

Peak Flow Meters

Using a peak flow meter takes some of the guesswork out of asthma management. It can help you and your healthcare team

- Detect early stages of increased airway inflammation
- Learn to recognize early signs that indicate asthma problems
- Identify allergens, irritants and activities that make your asthma worse
- Measure your response to medications
- Decide how well your treatment plan is working
- Decide when to call your healthcare provider or seek emergency care
- Make decisions about school attendance or physical activity
- Improve communication among you, your family and your medical care team

Measuring Up

When you use a peak flow meter, the force of your breath moves the indicator along a numbered scale. The number opposite the indicator is your peak expiratory flow rate – PEFr – how *fast* you can push your breath out, in liters per second.

Use the peak flow meter each morning and evening, especially when you are monitoring an asthma flare or learning to understand your symptoms. A midday reading can also be helpful. To get an accurate reading, use the peak flow meter *before* taking your bronchodilator medication (a medicine, such as albuterol, that opens and relaxes your airways).

Follow these five steps carefully:

1. Move the sliding indicator to the bottom of the numbered scale, according to package instructions.
2. Stand up.
3. Take a deep breath, filling your lungs completely.
4. Place the mouthpiece in your mouth and close your lips around it. Do not put your tongue inside the hole.
5. Blow out as *hard and fast as you can* in a single blow.

Step five is particularly important; if you cough or make a mistake, skip that reading and try again. Repeat the steps above two more times, then enter the highest of your three readings into a daily

symptom diary or notebook.

What's Your Target?

When you first begin using a peak flow meter, the numbers won't mean much. It's only when you compare them from day to day that they become helpful. Over time, you will learn to separate the PEFrs that indicate your asthma is under control from those that point to trouble brewing.

Your first goal is to identify your **Target** PEFr – the best you can do when your asthma is well controlled.

Find your *predicted* PEFr on the nomogram chart that came packaged with your peak flow meter. This chart lists normal PEFrs for people of different ages and heights who do not have asthma. Compare your predicted number to the *actual* PEFrs recorded in your daily symptom diary.

If your best actual PEFr is close to or higher than the predicted PEFr, use the actual PEFr as your Target.

If your best actual effort gets you nowhere near the nomogram prediction, talk with your healthcare provider. Many people think they are breathing fine when in fact they have simply become accustomed to compromised breathing. They have adjusted to their asthma, but they are not managing it.

Target PEFrs should be reevaluated from time to time, especially for children, whose peak flow meter readings will change as they grow.

Color Therapy

Many healthcare providers use peak flow meter color zones to guide asthma management. Based on familiar traffic signal colors, these are broad guidelines only; your individual zones must be set specifically for you by your healthcare team.

GREEN SIGNALS *good control*

No asthma symptoms are present. Follow your asthma management routine. The green zone is 80-100 percent of your Target. (Some healthcare providers limit the green zone to 90% and up.)

YELLOW SIGNALS *caution*

Airways may be inflamed or constricted. If your PEFrs are falling into the yellow zone, an asthma episode is developing. (If you are moving up out of the red zone, however, yellow can signal that symptoms are improving.) The yellow zone usually includes peak flow meter readings that are 50-80 percent (or 50-90%) of your Target.

RED SIGNALS *medical alert*

Your asthma is at a dangerous level. Take immediate action. Follow the emergency directions laid out in your asthma plan. If actions taken at home do not move your PEFr into the yellow or green zones as specified by your healthcare provider (or if you do not have a plan), contact your healthcare provider or go to the emergency department. *Do not delay seeking help.*