Asthma is a chronic lung disease that affects the airways. Children with asthma have airways that are overly sensitive to certain stimuli. These are called “triggers.”

**Triggers** can be allergy-causing substances, such as dust mites, mold, and pollen; or irritants, such as cigarette smoke and fumes from paint and cleaning fluid. There are many different types of triggers. Triggers cause three things to happen in the airways which lead to difficulty breathing.

- Swelling in the airways
- Excess mucous production
- Muscles surrounding the airways tighten

**Symptoms of asthma** include coughing, wheezing (a whistling or squeaky sound during breathing), chest tightness, and shortness of breath. Symptoms can vary in severity; they can be mild or moderate, or they can be severe and life threatening. When a child is experiencing symptoms, you may have to administer an inhaler to them.

### How to Administer an Inhaler:

**Choose the administration technique according to what the child is comfortable doing:**

**With a Spacer**
1. Take off inhaler cap
2. Shake inhaler to mix medicine
3. Attach inhaler to spacer
4. Have the child breathe out and position spacer in mouth (if it’s a mask have the mask sealed around the nose and mouth)
5. Depress the inhaler and have the child slowly breathe in.
6. Have the child hold their breath for 10 seconds.
7. Have the child breathe out
8. If another puff is needed, wait 1 minute and repeat
9. Attach cap for storage

**Closed Mouth**
1. Take off inhaler cap
2. Shake inhaler to mix medicine
3. Have the child breathe out and position inhaler in mouth
4. Depress the inhaler and have the child slowly breathe in.
5. Have the child hold their breath for 10 seconds.
6. Have the child breath out
7. If another puff is needed, wait 1 minute and repeat
8. Attach cap for storage

**Open Mouth**
1. Take off inhaler cap
2. Shake inhaler to mix medicine
3. Have the child breathe out
4. Position the inhaler two finger widths away from the mouth
5. Depress the inhaler and have the child slowly breathe in.
6. Have the child hold their breath for 10 seconds.
7. Have the child breath out
8. If another puff is needed, wait 1 minute and repeat
9. Attach cap for storage

Pictures taken from www.mymosaiclifecare.org
Recess Guidance for Schools:
When to schedule indoor recess based on air quality.

**Particulate Matter (PM) 2.5 & Air Quality Index (AQI)**

<table>
<thead>
<tr>
<th>AQI</th>
<th>PM2.5 (µg/m³)</th>
<th>Recommendations for Recess</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>250.0</td>
<td>PM2.5 above 55.5 &lt;br&gt; <strong>All students stay indoors.</strong></td>
</tr>
<tr>
<td>150</td>
<td>55.4</td>
<td>PM2.5 35.5 - 55.4 &lt;br&gt; <strong>Students with respiratory symptoms</strong> &amp; sensitive students*** stay indoors.</td>
</tr>
<tr>
<td>100</td>
<td>35.4</td>
<td>PM2.5 below 35.4 &lt;br&gt; <strong>All students outdoors.</strong></td>
</tr>
</tbody>
</table>

**Indoor Recess Activity**
The school makes the final decision regarding when and where to hold recess. We encourage schools to consider active options for indoor recess. See examples at [health.utah.gov/asthma](http://health.utah.gov/asthma).

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* AQI is the EPA's index for reporting daily air quality, based on 5 main air pollutants. It tells you how clean or polluted your air is, and its levels of health concern. Learn more at [airnow.gov](http://airnow.gov).

**Respiratory symptoms** may include coughing, wheezing, shortness of breath, and chest tightness.

***Sensitive students** may include those with asthma, cystic fibrosis, chronic lung disease, congenital heart disease, compromised immune systems, or other respiratory problems.

Parents, with the advice of their health care provider, should inform the school if they believe their child is part of a sensitive group and should have limited outdoor physical activity when air quality is poor.

Updated July 2016