

Asthma - Reactive Airway Disease

Peak Flow Meter

What is it?

- ❖ A peak flow meter is a small hand-held device that measures peak expiratory flow rates. This measured when you take a deep breath and blow as hard as you can. This meter is used to check your lungs the way that a blood pressure cuff is used to check your blood pressure.
- ❖ You may need to use a peak flow meter if you take asthma medicine every day. Children as young as 5 years old can learn to use a peak flow meter.

Why should I use a peak flow meter?

- ❖ Using the peak flow meter **correctly** will help you better monitor and manage your asthma. The peak flow meter can show if there is narrowing in your airways days before you have asthma symptoms. You and your caregiver will closely work together to learn what peak flow numbers are normal for you. You will also learn what you need to do when your numbers decrease.
- ❖ Measuring your peak flow every day and writing the number in a diary can help you notice early asthma symptoms. Your peak flow number may decrease within hours or a few days before an asthma attack. You can notice this decrease when you compare daily peak flow readings in your record book.
- ❖ A peak flow meter can also help you learn what may trigger your asthma, like pollens or molds. The peak flow number can tell you and your caregiver if your asthma medicine treatment plan is working. It can also tell caregivers if medicine should be stopped or added. Your peak flow number may tell you if you should see caregivers right away.

How do I use a peak flow meter?

- Step 1:** Before each use, make sure the sliding marker or arrow on the peak flow meter is at the bottom of the numbered scale (zero or the *lowest* number on the scale).
- Step 2:** Stand up straight. Remove gum or any food from your mouth. Take a deep breath (as deep as can). Put the mouthpiece of the peak flow meter into your

mouth. Close your lips tightly around the mouthpiece. Blow out as hard and quickly as possible. Blow a “fast hard blast” rather than “slowly blowing” until you have emptied out nearly all of the air from your lungs.

- Step 3:** The force of the air coming out of your lungs causes the marker to move along the numbered scale. Note the number on a piece of paper.
- Step 4:** Repeat the entire routine three (3) times. You know you have done the routine correctly when the numbers from all three attempts are very close together.
- Step 5:** Record the **highest** of the three (3) readings. **Do not calculate an average.** This is very important. You can't breathe out too much when using your peak flow meter, but you can breathe out too little. Record your highest reading.
- Step 6:** Measure your peak flow rate close to the same time each day. You and your doctor can determine the best times. One suggestion is to measure your peak flow rate twice daily between 7 and 9 a.m. and between 6 and 8 p.m. You may want to measure your peak flow rate before *or* after using your medicine. Some people measure peak flow both before *and* after taking medication. Try to do it the same way each time.
- Step 7:** Keep a chart of your peak flow rates. Refer to the peak flow chart in packet.

How do I chart my peak flow rates?

Chart the **highest** of the three readings. The chart could include the date at the top of the page, with AM and PM listed. The left margin could list a scale, starting with zero (0) liters per minute (L/min) at the bottom of the page and ending with 600 L/min. at the top. You could leave room at the bottom of the page for notes to describe how you are feeling or to list any other thoughts you may have. You may also use a diary to track your peak flow numbers.

What is a “Normal” peak flow rate?

A “normal” peak flow rate is based on a person's age, height, sex and race. A standardized “normal” may be obtained from a chart comparing the patient with a population without breathing problems. A personal best “normal” may be obtained from measuring the patient's own peak flow rate. Therefore, it is important for you and your doctor to discuss what is considered “normal” for you. Once you have learned your usual and expected peak flow rate, you will be able to recognize changes or trends.

How Can I determine a “normal” peak flow rate for me?

Three (3) zones of measurement are commonly used to interpret peak flow rates. It is easy to relate the three (3) zones to traffic light colors: green, yellow, and red. In general, a normal peak flow rate can vary as much as 20%. Be aware of the following general guidelines. Keep in mind that recognizing changes from “normal” is important. Your doctor may suggest other zones to follow.

Green Zone: 80%-100% of your usual or “normal” peak flow rate signals all clear. A reading in this zone means that your asthma is under reasonably good control. It would be advisable to continue your prescribed program of management.

Yellow Zone: 50%-80% of your usual or “normal” peak flow rate signals caution. It is time for decisions. Your airways may require extra treatment. Your symptoms can get better or worse depending on what you do, or how and when you use your prescribed medication. To be safe, call your doctor.

Red Zone: Less than 50% of your usual or “normal” peak flow rate signals a **Medical Alert**. Immediate decisions and actions need to be taken. Severe airway narrowing may be occurring. Contact your doctor **now**. The doctor can tell you what treatment to start. It is important to know your peak flow reading, but it is even more important to know what you will do based upon that reading. Work with your doctor to develop an asthma management plan that follows your green-yellow-red zone guidelines.

When should I use my peak flow meter?

Use of the peak flow meter depends on a number of things. Its use should be discussed with your doctor. If your asthma is well controlled and you know the “normal” rate for you, you may decide to measure your peak flow rate only when you sense that your asthma is getting worse. More severe asthma may require several measurements daily.

Don’t forget that your peak flow meter needs care and cleaning. Dirt collected in the meter may make your peak flow measurements inaccurate. If you have a cold or other respiratory infection, germs or mucus may also collect in the meter. Proper cleaning with mild detergent in hot water will keep your peak flow meter working accurately and may keep you healthier. Please refer to Home Care Instructions – Equipment Cleaning

Does using a peak flow meter have any side effects?

A peak flow meter is not a medicine. It has no major side effects. Sometimes pushing the air out of your lungs in a “fast blast” may cause you to cough or wheeze. Check with your doctor before using a peak flow meter.

Using the meter is as simple as taking a deep breath and blowing out a candle. If used properly, it can only help. You must realize that measuring peak flow is only one step in a program to manage asthma. Its importance must not be exaggerated or over-interpreted. Using a peak flow meter is not a substitute for regular medical care. Ask your doctor to help you understand your peak flow measurements.