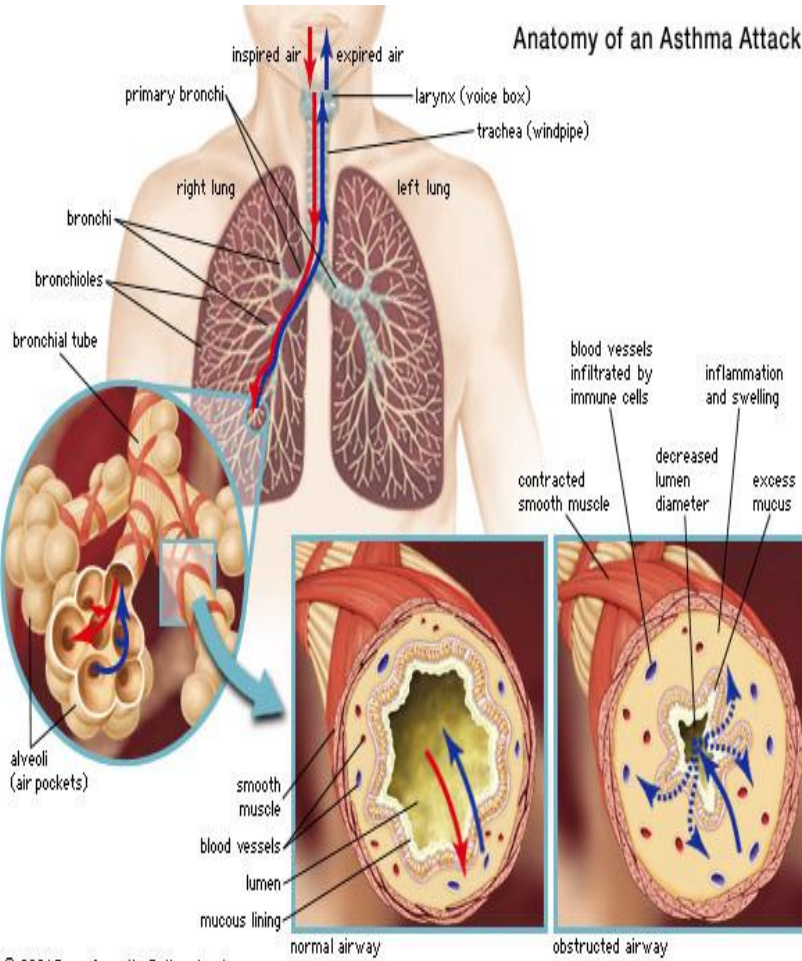


ASTHMA

Anatomy of an Asthma Attack



Asthma is a chronic lung disease that inflames and narrows the airways. Asthma can cause intermittent symptoms in affected individuals. Often asthma is triggered by allergens, exercise or respiratory illness; occasionally exacerbations occur with no notable cause.

Asthma affects people of all ages, but it most often starts during childhood and often severity is reduced with physical and immunological maturity.

Most asthma is easily managed, with routine rescue inhaler and sometimes maintenance medications. If a student has complicated or frail asthma an individual health protocol will be implemented via the health care provider for that student. All students with inhalers at school should have an [Asthma Action Plan](#) on file. These plans are good for one year. Individual Asthma Action Plans should be deferred to first.

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CONFIDENTIAL ASTHMA ACTION PLAN

Name: _____ DOB: _____	
SELF MANAGEMENT: <input type="checkbox"/> Student self carries/administers inhaler <input type="checkbox"/> Provider <input type="checkbox"/> Medication <input type="checkbox"/> Inhaled <input type="checkbox"/> Oral	
ASTHMA SEVERITY: <input type="checkbox"/> Intermittent <input type="checkbox"/> Persistent	
TRIGGERS: <input type="checkbox"/> Times <input type="checkbox"/> Smoker <input type="checkbox"/> Dust <input type="checkbox"/> Environmental allergens <input type="checkbox"/> Animals <input type="checkbox"/> Mold/moisture <input type="checkbox"/> Stress <input type="checkbox"/> Acid reflux <input type="checkbox"/> Exercise <input type="checkbox"/> Other _____	
<p>THESE MEDICATIONS ARE TAKEN TO CONTROL/PREVENT ASTHMA ATTACKS:</p> <p>PREVENTIVE</p> <p><input type="checkbox"/> No control/Maintenance medication required</p> <p><input type="checkbox"/> Singulair (Montelukast) 4 mg <input type="checkbox"/> 5 mg <input type="checkbox"/> 10 mg by mouth once daily at bedtime</p> <p><input type="checkbox"/> Albuterol <input type="checkbox"/> Advair <input type="checkbox"/> Avireo <input type="checkbox"/> Azmacort <input type="checkbox"/> Budesonide <input type="checkbox"/> Dextro <input type="checkbox"/> Flovent</p> <p><input type="checkbox"/> Pulmicort <input type="checkbox"/> Qvalair <input type="checkbox"/> Ventolin <input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> _____ puffs, MDI _____ times a day -OR- <input type="checkbox"/> _____ nebulator treatments _____ times a day</p> <p>For asthma with exercise, per MD order:</p> <p><input type="checkbox"/> Albuterol <input type="checkbox"/> Ipratropium bromide/Albuterol (Spirivastart)</p> <p><input type="checkbox"/> _____ puffs with spacer <input type="checkbox"/> 2-5 <input type="checkbox"/> 30 minutes prior to exercise (PE, recess, sports)</p>	
<p>THESE MEDICATIONS ARE TO BE TAKEN WHEN ASTHMA SYMPTOMS ARE PRESENT:</p> <p>CAUTION/PREUSE</p> <p>1. When symptoms are present, add rescue medication:</p> <p>Rescue inhaler (per MD order or <input type="checkbox"/> No label) <input type="checkbox"/> _____ puffs with spacer every _____ hrs</p> <p><input type="checkbox"/> Albuterol <input type="checkbox"/> Avireo <input type="checkbox"/> Ipratropium <input type="checkbox"/> _____ puffs with spacer every _____ hours as needed.</p> <p>Nebulator Medication (per MD order):</p> <p><input type="checkbox"/> Albuterol 2.5/5hr <input type="checkbox"/> Levalbuterol <input type="checkbox"/> Ipratropium 2.5 mg/3 ml, one nebulator treatment every _____ hours as needed.</p>	
<p>THESE STEPS ARE TO BE TAKEN WHEN SYMPTOMS PERSIST AFTER INITIAL TREATMENT</p> <p>EMERGENCY/INTERVENTION</p> <p>Continue (per MD order) OR (per MD order) _____ minutes for _____ treatments.</p> <p>Rescue inhaler as above every _____ minutes for _____ treatments.</p> <p><input type="checkbox"/> Nebulizer as above every _____ minutes for _____ treatments.</p> <p>IF STUDENT IS IN DISTRESS AND/OR FINDING NO RELIEF FROM EMERGENCY MEDICATIONS:</p> <p>1. Call EMS (9-1-1)</p> <p>2. Monitor airway and status until EMS arrives</p> <p>3. Call Parents and RN if not previously contacted</p> <p>Parent/Teacher: _____ RN Number: _____</p>	
<p>MD Signature or other written orders are required for any treatments that deviate from or are in addition to the contents of the prescription label(s), including all emergency treatments and all nebulator treatments. <input type="checkbox"/> Student may self-administer</p> <p>Parent Signature: _____ Date: _____</p> <p>RN Signature: _____ Date: _____</p> <p>This plan is good for one year unless otherwise specified. MD Signature: _____ Date: _____</p>	

CONFIDENTIAL ASTHMA ACTION PLAN

Procedure for Metered-Dose Inhaler:

A metered-dose inhaler, called an MDI for short, is a pressurized inhaler that delivers medication by using a propellant gas.

To use an MDI:

1. Shake the inhaler well before use (3 or 4 shakes).
2. Remove the cap.
3. Advise student to breathe out, away from the inhaler.
4. Bring the inhaler to individual's mouth and advise student to place it in the mouth between the teeth and close mouth around it.
5. Advise student to start to breathe in slowly. Press the top of the inhaler once and encourage continued breathing to empty oral and nasal cavities has been opened.
6. Remove the inhaler from the student's mouth, and advise them to hold your breath for about 10 seconds, then breathe out.
7. If subsequent doses are needed, advise student wait 30 seconds and repeat steps, document on medication administration records.

Procedure for Spacer:

Also known as a metered holding chamber, add-on device and spacing device, spacers are long tubes that slow the delivery of medication from pressurized MDI. Spacers make it easier for medication to reach the lungs, and also mean less medication gets deposited in the mouth and throat, where it can lead to irritation and oral thrush.

To Use a Spacer:

1. Shake the inhaler well before use (3 or 4 shakes).
2. Remove the cap from the inhaler, and from the spacer, if it has one.
3. Put the inhaler into the spacer.
4. Advise the student to breathe out, away from the spacer.
5. Bring the spacer to the student's mouth, put the mouthpiece between the teeth and advise the student to close their lips around it.
6. Press the top of the inhaler once.
7. Advise the student to breathe in very slowly until you know they have taken a full breath. If a student would not breathe the individual is breathing in too fast. Advise the student to slowly breathe in.
8. Advise student to hold your breath for about ten seconds, and then breathe out.

If subsequent doses are needed, repeat steps, document on medication administration records.

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Standard Response for Asthma

Mild/Common symptoms:

- Persistent coughing
- Slight shortness of breath on exertion
- Student reports wheezing (but it is not audible)

If mild symptoms are observed, or if student reports symptoms and is in no distress:

1. Student may self-administer inhaler, if the student self- carries
2. The student should to go to the office for use of their inhaler
3. Treatment should occur as per students *Asthma Action Plan*.
4. If the student does not have an inhaler:
 - a. Have student rest for 15 minutes.
 - b. Have student sip warm liquid.
5. If symptoms resolve, student may return to class, notify parent.
6. If symptoms worsen follow directions for *Moderate to Severe Symptoms of Asthma* below:

Moderate to Severe Symptoms of Asthma include:

- | | |
|------------------------------------|--|
| • Tightness in chest | • Coughing that causes choking, bluish color, or vomiting |
| • Shortness of breath | • Bluish discoloration to lips, nails, gums, eyelids |
| • Coughing for prolonged periods | • Inability to speak in full sentences without taking a breath or only able to whisper |
| • Audible wheeze or unusual sounds | |
| • Need to lean over at the waist | |
| • Anxious appearance | |
| • Decreased level of consciousness | |

If student complains of asthmatic symptoms, “asthma attack” or if a student exhibits any of the above symptoms of asthma:

1. Student must go to the office *accompanied by a peer or staff member*. Unless the student is physically unable to walk to the office, in which case medication trained personnel should go to the student.
 - a. EMS/9-1-1 should be called if student is unable to walk or in distress.
2. Have the student sit down.
3. Allow student to use inhaler or assist student if trained* as per their *Asthma Action Plan*.
 - a. Rescue inhalers are the standard of care for asthma. Inhalers may either be self-administered, or administered by Medication-Trained Personnel exactly as indicated on their *Asthma Action Plan*.

- b. Stay with the student and remain calm once medication has been administered
 - c. Record medication administration on medication log (unless student self-administers).
4. If a student with asthma exhibits symptoms and does not have a rescue inhaler:
 - a. Call parents and RN
 - b. Provide warm liquids to sip
 - c. Permit student to drink warm caffeinated beverage if accessible
5. If the student has no documented history of asthma and presents with moderate to severe symptoms, immediately call EMS/9-1-1, parents and RN.
6. Encourage student to relax by assuming a comfortable position, doing slow/deep breathing, encourage warm fluid intake.
7. If asthma symptoms decrease to baseline within 15 minutes after taking medication or 15 minutes of rest/fluids, student may return to class if coloration is also appropriate.
 - a. If student exhibits extreme pallor (paleness, call parents and RN)
 - b. If student exhibits cyanosis (blueness) call EMS (9-1-1)
 - c. Advise parent of incident before returning student to class.
8. If asthma symptoms persist, student may be given additional medication or nebulized medication if the plan allows. If student's plan does not allow for additional treatment should be dismissed to parents.
9. If asthma symptoms increase in severity or if there is obvious distress, change in skin color, absent breathing/pulse/decreased level of consciousness
 - a. Delegate call to EMS/9-1-1.
 - b. Begin CPR if trained for absent breathing or pulse
10. Notify nurse if a student has changes in frequency, duration, or intensity of asthma attacks.

If student exhibits any of the following:

- Absent breathing and/or pulse
- Intractable cough with difficulty catching breath
- No improvement within 15-20 minutes of administration of rescue inhaler medication AND a relative cannot be reached.
- Chest and neck pulled in with breathing.
- Stooped body posture.
- Struggling or gasping to breathe.
- Trouble walking or talking
- Lips or fingernails that are gray or blue.

- 1. Delegate call to EMS/9-1-1 immediately.**
- 2. Delegate call to school nurse and parent.**
- 3. Start CPR for absent breathing or pulse.**

ACUTE SEVERE ASTHMA

Acute severe asthma (also referred to as *status asthmaticus*) is an acute exacerbation of asthma that does not respond to standard treatments of bronchodilators (inhalers) and steroids.

Symptoms include:

- chest tightness
- rapidly progressive dyspnea (shortness of breath)
- intense dry cough
- use of accessory respiratory muscles
- labored breathing, and extreme wheezing

It is a life-threatening episode of airway obstruction and is considered a medical emergency. Complications include cardiac and/or respiratory arrest.

- Breathlessness may be so severe that it is impossible to speak more than a few words
- Elevated respiratory rate may be elevated (more than 30 breaths per minute)
- Rapid heart rate is often present (120 beats per minute or faster).
- Blue discoloration in the face is not unusual.

IF THESE SYMPTOMS ARE PRESENT IMMEDIATELY CALL EMS/9-1-1

Follow up:

- Always ensure appropriate documentation is completed
- Always notify nurse of incidents

*Medication trained staff must have completed Oregon approved medication administration training by a license nurse or pharmacist.

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Image: Encyclopedia Britannica