LESSON 5

Asthma Action Plan

Wee Breathers™
Asthma Education for Families with Young Children

Asthma and Allergy Foundation of America

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Lesson 5  Asthma Action Plan

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.
• If this lesson is being taught to a group of parents, ask the parents to bring their child’s peak flow meter, if they have one, to the lesson meeting.
• Make copies of handouts.
• Confirm session date and time.

Lesson Objectives

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

• describe what to do when early symptoms appear;
• list five asthma symptoms that require immediate help;
• state two things to do when child is having severe symptoms;
• describe what a peak flow meter (PFM) does;
• state how to use a PFM;
• explain how to care for a PFM; and
• determine what the readings/numbers mean.

Agenda

• Greeting & Overview 10 minutes
• Asthma Action Plan 10 minutes
• Using a Peak Flow Meter with the Asthma Action Plan 15 minutes
• Using Symptoms with the Asthma Action Plan 15 minutes
• Summary & Questions 10 minutes

Total Time: 60 minutes
### CONTENT OUTLINE

**Materials, Equipment, and Supplies**
- Pencil or pen (one per participant)

**Teaching Tools**
- TT #1: Pre-/Post-Test Answer Key

**Handouts**
- HO #1: Pre-Test
- HO #2: How to Use a Peak Flow Meter
- HO #3: My Child’s Early Warning Signs
- HO #4: Red Light, Green Light: Signs of Asthma
- HO #5: My Early Warning Signs
- HO #6: Post-Test

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

Centers for Disease Control and Prevention
www.cdc.gov/asthma
www.cdc.gov/asthma/tools_for_control.htm

National Asthma Education and Prevention Program
U.S. Department of Health and Human Services
National Institutes of Health
National Heart, Lung and Blood Institute
Note: This lesson includes a Peak Flow Meter (PFM) demonstration. A PFM may not be useful with everyone (for example, a child less than 4 years old or who is unable to “blow” well).

If the participant(s) do/does not have a PFM, make a “signs-based” Asthma Action Plan (AAP), which is just as effective. Skip to the section in this lesson titled, Early Warning Signs of Asthma, and begin there.

If you choose to teach how to use a PFM, follow the steps in HO #2: How to Use a Peak Flow Meter.

AAFA recommends that a doctor or certified asthma educator (AE-C) assist with getting the PFM readings and completing the AAP.

Greeting & Overview

• Introduce yourself and get acquainted with the participant(s).
• Explain that you are going to discuss the following:
  What is an Asthma Action Plan?
  How do you use a Peak Flow Meter along with an Asthma Action Plan?
  How can you use symptoms to determine the Asthma Action Plan zone and next steps?

HO #1: Pre-Test

• Distribute pre-test and allow 5 minutes for completion. Collect when finished.
Asthma Action Plans

- Explain that one of the best ways to manage asthma is to have a plan.

Your child’s doctor or a certified asthma educator (AE-C) can help you complete an Asthma Action Plan (AAP).

Everyone with asthma should have an AAP.

This is a written plan that tells you what kinds of medicine to take and when.

The AAP should be kept in a very visible place in the home, such as next to the telephone or on the refrigerator.

- The doctor, school, child care center, sitters, and other adults who care for the child should also have a copy.
- It is also a good idea to keep a copy in the car in case of an asthma episode or attack.

- Describe how an AAP works:

AAPs are divided into three zones - Green, Yellow, and Red.

These zones are based on asthma symptoms.

They can also be based on Peak Flow numbers, which we will discuss in a moment.

AAPs help you know what medicines you need to take or when to change them.

Note: Please assist the participant(s), to the extent you are comfortable, with completing their child’s AAP. Tell the participant(s) to review the AAP with their child’s asthma doctor, and ask him or her to initial or sign it.

Various AAP templates can be found on page 3 under Recommended Resources. Select the template that works best for your participant(s).

If the participant(s) have an AAP already completed, please review it during this lesson and answer any questions.
Nous REMEMORONS l’objectif de ce cours :
1. **Définition** de l’asthme
2. **Diagnostic** de l’asthme
3. **Traitement** de l’asthme
4. **Éducation** parentale

**CONTENT OUTLINE**

**Using a Peak Flow Meter with the Asthma Action Plan**

Ask the parent(s) if their child has a peak flow meter.

If the child **does** have a peak flow meter, ask the child to show you his or her peak flow meter to include them in your discussion. If the child is not available, have the parent(s) show you their child's peak flow meter.

If the child **does not** have a peak flow meter, suggest to the parent(s) that they discuss whether their child can benefit from a peak flow meter at the next visit to the child’s doctor.

Use your own demonstration peak flow meter to demonstrate during this lesson and ask the parent(s) to follow along using their child's peak flow meter, if they have one. If this lesson is being taught to a group of parents, have the parents without a peak flow meter pair up with parents who do have one.

- Explain that a peak flow meter measures how well someone can push air out of their lungs.
- During an asthma attack, the muscles of the upper airway become tight and the airways become narrow. This makes it harder for the lungs to take in and push air out. The airways become narrower over time before the first symptoms of asthma are felt.
- A peak flow meter, when used properly, can reveal narrowing of the airways well before an asthma attack. Taking asthma medications early, before symptoms, may help avoid an asthma attack.
- There are many different types of peak flow meters, but they all work in the same way.

*Read the instructions that come with the peak flow meter. Ask the doctor or a certified asthma educator if you have any questions on how to properly use it or clean it.*

*If your child is using more than one peak flow meter (such as one at school and another one at home) be sure that all of them are the same type or brand.*

**HO #2: How to Use a Peak Flow Meter**

- Distribute **HO #2** and show proper use.
• Explain how the three zone system (Green Zone, Yellow Zone, and Red Zone) used on an Asthma Action Plan (AAP) is also used with peak flow meter readings and what medicines are needed in each zone. Use a traffic light as an example to explain what should be done in each of the three color zones.

For example, when your child has symptoms, the reading on the PFM will help you determine whether symptoms are mild (in the Yellow Zone) or severe (in the Red Zone).

A PFM can also be used to check whether the Quick-Relief medicine is working. Quick-Relief medicines should provide a quick (5 to 15 minutes) increase in lung airflow and relief of symptoms.

Labeling the peak flow meter with the child’s three zones can help when comparing daily peak flow measurements to the child’s asthma action plan.

• Emphasize that parents need to check with the doctor or a certified asthma educator (AE-C) to learn the child’s peak flow meter values for each of the three zones and what medicines are needed in each. The following is a guide on how peak flow meter values are calculated for each of the three zones (Green, Yellow, and Red).

The first step is to find your child’s personal best peak flow number. This is done by having the child take a peak flow measurement once or twice a day at the same time for two to three weeks. Your child’s asthma should be under good control during this time. Keep a record of each daily measurement number and the date it was taken. Using your records, your doctor or certified asthma educator will help you determine what is your child’s personal best peak flow measurement number.

The Green Zone is 80 to 100% (percent) of the child’s personal best peak flow number. This signals your child’s asthma is under good control. This means your child has no symptoms, should take his or her regular daily medicine(s), and can do normal activities.

The Yellow Zone is 50 to 79% (percent) of the child’s personal best peak flow number. This signals caution. Your child’s asthma is not under control. This means the airways in your child’s lungs may be getting tighter and smaller and he or she may be having symptoms. The child should take Quick-Relief medicine as directed by the doctor to get his or her asthma back under control. The child should also continue to take his or her regular green zone medicine(s).
The Red Zone is less than 50% (percent) of the child’s personal best peak flow number. This signals a medical alert! This means the child is having symptoms like coughing, wheezing, shortness of breath, and trouble walking, talking, eating, and playing. Have the child take his or her Quick-Relief medicine(s) immediately and contact his or her doctor. Call 9-1-1 if the child has any of these danger signs:

- lips or fingernails are blue
- the child doesn’t respond to you
- the child’s skin is sucked in around his or neck or ribs
- the child has trouble walking or talking due to shortness of breath

• Explain that the parent(s) need(s) to know when the child’s asthma doctor wants the child to use the peak flow meter: how often and what time of day. Also ask the doctor if you should record the peak flow meter readings in a diary to share at office visits.

• Remind the participant(s) that their child does not have to have a peak flow meter to have an asthma action plan. They can also use asthma symptoms to identify the zone.
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NOTES
15 mins.

CONTENT OUTLINE

Using Symptoms with the Asthma Action Plan

- Emphasize that recognizing early warning signs of an asthma episode or attack is a very important part of developing a plan of action.

  The earlier you can recognize breathing problems, the earlier you can, and should, start treatment.

  Work with your doctor to find out which medicine plan to use for each zone and have it written in an AAP.

  When you start treatment as soon as possible, you may reduce the need for emergency care.

HO #3: My Child’s Early Warning Signs

- Distribute HO #3.

- Ask the participant(s) to check off the signs they have seen in their child.

HO #4: Red Light, Green Light: Signs of Asthma

- Review the information the participant(s) checked on HO #3 and use HO #4 to find what zone they fall in when they see these symptoms and what they should do next.

Note: HO #4 Red Light, Green Light: Signs of Asthma has to be printed in color for the participants to see how the zones relate to a traffic light.

- Explain that it is important for children to recognize their own warning signs.

  Probably the first self-management skill children can perform for themselves is to tell parents or other adults when early warning signs happen.

  Most children can do this by the age of 3 or 4.

  Children know something is happening to their body, but don’t necessarily think about telling their parents or another adult. Be sure to encourage your child to tell you or another adult.
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NOTES

CONTENT OUTLINE

• Explain to the child:

  You may know you have certain feelings in your body, like you start to cough, or your throat gets itchy inside, or your chest feels tight, which tell you that you’re going to have trouble with your asthma soon. These are called early warning signs.

  You will know these signs before anyone else, so you need to tell your parent or other adult as soon as you start feeling one of these early warning signs.

• Transition to activity.

Activity (optional)

HO #5: My Early Warning Signs

• Pass out HO #5.
  - Home Visitors – Conduct the activity with the child as instructed below.
  - Child Care Providers – Teach parents how to do this activity at home with their child.

• Ask the child to circle, with help from his or her parent(s), the early asthma warning signs he or she feels.

• If the child has a warning sign that is not listed on the handout, ask him or her to draw it in on the figure at the bottom.

• After the child has finished circling his or her warning signs, ask him or her, “What will you do if you feel one of these early warning signs?”

• Remind the child that the earlier they tell a parent or other adult, the sooner they can get medicine to help them feel better.

  If the child is old enough to “self-carry” his or her asthma medicine, knowing the early warning signs will give him or her the power to stop those symptoms with the right medicine.
Summary & Questions
• Ask the participant(s) to summarize what you have discussed today.
  Correct any misinformation and emphasize key points.
• Answer any questions.

HO #6: 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.
LESSON 5  Asthma Action Plan

Teaching Tool #1
Pre- and Post-Test Answer Key

1. An Asthma Action Plan (AAP) shows me what kind of asthma my child has.
   ■ True
   ■ False

2. Asthma Action Plans (AAPs) are divided into three zones that:
   ■ A. Give guidelines on when to sleep and when go to school.
   ■ B. Give guidelines on what medicines are needed when there are asthma symptoms or the Peak Flow reading is low.
   ■ C. Show Green, Yellow, and Red zones for using Peak Flow readings.

3. Which answer lists 3 severe (Red Zone) asthma symptoms:
   ■ A. No cough, hunched over, chest tightness
   ■ B. Blue lips/fingernails, hunched over, hard breathing
   ■ C. Coughing at night, but no wheezing

4. You should call the doctor if your child has these symptoms:
   ■ A. Coughing at night, chest feels tight, out of breath
   ■ B. Breathing is easy, no wheezing, sleeping through the night
   ■ C. No cough or wheezing while playing hard

5. A copy of your child’s Asthma Action Plan (AAP) should be given to his or her school.
   ■ True
   ■ False
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   - False

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5. A copy of your child’s Asthma Action Plan (AAP) should be given to his or her school.
   - True
   - False
Handout #2
How to Use a Peak Flow Meter

1. Move the red marker to the bottom of the scale.
2. Stand up.
3. Take a deep breath.
4. Put the mouthpiece of the peak flow meter in your mouth behind your teeth. Keep your tongue down and out of the way. Close your lips tightly around it.
5. Blow as hard and fast as you can.
6. See what zone the reading is in on the Asthma Action Plan. Follow your doctor’s instructions for that zone.

Adapted from Wee Wheezers at Home – A Home Visiting Program for Families of Young Children with Asthma. 2003 Josephine V. Brown, Alice S. Demu, and Sandra R. Wilson – Palo Alto Medical Research Foundation Institute.

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### Handout #3
My Child’s Early Warning Signs

Children frequently have symptoms before they have trouble breathing. These feelings can be the early warning signs of asthma.

*Please mark your child’s asthma signs with an “X”*

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Symptom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coughing</td>
<td>Restless</td>
</tr>
<tr>
<td>Stomach ache/nausea</td>
<td>Dry mouth/thirsty</td>
</tr>
<tr>
<td>Difficulty breathing</td>
<td>Not sleeping well</td>
</tr>
<tr>
<td>Loss of appetite</td>
<td>Hoarse voice</td>
</tr>
<tr>
<td>Runny/stuffy/congested nose</td>
<td>Dizziness</td>
</tr>
<tr>
<td>Tired</td>
<td>Snoring</td>
</tr>
<tr>
<td>Sneezing</td>
<td>Paleness</td>
</tr>
<tr>
<td>Feeling weak, no energy</td>
<td>Changes in how she (he) talks</td>
</tr>
<tr>
<td>Itchy/sore/scratchy throat</td>
<td>Raised shoulders/slouching</td>
</tr>
<tr>
<td>Feeling sick</td>
<td>Headache</td>
</tr>
<tr>
<td>Acting irritable, cranky</td>
<td>Clammy skin</td>
</tr>
<tr>
<td>Itchy/watery eyes</td>
<td>Chest pain</td>
</tr>
<tr>
<td>Acting spacey</td>
<td>Tight chest</td>
</tr>
<tr>
<td>Itching</td>
<td>Acting unusual. This is an important sign.</td>
</tr>
</tbody>
</table>

Does your child have any other early warning signs? What are they?

- ____________________________________________
- ____________________________________________
- ____________________________________________
- ____________________________________________
- ____________________________________________
- ____________________________________________
- ____________________________________________
- ____________________________________________
- ____________________________________________
- ____________________________________________
# Lesson 5: Asthma Action Plan

## Handout #4

**Red Light, Green Light: Signs of Asthma**

<table>
<thead>
<tr>
<th><strong>STOP</strong></th>
<th><strong>SLOW DOWN</strong></th>
<th><strong>GO!</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Call 9-1-1 if the child has any of these danger signs:</td>
<td>Coughing</td>
<td>• Breathing is easy</td>
</tr>
<tr>
<td>• Lips or fingernails are blue</td>
<td>Mild wheezing</td>
<td>• No coughing or wheezing</td>
</tr>
<tr>
<td>• The child does not respond to you</td>
<td>Shortness of breath</td>
<td>• Sleeping through the night</td>
</tr>
<tr>
<td>• The child’s skin is sucked in around his or her neck or ribs</td>
<td>Chest tightness</td>
<td>• Can play or do sports without breathing problems</td>
</tr>
<tr>
<td>• The child has trouble walking or talking due to shortness of breath</td>
<td>Coughing at night</td>
<td></td>
</tr>
<tr>
<td>• Breathing is hard and fast</td>
<td>Other signs:</td>
<td></td>
</tr>
<tr>
<td>• Lots of coughing</td>
<td>• Dark circles under eyes</td>
<td></td>
</tr>
<tr>
<td>• Nose opens wide (flaring)</td>
<td>• Being pale, tired, or feeling weak</td>
<td></td>
</tr>
<tr>
<td>• Hunched over</td>
<td>• Itchy chin</td>
<td></td>
</tr>
<tr>
<td>• Asthma Quick-Relief/Rescue medicine not helping</td>
<td>• Itchy, scratchy, sore throat, or clearing throat a lot</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Nose that is runny, stuffy, or rubbed it a lot</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Sneezing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Stomach aches or headaches</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Mood changes like being extra grouchy, extra quiet, or restless</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Eczema flare-up</td>
<td></td>
</tr>
</tbody>
</table>

**Call your doctor or 9-1-1**

**Follow your Asthma Action Plan and call the doctor!**

**Keep doing what you are doing!**

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Handout #5
My Early Warning Signs

- stuffy nose
- watery eyes
- itchy or sore throat
- cough
- sneeze
- feel tired
- feel bad
- tummy hurts
- chest tight
- some other feeling (draw it)
1. An Asthma Action Plan (AAP) shows me what kind of asthma my child has.
   - True
   - False

2. Asthma Action Plans (AAPs) are divided into three zones that:
   - A. Give guidelines on when to sleep and when go to school.
   - B. Give guidelines on what medicines are needed when there are asthma symptoms or the Peak Flow reading is low.
   - C. Show Green, Yellow, and Red zones for using Peak Flow readings.

3. Which answer lists 3 severe (Red Zone) asthma symptoms:
   - A. No cough, hunched over, chest tightness
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4. You should call the doctor if your child has these symptoms:
   - A. Coughing at night, chest feels tight, out of breath
   - B. Breathing is easy, no wheezing, sleeping through the night
   - C. No cough or wheezing while playing hard

5. A copy of your child’s Asthma Action Plan (AAP) should be given to his or her school.
   - True
   - False