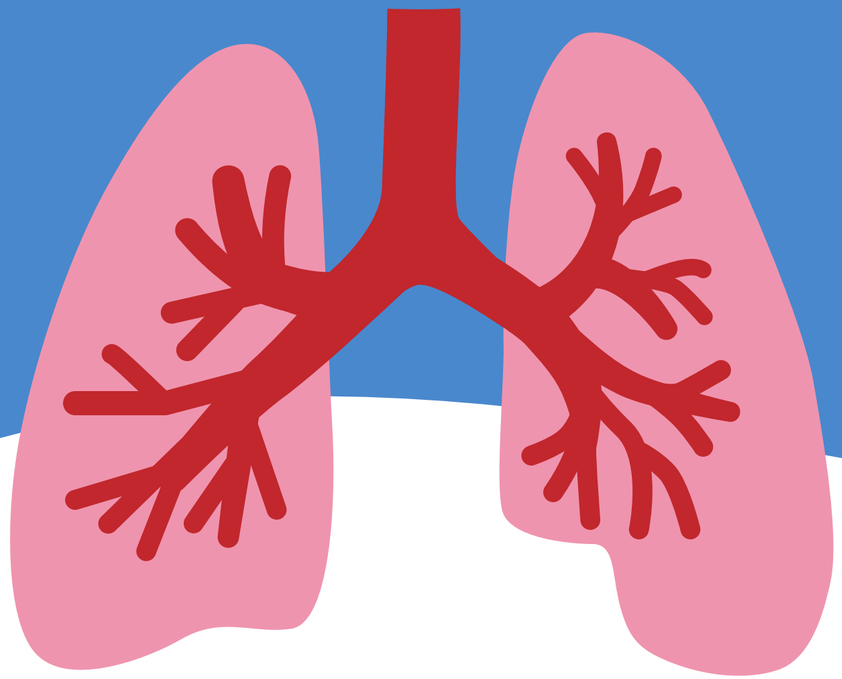
# Diagnostic Teaching:

## Asthma



By: Carina Bergouignan

# Diagnosis

**Asthma** is defined as "a long-term disease of the lungs. It causes your airways to get inflamed and narrow, and it makes it hard to breathe. Severe asthma can cause trouble talking or being active. You might hear your doctor call it a chronic respiratory disease."

https://www.webmd.com/asthma/what-is-asthma#:~:text=Asthma%20is%20a%20long%2Dterm,it%20a%20chronic%20respiratory%20disease.

# Asthma Population

"It is the leading chronic disease in children. Currently, there are about 5.1 million children under the age of 18 with asthma."

https://www.aafa.org/asthma-facts/

# Asthma's impact on the Body

on the pediatric population

## Symptoms of Asthma include:

- Wheezing sound when breathing out
- Chest tightness
- Shortness of breath
- Coughing (which can be triggered by environmental factors)

Asthma Facts | AAFA.org

# Changes to Development

**Physical**

**Cognitive**

**Emotional**

**Social**

**Langauge**

# Physical

- Coughing
- Wheezing
- Tightness in the chest
- Shortness of breath
- Awakening in the night from coughing or wheezing
- Unusual tiredness or restlessness
- Trouble sitting still
- Crankiness
- Looking worried or scared
- Pale, sweaty skin
- Fast breathing
- Slouching Over

# Cognitive

**According to research "Asthma primarily affects the lungs, but can impact brain function through direct and indirect mechanisms. Some studies have suggested that asthma negatively impacts cognition, while others have failed to identify asthma-related cognitive compromise. "**

https://pubmed.ncbi.nlm.nih.gov/28325118/

# Emotional

**The severity of the Asthma plays a role in a child's emotional state including:**

- When to set boundaries and limits on activities
- Where those activities take place
- Your personality
- Support systems (friends and family)
- How much asthma limits your activities
- What the child is able to understand in regards of their diagnosis
- How the child copes with their diagnosis

https://hospital.uillinois.edu/primary-and-specialty-care/pulmonary/our-areas-of-expertise/asthma/emotional-effects-of-asthma

# Social

"Many parents also limit their children’s physical and social activities because they’re worried about their safety."

" Limiting these sorts of activities, like sports, can cost kids exercise, healthy habits, and some opportunities for social interaction and growth, which can isolate them from other kids and make them feel alone."

https://blog.healthalliance.org/wellness-101/disease-management/emotional-and-social-effects-of-asthma/

# Language

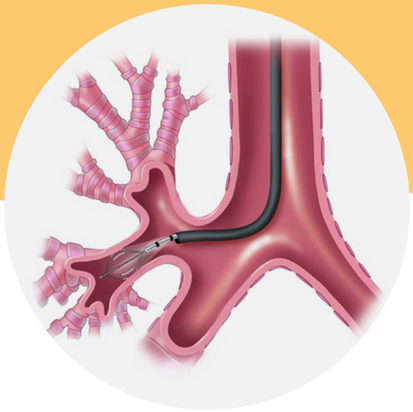
**Asthma and allergies can play a role in childhood communication disorders as they effect the respiratory tract.**

**"Up to 50% of children with speech and voice disorders also have asthma, allergic rhinitis, or both (Baker, Baker, & Le, 1982; Keating, Turrell, & Ozanne, 2001)."**

https://asthmaallergieschildren.com/asthma-allergies-articulation-a-speech-therapy-perspective/

# Test, Procedures and Treatments

**Test**



**Procedures**

**Treatments and Medications**

# Test

**The most common lung function test is called spirometry.**
**This lung function test uses a device called, a spirometer, to measure the amount and speed of the air you blow out.**

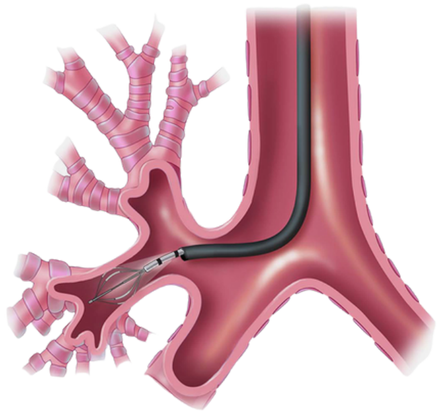
https://www.mayoclinic.org/diseases-conditions/asthma/in-depth/asthma/art-20045198

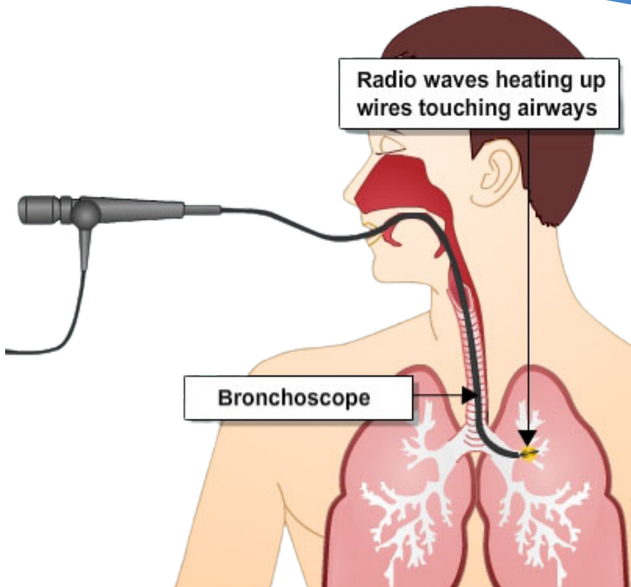
https://www.sutterhealth.org/services/asthma/treatments-procedures

# Procedures

**Typically Asthma can be resolved without procedures. In severe cases their is a procedure called Bronchial Thermoplasty.**

**"Under sedation, a catheter inside a bronchoscope—a thin, flexible tube-like instrument introduced through the patient's nose or mouth, and into their lungs—delivers thermal energy into the airways. The catheter delivers a series of 10-second temperature controlled bursts of radio frequency energy which heat the lining of the lungs to 65 degrees Celsius. It is this heat that destroys some of the muscle tissue which constricts during an asthma attack, reducing the number and severity of exacerbations."**





# Asthma Treatments

## Treatments

- **Bronchodilator: Helps open the airways of the lungs to make breathing easier.**
- **Steroid: Modifies or simulates hormone effects, often to reduce inflammation or for tissue growth and repair.**
- **Anti-inflammatory: Prevents or counteracts swelling (inflammation) in joints and tissues.**

Childhood asthma - Diagnosis and treatment - Mayo Clinic

# Implications

https://www.webmd.com/asthma/asthma-triggers

Food Can Affect Asthma | AAFA.org

## Diet

### Food that can trigger asthma:

- Eggs
- Cow's milk
- Peanuts
- Tree nuts
- Soy
- Wheat
- Fish
- Shrimp and other shellfish
- Salads
- Fresh fruits

**Foods with preservatives are also triggers.**

# Implications

continued...

## Family

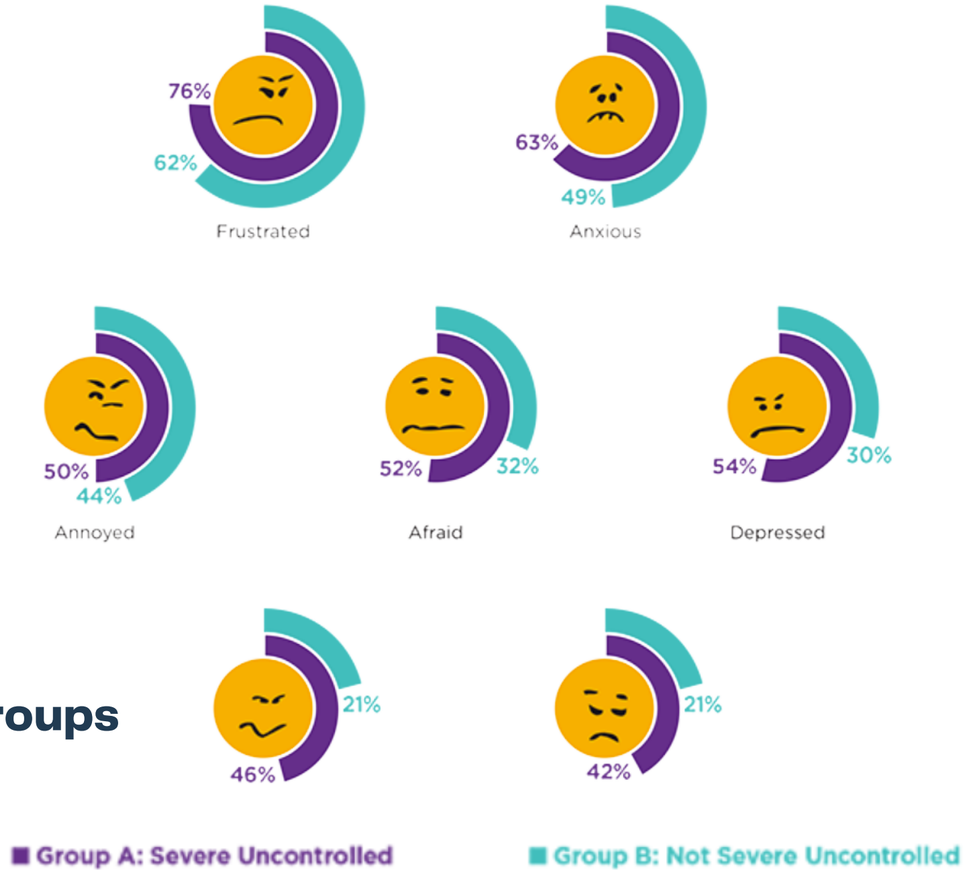
**According to the My Life With Asthma online survey**

- **64% said asthma affected their family relationships**
- **55% said it had a negative impact on relationships**
- **17% had no impact on any relationship**

**The study looked at two groups:**

- **Group A: People with “severe uncontrolled” asthma**
- **Group B: People with “not severe uncontrolled” asthma**

**The chart to the right is the range of emotions felt by both groups**




https://www.aafa.org/my-life-with-asthma-report/

# Child Life Interventions

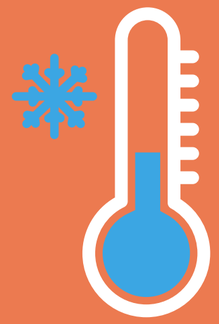
## ASTHMA EDUCATION

# A S T H M A

AIRWAYS

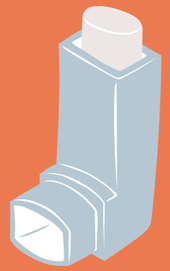
SYMPTOMS

TECHNIQUES/ TRIGGERS

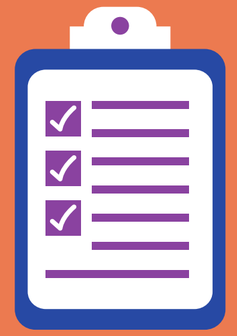


HELP

MEDICATIONS

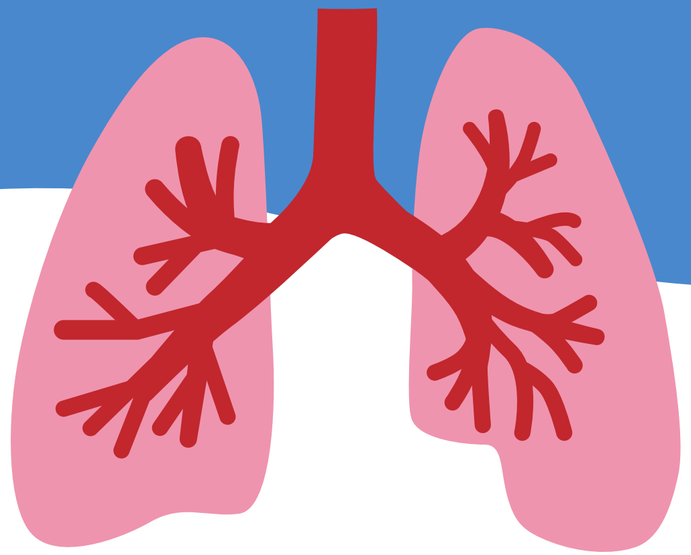


ASTHMA COPING PLAN



https://www.albertahealthservices.ca/scns/page13147.aspx

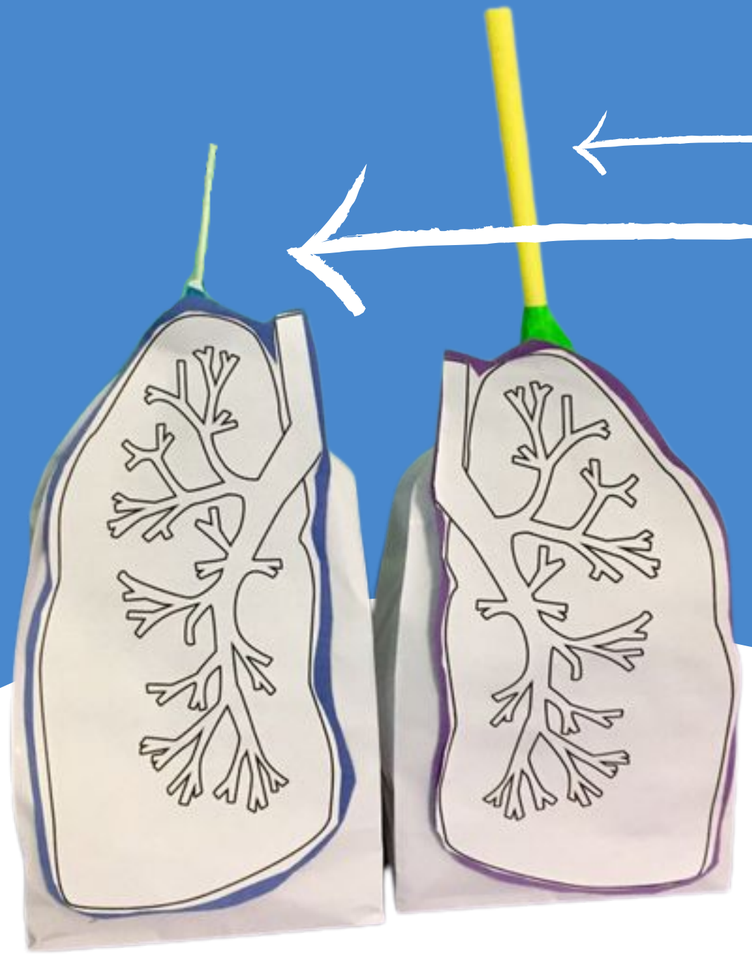
# Diagnostic Teaching

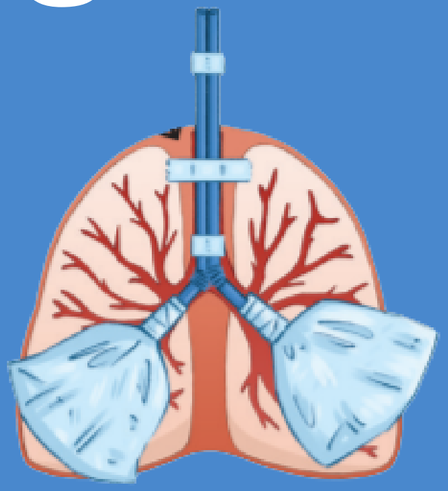


https://www.pinterest.com/pin/362821313736594022/

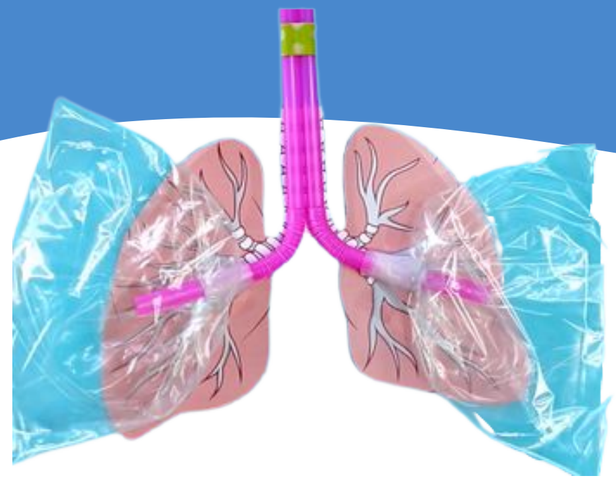
# Diagnostic Teaching

## Materials





- Wide straw (smoothie/shake)
- Thin straw
- Tape
- Printable Lungs or Markers to draw lungs
- 2 Paper bags or Ziplocs

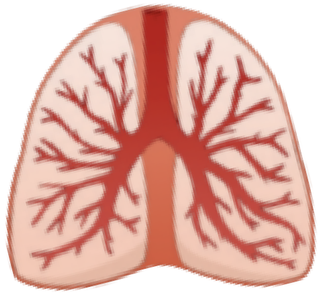


pinterest.com/pin/16185498560275 20/

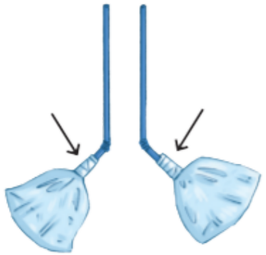
# Diagnostic Teaching

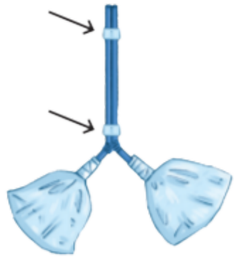
## Activity

## Step 1



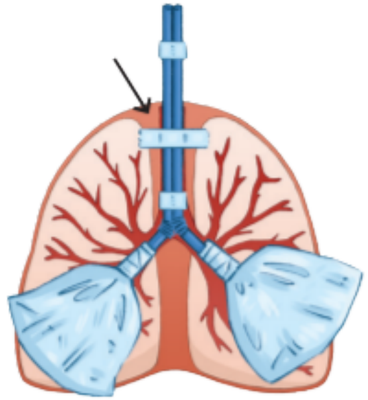
## Step 2





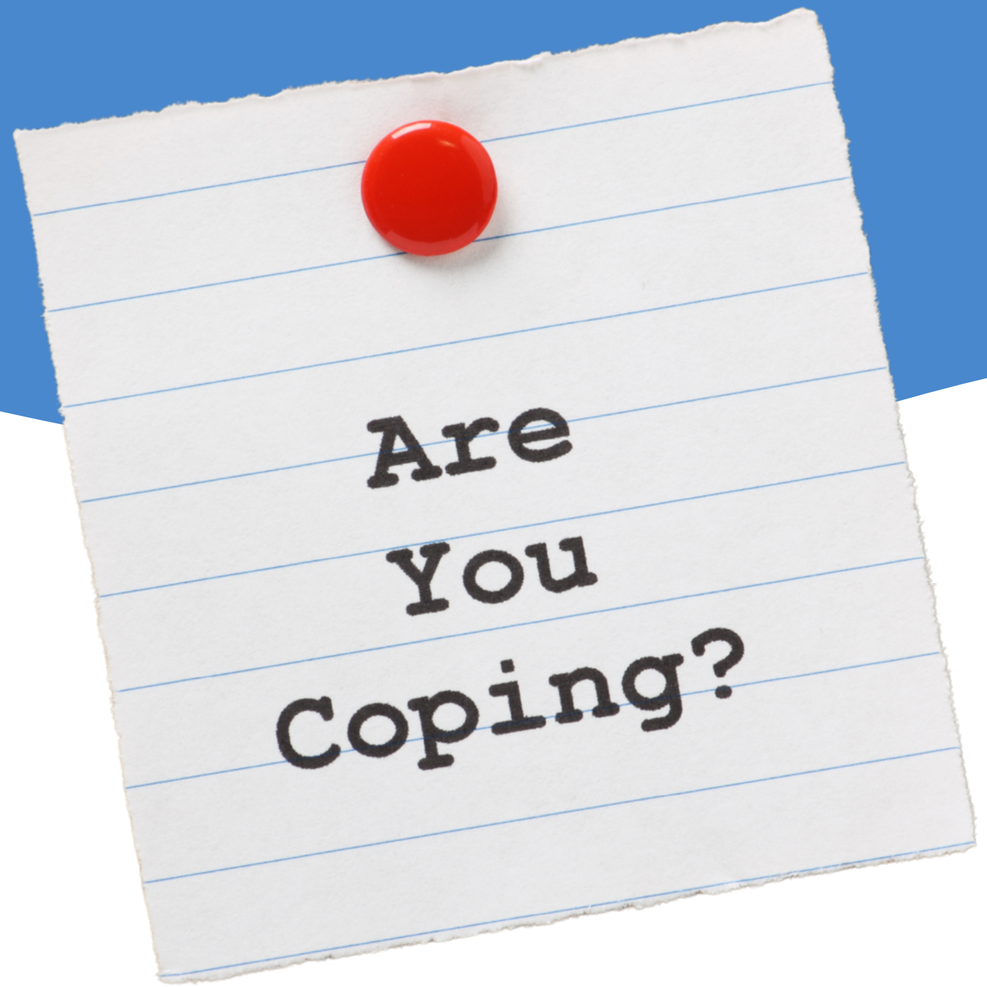
**Use one thin straw and one wide straw**

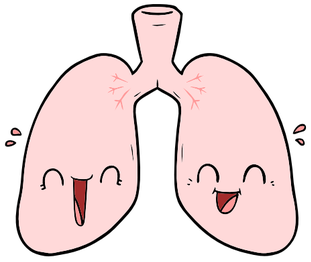
## Step 3



https://www.livinglifeandlearning.com/make-your-own-paper-bag-lungs-activity.html?utm_medium=social&utm_source=pinterest&utm_campaign=tailwind_tribes&utm_content=tribes

# Diagnostic Teaching



# Questions?

# Resources


- https://www.sutterhealth.org/services/asthma/treatments-procedures
- https://www.mayoclinic.org/diseases-conditions/asthma/in-depth/asthma/art-20045198
- https://www.webmd.com/asthma/what-is-asthma#:~:text=Asthma%20is%20a%20long%2Dterm,it%20a%20chronic%20respiratory%20disease.
- https://www.aafa.org/asthma-facts/
- https://www.mayoclinic.org/diseases-conditions/childhood-asthma/symptoms-causes/syc-20351507
- https://hospital.uillinois.edu/primary-and-specialty-care/pulmonary/our-areas-of-expertise/asthma/physical-effects

# Resources

**continued...**


- https://pubmed.ncbi.nlm.nih.gov/28325118/
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- https://blog.healthalliance.org/wellness-101/disease-management/emotional-and-social-effects-of-asthma/
- https://www.tandfonline.com/doi/abs/10.1080/2050571X.2017.1322740
- https://asthmaallergieschildren.com/asthma-allergies-articulation-a-speech-therapy-perspective/
- https://www.lung.org/lung-health-diseases/lung-disease-lookup/asthma/diagnosing-treating-asthma/how-is-asthma-diagnosed