LESSON 4  Asthma Medicines

CONTENT OUTLINE

This lesson is one of seven lessons on asthma management topics. Each lesson is designed to be taught one-on-one with a family by a home visitor or to a group of parents with young children who have asthma by a health professional in a child care setting.

Getting Ready
Things To Do

• Read through the session carefully until you are comfortable with delivering the content. Jot down any notes that may help you.
• Gather all supplies needed for the session. See the Materials, Equipment, and Supplies section for more information.
• Make copies of handouts.
• Confirm session date and time.
• Ask the participant(s) to collect all of his or her child’s asthma medicines for this session so that you may review them together during your discussion.

Lesson Objectives

By the end of this lesson, participants will be able to:

• explain the difference between Controller medicines and Quick-Relief medicines;
• indicate when to use each type (Controller and Quick-Relief) of medicine;
• list two techniques, in addition to medicine, to manage asthma symptoms;
• demonstrate the proper use of an inhaler;
• explain how to care for an inhaler;
• demonstrate the proper use of a spacer/holding chamber; and
• explain how to care for a spacer/holding chamber.
LESSON 4  Asthma Medicines

CONTENT OUTLINE

Agenda

- Greeting & Overview 10 minutes
- Introduction to Asthma Medicines 5 minutes
- Types of Asthma Medicines 5 minutes
- Medicine Review 15 minutes
- Proper Care and Use 10 minutes
- Other Ways to Manage Asthma Symptoms 5 minutes
- Summary & Questions 10 minutes

Total Time: 60 minutes

Materials, Equipment, and Supplies

- Pencil or pen (one per participant)
- Sample metered-dose inhaler (MDI) and dry powder inhaler (DPI)
- Sample spacer/holding chamber
- Sample nebulizer

Teaching Tools

- TT #1: Pre-/Post-Test Answer Key

Handouts

- HO #1: Pre-Test
- HO #2: Asthma Medicines Chart (7 pages)
- HO #3: How to Use a Nebulizer Machine (2 pages)
- HO #4: How to Use a Spacer/Holding Chamber
- HO #5: How to Use a Metered-Dose Inhaler (without a Spacer)
- HO #6: How to Use a Dry Powder Inhaler
- HO #7: How Do I Know When My Child’s Inhaler is Empty?
- HO #8: Other Ways to Manage Asthma Symptoms
- HO #9: Post-Test
Recommended Resources

Asthma and Allergy Foundation of America
www.aafa.org or asmaalergia.org (Spanish)

Guidelines for the Diagnosis and Management of Asthma (EPR-3)
www.nhlbi.nih.gov/guidelines/asthma

Asthma Care Quick Reference: Diagnosing and Managing Asthma
www.nhlbi.nih.gov/guidelines/asthma/asthma-qrg.pdf

Centers for Disease Control and Prevention
www.cdc.gov/asthma/inhaler_video/ (English and Spanish)

American Academy of Allergy Asthma & Immunology

Partnership for Prescription Assistance
www.pparx.org or 1-888-4PPA-NOW

National Asthma Education and Prevention Program
U.S. Department of Health and Human Services
National Institutes of Health
National Heart, Lung and Blood Institute
LESSON 4 Asthma Medicines

Greeting & Overview
- Introduce yourself and get acquainted with the participant(s).
- Explain that you are going to discuss the following:
  What are the different types of asthma medicines?
  What medicine(s) is my child currently taking?
  How do we use them properly?

HO #1: Pre-Test
- Distribute the pre-test and allow 5 minutes for completion. Collect when finished.

Introduction to Asthma Medicines
- Reinforce that there is no cure for asthma.
  Cutting down on trigger contact helps reduce asthma symptoms.
  But medicines are important in controlling asthma too.
- Emphasize that it is important to understand:
  Why asthma medicines are used
  How asthma medicines are used
  When asthma medicines are used
  What possible side effects asthma medicines may cause
- This information is also used to complete the Asthma Action Plan (AAP).

Note: If no Asthma Action Plan is available, encourage the family to obtain one from their child’s doctor or asthma educator.

- Explain that most of good asthma care is “self-management.” This is done through:
  Eliminating or reducing the triggers.
  Taking the right medicines, at the right time, and in the right way.
- Remind the participant(s) that working closely with their child’s doctor and asthma educator will give them the best results.
Types of Asthma Medicines

• Explain that there are two main groups or types of asthma medicines:

  Controller medicines prevent symptoms and should be used every day, even when there are no symptoms.

  Quick-Relief or Rescue medicines are used to relieve acute or urgent asthma symptoms.

• Remind the participant(s) that it is important to take either type of medicine exactly the way the doctor says it should be taken.

• Describe what Controller medicines do:

  Help to reduce or prevent airway inflammation (swelling).
  Reduce the swelling and excess mucus in the bronchial tubes.
  Prevent the muscles from tightening around the small breathing tubes (also known as bronchoconstriction) which restricts airflow.
  Make the airways less reactive or twitchy.

• Emphasize that controller medicines do not relieve asthma symptoms.

  They help prevent symptoms.

• Describe what Quick-Relief or Rescue medicines do:

  Relieve acute asthma or urgent symptoms
  Relax muscles around the airways (the bronchoconstriction we mentioned just a moment ago)
  Prevent exercise-induced bronchospasms or sudden bronchoconstriction, the tightening of the muscles around the bronchiole tubes which restricts airflow.
• Emphasize that everybody with asthma should always have a Quick-Relief medicine available. Quick-Relief medicines should not be used every day or even every week. The only time it’s ok to use Quick-Relief medicine more often is when suggested by the doctor for relief of symptoms from:
  - Exercise, hard playing, or sports
  - Having a cold or the flu
This is because Quick-Relief medicines do not reduce airway inflammation (swelling).

Note: Children younger than 4 or 5 may still be using a nebulizer machine to get his or her asthma medicine. Share information regarding forms of inhalers, if appropriate, given the child’s age. Children who are using a metered-dose inhaler (MDI) should use a spacer/holding chamber with the MDI to improve the delivery of the inhaled medicine. A face-mask is advised for young children who cannot use a spacer/holding chamber with their MDI.

• Share with the participant(s) that most asthma medicines come in what’s called an inhaler or liquids for nebulizers.
Nebulizers are machines that deliver asthma medicine in the form of a mist. Tubing and a mask are used to breathe in the medicine.

Inhalers can be in two forms:
  - Dry Powder Inhaler (DPI) or
  - Metered-Dose Inhaler (MDI)

• Explain that most inhalers need to be “primed” when first opened and some may need to be “primed” before each use. This is especially true for MDIs. Check the medicine instructions.

Priming the inhaler means you spray it into the open air, away from anyone. This action gets the inhaler ready for use.

Note: If the participant(s) is/are unfamiliar with priming, consider demonstrating how to do it with a sample inhaler, if available.
LESSON 4 Asthma Medicines

NOTES

CONTENT OUTLINE

Medicine Review

- Ask the participant(s) to get out their child’s asthma medicines.

HO #2: Asthma Medicines

- Distribute HO #2 (7 pages).

Note: Be sure to mention that neither you, [name of your company/organization/health department], nor the Asthma and Allergy Foundation of America endorse a particular medicine or product.

- Ask the participant(s) to check off the medicine(s) prescribed to her or his child on the Asthma Medicines handout.

- Review the information about the medicine(s) that his or her child is taking.

- Clarify which medicines are controller medicines and which ones are Quick-Relief or Rescue medicines. Labeling each medicine by type (Controller vs. Quick-Relief or Rescue) can be helpful for parents and children.

- Questions that go beyond the information provided in this lesson should be referred to the child’s doctor.

Note: Make sure the child’s medicines are not yet expired or empty during this activity. If a medicine is expired or empty, urge the participant to have the prescription renewed as soon as possible. (See HO #8.)

Proper Care and Use

- Ask the child and/or parent to demonstrate and describe the use and care of the following, as appropriate:
  
  Nebulizer
  
  MDI (including spacer/holding chamber, if appropriate)
  
  DPI

Note: Observe carefully and correct any technique errors or misuse.
LESSON 4 Asthma Medicines

5 mins.

HO #3, 4, 5, & 6

- Review the proper use and care for each of the following, as appropriate:
  
  Nebulizer (HO #3: How to Use a Nebulizer – 2 pages)
  
  Spacer/Holding Chamber (HO #4: How to Use a Spacer/Holding Chamber)
  
  Metered-Dose Inhaler without a Spacer (HO #5: How to Use a Metered-Dose Inhaler (Without a Spacer))
  
  Dry Powder Inhaler (HO #6: How to Use a Dry Powder Inhaler)

HO #7: How Do I Know When My Child’s Inhaler is Empty?

- Review HO #7.

Other Ways to Manage Asthma Symptoms

HO #8: Other Ways to Manage Asthma Symptoms

- Review HO #8.
Summary & Questions
• Ask the participant(s) to summarize what you have discussed today.
  Correct any misinformation and emphasize key points.
• Answer any questions.

HO #9: Post-Test
• Distribute post-test and allow 5 minutes for completion.
  Collect when finished.
  Review questions and answers.
  Correct any misinformation and emphasize key points.
• Share local and national asthma resources with the participant(s).
• Confirm next session date and time, if appropriate.
• Thank the participant(s) for participating.

After the Session
Things to Do
• Grade pre- and post-tests, using Teaching Tool #1: Pre- and Post-Test Answer Key. Plan to review and emphasize key messages, as indicated, at next session.
• Schedule next session, if appropriate.
1. Using a spacer/holding chamber with a metered-dose inhaler helps to get the medicine into the lungs.
   - True
   - False

2. There are two main groups of asthma medicines: Quick-Relief/Rescue and Controller.
   - True
   - False

3. Quick-Relief/Rescue medicine should be used every day, even when there are no asthma symptoms.
   - True
   - False

4. Controller medicine should be used every day, even when there are no asthma symptoms.
   - True
   - False

5. List two ways you can manage asthma symptoms in addition to using medicine.
   A. Have the child to do something quiet.
   B. Calm the child.
   C. Use pursed-lip breathing.
1. Using a spacer/holding chamber with a metered-dose inhaler helps to get the medicine into the lungs.
   - True
   - False

2. There are two main groups of asthma medicines: Quick-Relief/Rescue and Controller.
   - True
   - False

3. Quick-Relief/Rescue medicine should be used every day, even when there are no asthma symptoms.
   - True
   - False

4. Controller medicine should be used every day, even when there are no asthma symptoms.
   - True
   - False

5. List two ways you can manage asthma symptoms in addition to using medicine.
   
   A. ________________________________________________
   
   B. ________________________________________________
## Handout #2
### Asthma Medicines: Inhaled Medicines

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Brand Name</th>
<th>Type</th>
<th>Possible Side Effects*</th>
<th>Form</th>
<th>Proper Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albuterol</td>
<td>ProAir</td>
<td>Quick-Relief/</td>
<td>Irregular or rapid heartbeat</td>
<td>Metered-Dose Inhaler (use spacer)</td>
<td>Shake 5 seconds \ 3 Primes to start \ Re-prime after 2 weeks without use</td>
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<tr>
<td></td>
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<td>Rescue</td>
<td>Nervousness</td>
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<td>Muscle tremors</td>
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<td></td>
<td>Proventil</td>
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<td></td>
<td>Ventolin</td>
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<tr>
<td>Beclomethasone</td>
<td>QVAR</td>
<td>Controller</td>
<td>Thrush – a yeast infection of the mouth</td>
<td>Metered-Dose Inhaler (use spacer)</td>
<td>No shaking needed \ 2 Primes to start \ Re-prime after 10 days without use \ Rinse mouth after every use \ Keep clean with dry cloth or tissue</td>
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<td></td>
<td></td>
<td></td>
<td>Hoarseness</td>
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<td>Skin rash</td>
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<td>Swollen face or legs</td>
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<tr>
<td>Budesonide</td>
<td>Pulmicort Flexhaler</td>
<td>Controller</td>
<td>Thrush – a yeast infection of the mouth</td>
<td>Dry Powder Inhaler</td>
<td>2 Primes to start when new (2 complete twists of the Flexhaler) \ Do not tip once dose is loaded \ Avoid humidity and moisture \ Rinse mouth after every use</td>
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<td>Hoarseness</td>
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<td>Dizziness</td>
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<td>Skin Rash</td>
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<td></td>
<td>Swollen face or legs</td>
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</tr>
<tr>
<td>Budesonide &amp;</td>
<td>Symbicort</td>
<td>Controller</td>
<td>Thrush – a yeast infection of the mouth</td>
<td>Metered-Dose Inhaler (use with or without spacer)</td>
<td>Shake for 5 seconds \ 2 Primes to start \ Re-prime after 7 days without use \ Rinse mouth after every use</td>
</tr>
<tr>
<td>Formoterol</td>
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<td>Headache</td>
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<td>Sinusitis</td>
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<td>Upset stomach</td>
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<td>Flu</td>
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<td>Back pain</td>
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<tr>
<td></td>
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<td>Vomiting</td>
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</tr>
</tbody>
</table>

*This is not a complete list of possible side effects. If you notice other effects not listed, contact your doctor or pharmacist.*
# Asthma Medicines: Inhaled Medicines

<table>
<thead>
<tr>
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<th>Type</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Ciclesonide</td>
<td>Alvesco</td>
<td>Controller</td>
<td>Thrush — a yeast infection of the mouth, Irregular or rapid heartbeat, Headache, Easy Bruising, Depression/Anxiety, Nervousness, Back pain, Muscle or joint pain</td>
<td>Metered-Dose Inhaler (use spacer)</td>
<td>3 Primes to start, Re-prime after 10 days without use, Rinse mouth after every use, Dose indicator in increments of 10</td>
</tr>
<tr>
<td>Fluticasone</td>
<td>Flovent HFA</td>
<td>Controller</td>
<td>Thrush — a yeast infection of the mouth, Hoarseness, Headache, Easy Bruising, Depression/anxiety, Tiredness, Muscle weakness</td>
<td>Metered-Dose Inhaler (use spacer)</td>
<td>Shake 5 seconds, 4 primes to start, Re-prime after 7 days without use, Rinse mouth after every use</td>
</tr>
<tr>
<td>Fluticasone</td>
<td>Flovent DPI</td>
<td>Controller</td>
<td>Thrush — a yeast infection of the mouth, Hoarseness, Headache, Easy Bruising, Depression/anxiety, Tiredness, Muscle weakness</td>
<td>Dry Powder Inhaler</td>
<td>No priming or shaking, Do not tip once dose is loaded, Avoid moisture and humidity, Rinse mouth after every use</td>
</tr>
</tbody>
</table>

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Handout #2
Asthma Medicines: Inhaled Medicines

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</tr>
</thead>
<tbody>
<tr>
<td>Fluticasone &amp; Salmeterol</td>
<td>Advair Diskus</td>
<td>Controller</td>
<td>Thrush — a yeast infection of the mouth, Hoarseness, Muscle and bone pain, Dizziness, Weakness, Cough and chest tightness</td>
<td>Dry Powder Inhaler</td>
<td>No priming; no shaking, Do not tip once dose is loaded, Avoid moisture and humidity, Rinse mouth after every use</td>
</tr>
<tr>
<td>Fluticasone &amp; Salmeterol</td>
<td>Advair HFA</td>
<td>Controller</td>
<td>Thrush — a yeast infection of the mouth, Hoarseness, Muscle and bone pain, Dizziness, Weakness, Cough and chest tightness</td>
<td>Metered-Dose Inhaler (use spacer)</td>
<td>Shake 5 seconds, 4 primes to start, Re-prime after 4 weeks without use, Rinse mouth after every use</td>
</tr>
<tr>
<td>Formoterol</td>
<td>Foradil</td>
<td>Controller</td>
<td>Irregular Heartbeat, Nervousness, Headache, Muscle cramp, Dizziness, Swelling of face and legs</td>
<td>Dry Powder Inhaler</td>
<td>No priming; no shaking, Do not tip once dose is loaded, Avoid moisture and humidity, NOT to be used for quick relief or without inhaled steroid</td>
</tr>
<tr>
<td>Levalbuterol HCL</td>
<td>Xopenex HFA Quick-Relief/Rescue</td>
<td>Metered-Dose Inhaler (use spacer)</td>
<td>Irregular or rapid heartbeat, Nervousness, Muscle tremors</td>
<td>Shake 5 seconds, 4 Primes to start, Re-prime after 3 days without use</td>
<td></td>
</tr>
</tbody>
</table>

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</tr>
</thead>
<tbody>
<tr>
<td>Mometasone</td>
<td>Asmanex Twisthaler</td>
<td>Controller</td>
<td>Thrus – a yeast infection of the mouth Headache Muscle or joint pain Loss of appetite Hoarseness Difficult, frequent, or painful urination</td>
<td>Dry Powder Inhaler</td>
<td>No priming or shaking Do not tip once dose is loaded Avoid moisture and humidity Rinse mouth after every use</td>
</tr>
<tr>
<td>Pirbuterol</td>
<td>Maxair AutoHALER</td>
<td>Quick-Relief/Rescue</td>
<td>Headache Upset stomach Dizziness Nervousness</td>
<td>Metered-Dose Inhaler</td>
<td>No spacer needed Shake 5 seconds 2 Primes to start Re-prime after 2 days without use</td>
</tr>
<tr>
<td>Salmeterol</td>
<td>Serevent</td>
<td>Controller</td>
<td>Irregular or rapid heartbeat Headache Nervousness Muscle tremors/pain Flu-like symptoms</td>
<td>Dry Powder Inhaler</td>
<td>No priming or shaking Do not tip once dose is loaded Avoid moisture and humidity NOT to be used for quick relief or without inhaled steroid</td>
</tr>
</tbody>
</table>

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# Handout #2
## Asthma Medicines: Medicines for Nebulizers

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Brand Name</th>
<th>Type</th>
<th>Possible Side Effects*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levalbuterol</td>
<td>Xopenex</td>
<td>Quick-Relief/Rescue</td>
<td>Irregular or rapid heartbeat</td>
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<td>Nervousness</td>
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<td>Muscle tremors</td>
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<tr>
<td>Levalbuterol</td>
<td>Xopenex</td>
<td>Quick-Relief/Rescue</td>
<td>Irregular or rapid heartbeat</td>
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<td>Nervousness</td>
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<td></td>
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<td></td>
<td>Muscle tremors</td>
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<tr>
<td>Budesonide</td>
<td>Pulmicort Respules</td>
<td>Controller</td>
<td>Thrush – a yeast infection of the mouth</td>
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<tr>
<td></td>
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<td></td>
<td>Hoarseness</td>
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<tr>
<td>Cromolyn Sodium</td>
<td>Cromolyn Nebulizer Solution</td>
<td>Controller</td>
<td>Drowsiness</td>
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<td>Hoarseness</td>
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<td></td>
<td>Upset stomach</td>
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<td>Tightness in lungs – wheezing</td>
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<td>Rash</td>
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<tr>
<td>Albuterol</td>
<td>AccuNeb or Generic</td>
<td>Quick-Relief/Rescue</td>
<td>Irregular or rapid heartbeat</td>
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<td></td>
<td></td>
<td></td>
<td>Nervousness</td>
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<td></td>
<td></td>
<td></td>
<td>Muscle tremors</td>
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</tbody>
</table>

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## Handout #2
### Asthma Medicines: Tablets

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Brand Name</th>
<th>Type</th>
<th>Possible Side Effects*</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylprednisolone</td>
<td>Medrol</td>
<td>Controller</td>
<td>Increased appetite</td>
<td>Oral steroids should be reserved for urgent use or when asthma is way out of control. Using oral steroids for more than 2 events in a year may show that asthma is uncontrolled.</td>
</tr>
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<td></td>
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<td>Weight gain</td>
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<td>Moodiness</td>
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<td></td>
<td>Nightmares</td>
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</tr>
<tr>
<td>Monteleukast</td>
<td>Singulair</td>
<td>Controller</td>
<td>Upset stomach</td>
<td>Take 2 hours before activity if used for exercise-induced asthma. Let the doctor know right away if you see any of these signs: • Agitation • Aggression • Anxiety • Unusual dreams • Seeing or hearing things • Thoughts of harming self or others</td>
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<td></td>
<td></td>
<td></td>
<td>Heartburn</td>
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<td>Headache</td>
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<td>Rash</td>
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<td></td>
<td>Change in mood or emotions</td>
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</tbody>
</table>

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#### Asthma Medicines: Tablets

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<tr>
<th>Generic Name</th>
<th>Brand Name</th>
<th>Type</th>
<th>Possible Side Effects*</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prednisone</td>
<td>Deltasone</td>
<td>Controller</td>
<td>Upset stomach, Vomiting, Moodiness, Nightmares, Difficulty sleeping</td>
<td>Oral steroids should be reserved for urgent use or when asthma is way out of control. Using oral steroids for more than 2 events in a year may show that asthma is uncontrolled.</td>
</tr>
<tr>
<td></td>
<td>Meticorten</td>
<td></td>
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<tr>
<td></td>
<td>Orasone</td>
<td></td>
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<tr>
<td></td>
<td>Sterapred</td>
<td></td>
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<tr>
<td>Theophylline</td>
<td>Slo-Bid</td>
<td>Controller</td>
<td>Dizziness, Headaches, Irritability, Increased urination</td>
<td>Keep all appointments with your doctor. Your doctor will order certain lab tests to check your response to theophylline. Do not change from one brand of theophylline to another without talking to your doctor.</td>
</tr>
<tr>
<td></td>
<td>Theo-Dur</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Theo-X</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Uni-Dur</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Zafirlukast</td>
<td>Accolate</td>
<td>Controller</td>
<td>Upset stomach, Loss of appetite, Lack of energy, Rash, Change in mood or emotions</td>
<td>Let the doctor know right away if you see any of these signs: • Agitation • Aggression • Anxiety • Unusual dreams • Seeing or hearing things • Thoughts of harming self or others</td>
</tr>
</tbody>
</table>

*This is not a complete list of possible side effects. If you notice other effects not listed, contact your doctor or pharmacist.*
1. Gather some toys or other items to entertain your child during the treatment.

2. Get all the pieces of the machine ready:
   - The machine
   - A medicine cup
   - A mouthpiece or face mask
   - A long piece of tubing
   - Electrical cord

3. Connect one end of tubing to the medicine cup without cover and one end to the machine. Plug the electrical cord into an outlet.

4. Measure medicine, put into medicine cup, and put cover on cup.

5. Put mask on nebulizer cup.
Handout #3
How to Use a Nebulizer Machine

6. Place the face mask on your child’s face. Be sure it’s a good fit.
If using a mouthpiece, place it between the teeth and lips. Have your child close his or her lips around the mouthpiece to form a seal. Waving the mouthpiece will NOT get medicine into the lungs and can cause serious eye infections or worse damage.

7. Turn on the machine.

8. Remind your child to take slow deep breaths. The treatment is done when all of the mist is gone. This takes about 15 minutes. Read to your child or let them play quietly with the toys or other items gathered in step #1.

9. Take the machine apart at the end of the day. Clean the plastic pieces in mild soap and water, rinse, and dry. You can also connect the tubing and mask/mouthpiece to the machine to dry. Do NOT wash the tubing.
A spacer/holding chamber or face mask should always be used whenever your young child uses a metered-dose inhaler (MDI). Spacers/holding chambers are not needed with a dry powder inhaler (DPI).

**Using a spacer/holding chamber allows most of the medicine to reach the lungs, instead of landing in the mouth and throat, when inhalers are used alone.**

There are many different types of spacers/holding chambers available. Your doctor can help you find one that works well for your child. Most insurance plans will cover the cost, but you need a doctor’s prescription. Take the prescription to a medical equipment store to get your spacer/holding chamber. (Many pharmacies don’t stock spacer/holding chambers.)

Follows these steps with your child:

1. Remove the cap on the medicine inhaler and shake.
2. Prime (only if needed) the inhaler into the air and away from your face. (Refer to Handout #2: Asthma Medicines Chart for priming and shaking details.)
3. Put the medicine inhaler into the spacer/holding chamber tool. Either the entire MDI goes into the end or you remove the medicine container and place the spiked end into the hole.
4. Tell your child to breathe in and out a few times to get his or her lungs ready. Your child should exhale the final breath completely.
5. Place mouthpiece in your child’s mouth like a straw. Ask him or her to make a tight seal around it with his or her lips.
6. Push down once on top of the inhaler to let out one puff/spray of medicine into the spacer/holding chamber tool. Push only 1 puff/spray at a time.
7. Tell your child to take a slow (3 to 5 seconds) and deep (big) breath in through his or her mouth.
8. Tell your child to hold his or her breath for 5 to 10 seconds. The mouthpiece can be either left in the mouth or not for this step.
9. Relax and breathe out slowly.
10. If more puffs are ordered repeat steps 4 to 9. Wait 1 minute between puffs/sprays.
11. To clean your spacer/holding chamber, follow the manufacturer instructions.

*Note: When taking an inhaled corticosteroid, rinse out your mouth with water and then spit it out. Rinsing helps to prevent an infection in the mouth.*
Handout #5
How to Use a Metered-Dose Inhaler (without a Spacer)

If no spacer is available, then the “2 finger technique” can be used:

1. Remove the cap on the medicine inhaler and shake.
2. Prime (only if needed) the inhaler into the air and away from your face. (Refer to Handout #2: Asthma Medicines Chart for priming and shaking details.)
3. Tell your child to breathe in and out a few times to get his or her lungs ready. Your child should exhale the final breath completely.
4. Hold the inhaler 1 to 2 inches in front of your child’s open mouth (about the width of two fingers).
5. Push down once on top of the inhaler to let out one puff/spray of medicine. Push only 1 puff/spray at a time.
6. Tell your child to take a slow (3 to 5 seconds) and deep (big) breath in through his or her mouth.
7. Tell your child to hold his or her breath for 5 to 10 seconds.
8. Relax and breathe out slowly.
9. If more puffs are ordered repeat steps 4 to 8. Wait 1 minute between puffs/sprays.

Note: When taking an inhaled corticosteroid, rinse out your mouth with water and then spit it out. Rinsing helps to prevent an infection in the mouth.
Handout #6
How to Use a Dry Powder Inhaler

1. Open the cover or remove the cap and hold the inhaler upright.
2. Load a dose of the medicine into the inhaler by either twisting it or flipping the lever.
3. Breathe in and out a few times to get your lungs ready then finally breathe out as much air as you can.
4. **Never** breathe into your dry powder inhaler (DPI).
5. Put the end of the mouthpiece into your mouth and close your lips firmly around it.
6. Breathe in quickly and deeply through the mouthpiece, **not your nose**.
7. Remove the inhaler from your mouth. Hold your breath for 10 seconds and slowly breathe out. This is one “puff.”
8. Your doctor will tell you how many puffs to take. Wait at least 1 minute between puffs.
9. Wipe off the mouthpiece and replace the cover and store your DPI at room temperature and keep it dry.

*Note: When taking an inhaled corticosteroid, rinse out your mouth with water and then spit it out. Rinsing helps to prevent an infection in the mouth.*
Handout #7
How Do I Know When My Child’s Inhaler is Empty?

Some metered-dose inhalers (MDIs) and dry powder inhalers (DPIs) have “counters” located right on the inhaler. This number will let you know how many doses are left in the inhaler.

But, some MDIs don’t have a counter. If the canister is new, it is full. The number of puffs a canister contains is listed on the label. You can also ask about puffs per canister from the place you get the medicine.

Do NOT put your Inhaler in water to see if it is empty.
This does not work.

You can figure out how long the inhaler should last once you know how many puffs it contains. For example, if a canister has 200 puffs and your child take four puffs every day, divide 4 into 200. It should last 50 days. Make sure that you also count and subtract the number of times you prime the inhaler.

\[
\frac{200 \text{ puffs in canister}}{4 \text{ puffs per day}} = 50 \text{ days}
\]

Feel free to ask the doctor, pharmacist, or asthma educator to help you with this.

Write the date that your child started using the MDI on the canister. If possible, always have a new MDI canister ready seven to ten days before you need it.

You can also place a blank label on the inhaler and make a mark each time your child takes a dose. If your inhaler has 200 puffs in it, you will know it is empty once you have 200 marks on the label. Your label might look like this, showing 200 puffs (or 40 sets of 5):
The most important things you do to help manage your child’s asthma symptoms are:
- giving medicine when you are supposed to,
- keeping the child away from anything that causes symptoms, and
- getting medical help when needed.

However, there are several things, in addition to giving medicine, that can be done to reduce discomfort and symptoms.

**Have the child to do something quiet**
You will need to reduce the activity level. Normally, a child with asthma should be allowed to be as active as possible. But, when the child is having medium to severe symptoms, there should be less activity. Running around increases the child’s need for oxygen.
- When signs of breathing hard show, get the child to sit and rest in a comfortable position.
- You will want to make it a comforting time. Reading to the child, listening to music, or watching TV together is good.
- Some children with asthma feel best when they are sitting upright.

**Calm the child**
Being upset or panicky can make symptoms worse.

**Use pursed-lip breathing**
Pursed lip breathing is a simple way to control shortness of breath. It provides a quick and easy way to slow your pace of breathing, making breath more effective. Pursed-lips look like a kiss.

**Step 1** Breathe in (inhale) slowly through your nose, keeping your mouth closed.
This should be a normal, not deep, breath.

**Step 2** Pucker or “purse” your lips as if you were going to whistle or blow out a candle.

**Step 3** Breathe out (exhale) slowly and gently through your “pursed” lips. Exhale normally.
Do not force air out.
1. Using a spacer/holding chamber with a metered-dose inhaler helps to get the medicine into the lungs.
   - True
   - False

2. There are two main groups of asthma medicines: Quick-Relief/Rescue and Controller.
   - True
   - False

3. Quick-Relief/Rescue medicine should be used every day, even when there are no asthma symptoms.
   - True
   - False

4. Controller medicine should be used every day, even when there are no asthma symptoms.
   - True
   - False

5. List two ways you can manage asthma symptoms in addition to using medicine.

   A. __________________________________________________________

   B. __________________________________________________________