



**Weill Cornell Medicine**  
Pediatrics

**NewYork-  
Presbyterian**

# Childhood Asthma

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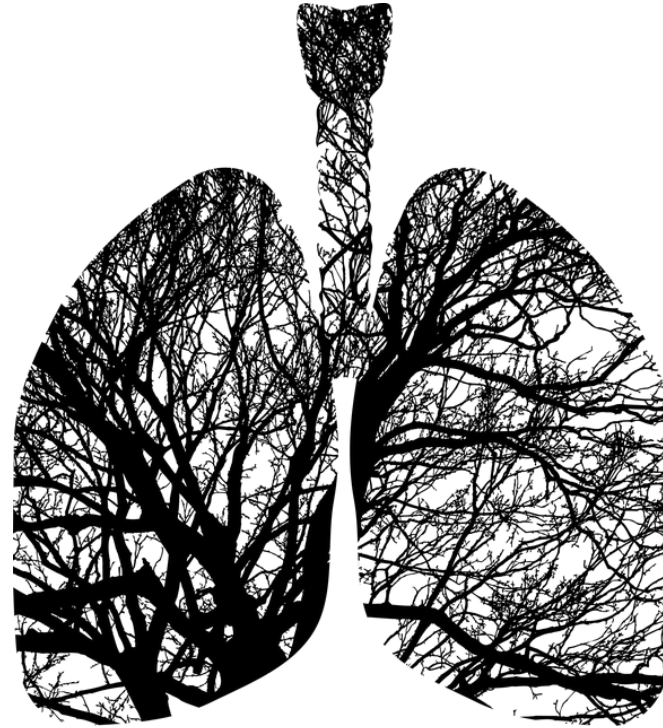
Weill Cornell Medicine  
Pediatric Asthma Program

# Objectives

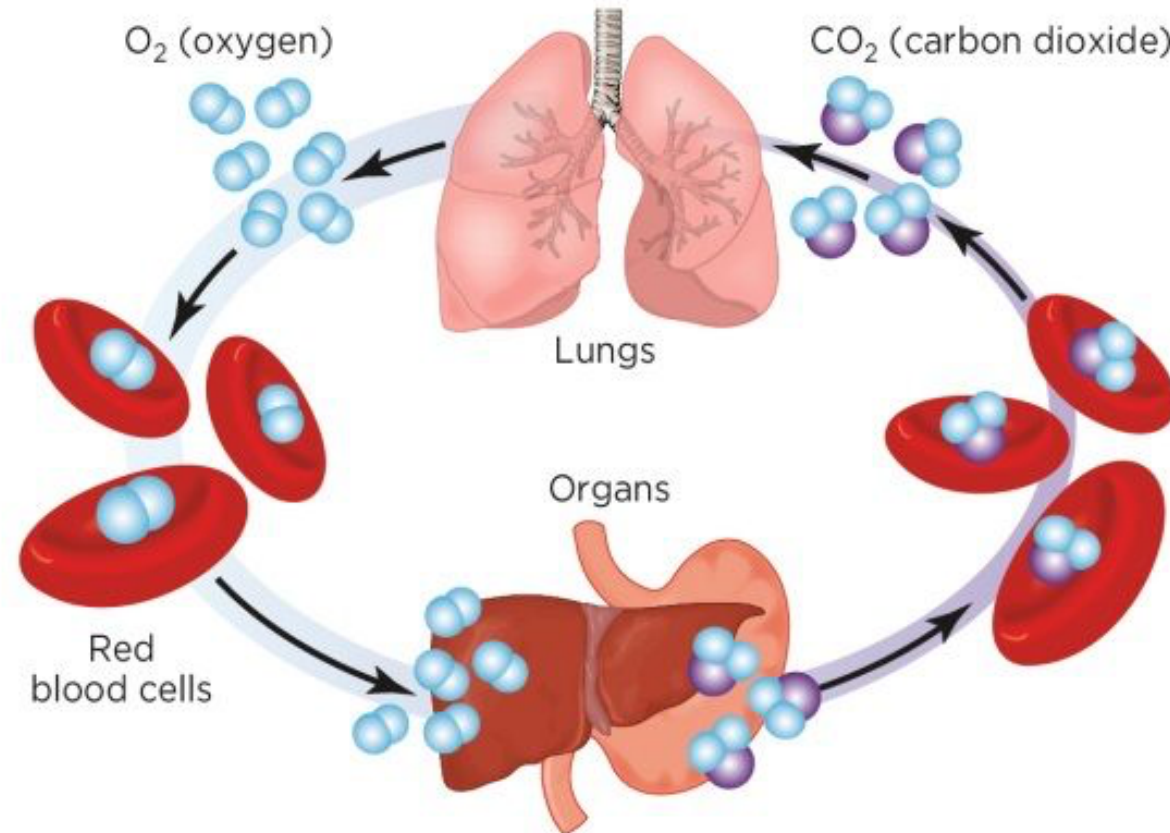
- ▶ Anatomy and Physiology
- ▶ Overview of asthma
- ▶ Asthma in NYC
- ▶ Symptoms
- ▶ Asthma management

# How does your body use oxygen?

- ▶ Breathing uses both chemical and mechanical processes to bring oxygen to every cell of the body and to get rid of carbon dioxide.
- ▶ Our body needs oxygen to obtain energy to fuel all our living processes. Carbon dioxide is a waste product of that process.
- ▶ The respiratory system, with its conduction and respiratory zones, brings air from the environment to the lungs and facilitates gas exchange both in the lungs and within the cells.



## g 1. Gas exchange in humans



# What is asthma?



- ▶ Asthma is a chronic inflammatory disease in which the airways become narrow - this makes it difficult for air to flow in and out of the lungs

# Burden of asthma in children

- ▶ More than **26 million** Americans have asthma <sup>(1)</sup>
  - ▶ **6.1 million** of those with asthma are children (under age 18)
- ▶ Asthma is the **third** leading cause of childhood hospitalization
- ▶ Asthma causes **millions of missed school** days every year - this can lead to a child falling behind in class
- ▶ In 2017, the NYC Environmental & Health Data Portal estimated that **over 11%** of children throughout New York City, between the ages of 0-13, have had a diagnosis of asthma <sup>(2)</sup>

(1) <https://www.lung.org/lung-health-diseases/lung-disease-lookup/asthma/learn-about-asthma>

(2) <http://a816-dohbsp.nyc.gov/IndicatorPublic/VisualizationData.aspx?id=2392,4466a0,11,Summarize>

# Burden of asthma in NYC children

- ▶ Children diagnosed with asthma, between ages 0-13 (2017 data)
  - ▶ 158,000 children ~ 11.2% of children living in NYC
  - ▶ Breakdown by borough
    - ▶ Bronx - 50,000 children
    - ▶ Brooklyn - 39,000 children
    - ▶ Manhattan - 24,000 children
    - ▶ Queens - 37,000 children
    - ▶ Staten Island - 8,000 children



# Asthma Symptoms

- ▶ Although asthma symptoms may look different from one person to another, here are the most common:
  - ▶ Wheezing
  - ▶ Cough
  - ▶ Shortness of breath
  - ▶ Chest tightness



# Asthma Management

- ▶ It is important to visit your child's healthcare professional regularly to keep asthma under good control (even if your child is feeling well)
- ▶ Managing your child's **triggers** - avoiding irritants and allergens that make asthma worse \*
- ▶ Taking asthma **medications** as prescribed by your child's healthcare provider\*
- ▶ Following your child's **asthma action plan**\*

\* Please see our other videos on these topics

# Contact Us

If you have questions about asthma,  
please reach out for more information:

- ▶ Email: [PedsAsthma@med.cornell.edu](mailto:PedsAsthma@med.cornell.edu)
- ▶ Phone: 212-746-4508

Visit our website for links to more resources:

<https://pediatrics.weill.cornell.edu/divisions-programs/general-academic-pediatrics/pediatric-asthma-program>