

Learners Take Action to Reduce the Risk of Asthma

Lesson 3: What can you do about asthma? Taking action

Teacher Instructions, Introduction, and Student Worksheets



Objectives for Lesson 3:

After completing the lesson the students will be able to:

- Describe actions that a person can take to reduce exposure to asthma triggers.
- Explain the importance of an Asthma Action Plan.
- Demonstrate how to access and use the Air Quality Index.

Teacher Preparation: Materials

1. Copies for students of the brochure: *Help Your Child Gain Control Over Asthma*. Download from website http://www.epa.gov/asthma/pdfs/ll_asthma_brochure.pdf
2. Copies of http://www.health.utah.gov/asthma/pdf_files/asthma_action_plan.pdf
3. Copies of the Student Worksheets for each student.
4. Copies of the *Asthma Trigger Factors Checklist* from Lesson 2.

Introduction to Taking Action to Control Asthma Triggers

Read to Students: In the second lesson we learned about asthma triggers, how a person is exposed to asthma triggers, and how asthma triggers affect the lungs of a person who has asthma attacks. We learned that indoor air pollution and outdoor air pollution can contribute to asthma and we used a checklist to look for factors in our own homes that could cause or contribute to an asthma attack.

In this lesson we are going to learn how we can take action to reduce exposure to asthma triggers. We will also learn how an **Asthma Action Plan** prepared by a doctor can help us track the symptoms of asthma, know when to use medicine to treat asthma, and know when it is necessary to get medical help to bring asthma under control.

Warm-Up Activity

Below is a warm up activity to engage students in thinking about asthma triggers and how asthma can be controlled by reducing exposure to things in the environment that can trigger an asthma attack.

Report Back to Class: What asthma triggers did you find in your home?

Directions: Divide the students into small groups of 3 – 5 students. Ask them to get out the *Asthma Trigger Factors Checklist* that they filled out for the Take Home Activity in Lesson 2 or provide them with a new copy if they forgot theirs..

Ask: Did you find anything in your home that might be an asthma trigger? Remember, everyone has asthma triggers in their home. Some of the asthma triggers we don't even know we have. Knowing that we have asthma triggers will help us decide what we can do to get rid of things in our homes that can cause asthma or lead to asthma attacks. Ask the students to discuss what they found in their home that can contribute to asthma. If they are reluctant or embarrassed to report some of what they found, just ask them to report what asthma triggers they think they may have in their homes.

Student Worksheets: Lesson 3

Teacher: Read aloud the vocabulary words at the beginning of each section of Mariana's Story to help the students pronounce the words. Ask the students if they know what the vocabulary words mean. Discuss the meaning of each word.

Student Activity 1: Mariana's Story - What can you do about asthma triggers?

***Vocabulary:* terrified, control medicine, active, athletes, rescue medicine, inhaler, Asthma Action Plan**

Thomas's asthma attacks got so bad that he had to go to the hospital. Mariana was **terrified** of what might happen to him! Mariana worked closely with Thomas's doctor to get his breathing under control. The doctor sent him home with a **control medicine** to prevent an asthma attack. The control medicine will keep him safe if he uses it every day, even when he feels well. The good news is the doctor told Thomas that he could be **active** and run around outside. The doctor said, "Many people have asthma, even some famous Olympic **athletes** who play a lot of sports!" After hearing that, Thomas was much less afraid of having asthma. The doctor also gave him **rescue medicine** that he can use when he has an asthma attack. His rescue medicine is an **inhaler** that sprays medicine into his lungs to help him breathe. The doctor helped Mariana and Thomas use an **Asthma Action Plan** to help them take care of Thomas's asthma. The Asthma Action Plan lists the medicines for Thomas to take when he has an asthma attack. It also lists the asthma triggers that make Thomas have an asthma attack. The doctor told Mariana to share Thomas's plan with his teachers, school nurse, babysitters, and other family members. He also told her to call his doctor right away if he has an asthma attack that she can't control.

***Vocabulary:* reduce exposure, leaking, prevent, mattress, HEPA filter vacuum cleaner, particles, expensive**

Mariana learned everything she could about how to **reduce exposure** to asthma triggers in Thomas's environment that cause his asthma. She checked for water **leaking** into the house from the roof, the basement, or from leaking pipes that need to be fixed to **prevent** and stop mold from growing in wet or damp areas. She learned that dust mites live in "fluffy" things such as rugs, pillows, and **mattresses** that people sleep on. To reduce exposure to these asthma triggers she took the rugs out of Thomas's bedroom and covered his pillows and mattress with a cover that can be washed. She took most of his fluffy toy animals out of his room and let him keep a few that could be washed every week to get rid of dust mites. She also got a **HEPA filter vacuum cleaner** that cleans up very small **particles** of dust. The vacuum cleaner was **expensive**, but her health insurance helped pay for it.

Vocabulary: label, cleaning products, chemicals, toxic, poisonous, bleach, dangerous, harm, air freshener

Mariana learned to read the **label** on **cleaning products** she got at the store. The label lists **chemicals** that are **toxic** and burn your skin or eyes and hurt your lungs when you breathe. They may also be **poisonous** and can make you sick. She learned to use safe cleaning products that our grandmothers used to use. These are: 1) soap and water, 2) vinegar for cleaning windows and counters, 3) baking soda to clean the toilet, and 4) vinegar and baking soda for cleaning the oven. She used to use **bleach** because she thought it made the house smell clean. She didn't know that bleach is **dangerous** and can **harm** or hurt your lungs and eyes. Learning all these things made Mariana think about other things she used in her home that could cause an asthma attack, like candles and **air fresheners** that smell nice. Mariana is so happy that she learned about asthma triggers. She said, "My son has been so much better! I can't tell you how good it makes me feel. There are many simple things that I can do to help prevent his asthma attacks. They help me and the rest of my family too!"

Student Activity 2: Vocabulary Practice - Defining Words

Directions: Write the definitions (meanings) in your own words, from memory, by looking at the reading about asthma in Mariana's Story, or by using a dictionary.

HEPA filter vacuum cleaner:

rescue medicine:

poisonous:

Asthma Action Plan:

control medicine:

particles:

Student Activity 3: Reading Comprehension

Directions: Circle the best answer to each of the following questions after reading about asthma triggers.

1. What is written on an Asthma Action Plan?

- a. The medicines that a person might need to control asthma.
- b. The things that can trigger an asthma attack.
- c. The rescue medicine that a person can use for quick relief when an asthma attack starts.
- d. All of the above.

2. What is a HEPA Vacuum cleaner?

- a. A vacuum cleaner that you use once a month.
- b. A vacuum cleaner that can only be used to clean up large pieces of dirt.
- c. A vacuum cleaner that picks up very small particles of dust that can cause an asthma attack.
- d. A Vacuum cleaner that you use outside to clear the air.

3. Which of the following things will not reduce exposure to asthma triggers?

- a. Baking soda
- b. Soap
- c. Vinegar
- d. Air fresheners

Student Activity 4: Matching Definitions

Directions: Use the following words to complete the definitions below.

Bleach	Reduce exposure	Toxic chemicals
Inhaler	Athletes	Air freshener
_____	_____	_____ people who are active and play a lot of sports.
_____	_____	_____ things that are poisonous and can make you sick.
_____	_____	_____ sprays medicine into your lungs to help you breathe.
_____	_____	_____ what a person does to prevent an asthma attack.
_____	_____	_____ could cause an asthma attack in people with asthma.
_____	_____	_____ a cleaning chemical that can harm or hurt you lungs and eyes.

Student Activity 5: Reading about Taking Action to Control Asthma Triggers

Read the Brochure ***Help Your Child Gain Control Over Asthma.***

http://www.epa.gov/asthma/pdfs/ll_asthma_brochure.pdf

Teacher and Students: Take turns reading pages 20 – 27

Student Activity 6: Writing about Taking Action to control Asthma Triggers

Directions:

List three things you can do to reduce asthma triggers in your home. You can write from your personal experience or something you learned from the video **Breathing Freely: Controlling Asthma Triggers** or from the brochure **Help Your Child Gain Control Over Asthma**. Use the worksheet, but if you need more space to write, use a separate sheet of paper.

1. _____

2. _____

3. _____

Student Activity 7: Making an Asthma Action Plan

Teacher: Read pages 11-13 from the brochure *Help Your Child Gain Control Over Asthma* http://www.epa.gov/asthma/pdfs/ll_asthma_brochure.pdf

Divide the students into groups of 3-5 students and ask them to discuss and write down the importance of an **Asthma Action Plan** and what should be included in an **Asthma Action Plan**.

Asthma Action Plan

1. Why is an Asthma Action Plan Important?

- _____
- _____
- _____

2. List what is included in an Asthma Action Plan.

- _____
- _____
- _____

3. What should you do if a person has an asthma attack?

- _____
- _____
- _____

4. When should you call a doctor and/or take a person to an emergency room?

- _____
- _____
- _____

Student Activity 8: Reading about Outdoor Air Pollution

Read the Brochure *Help Your Child Gain Control Over Asthma*.

http://www.epa.gov/asthma/pdfs/ll_asthma_brochure.pdf

Teacher and Students: Take turns reading pages 28-30 to learn about outdoor air pollution and what you can do to protect yourself and your family from outdoor air pollution that affects asthma.








Student Activity 9: Computer Practice - Outdoor Air Pollution

In Lesson 2 we learned about **Outdoor Air Pollution** that comes from small particles of dust from roads, exhaust from cars and trucks, and smoke from factories. People with asthma or who have family members with asthma need to find out when the air where they live is unhealthy. The local weather report lets people know the air quality, but a person can look it up on the computer. Use the guide on the following page to learn how to check the air quality where you live.

Air Quality Index: A Guide to Air Quality and Your Health

The **Air Quality Index** (AQI) tells us how clean or **polluted** (dirty) the air is where we live. It also tells us if we should be concerned. Search for the Air Quality Index on your computer at <http://www.airnow.gov> The EPA **monitors** (keeps track of) air quality and **alerts** (lets people know) if the air quality is unhealthy and people should not do too much outside.

1. **At the top of the page** find the words **Local Air Quality Conditions**
2. **Look for: Zip Code**
3. **Enter your Zip Code and Click Go** to find the air quality forecast for where you live

Good 0-50		Air quality poses little or no risk.
Moderate 51-100		Air quality is acceptable. May be a concern for a very small number of people.
Unhealthy for Sensitive Groups (USG) 101-150		Air quality <i>may be</i> unhealthy for sensitive (USG) groups of people who have health problems, but not a risk for most people.
Unhealthy 151-200		Everyone may feel the effects, but the air quality is unhealthy for sensitive people.
Very Unhealthy		Emergency conditions, health warnings. Everyone is likely to be affected.