Targeted therapies for moderate-tosevere uncontrolled asthma2,4

All treatment plans are unique, and can vary from person to person. All components of this diagram might not be included in your patient-specific medication treatment plan.



# **Communicate With** Your Healthcare Provider; **Seek Immediate Care When Necessary**

Develop a written asthma action plan with your healthcare provider. Understand the specific actions to take

- When doing well
- When asthma is getting worse
- During an exacerbation

Seek care immediately during an asthma exacerbation

### For additional resources, please visit:

- American Lung Association at www.lung.org
- Asthma and Allergy Network at www.allergyasthmanetwork.org



For additional information please visit: luma-edu.com

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