

Peak Flow Monitoring

What is a Peak Flow Meter

A peak flow meter is a small portable device with a measuring gauge that measures the speed that air is blown *out* of the lungs. This measurement is referred to as the peak expiratory flow (PEF).

Why Should I Use One

Your symptoms are the most important gauge of how well your asthma is controlled, but the peak flow meter can also help. It is useful to detect changes in the airways like a thermometer detects changes in your temperature. Your health care provider may want you to monitor your peak flows for one or more of the following reasons:

- to assist in asthma diagnosis and assess how much airway narrowing you have
- to check how your peak flows change throughout the day, which may help you decide what makes your asthma worse
- to monitor the effectiveness of medications and if your asthma is controlled
- to detect worsening of your asthma, which could help you decide when you should seek medical help
- to develop an asthma action plan, which can allow you to make fewer doctor and hospital visits and take more control of your asthma

How to Use a Peak Flow Meter

You must give your best effort to achieve accurate results. The following steps are recommended:

- Attach the mouthpiece into the peak flow meter (if required)
- Set the marker/indicator to zero level on scale
- Stand up (sit upright if unable to stand) and breathe in as deeply as possible
- Close your lips around the mouthpiece while holding the meter horizontally
- Blow out as hard and fast as you can into the mouthpiece (do not lean forward or jerk your head)
- Note the level of the marker, reset to zero, and repeat two more times
- Record the highest level of three attempts in your symptom/peak flow diary

*Note: For more specific information about *your* peak flow meter, please follow instructions that come with it or consult your health care provider.

What Does It All Mean

Once your best peak flow is known, the aim is to stay above 80% of this figure. Your health care provider will calculate the percentages from your best peak flow and give you step by step instructions based on changes in your peak flows. Peak flow monitoring should be used

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T 416 787 4050 F 416 787 5807 E info@asthma.ca

130 Bridgeland Avenue, Suite 425 Toronto, Ontario, Canada m6a1z4 Charitable **registration no.** 89853 7048 RR0001

along with an "Asthma Action Plan". The following describes a common three zone method similar to traffic signals:

The "Green" Zone:

(80% - 100% of your best peak flow level is your Good zone).

The aim is to keep your peak flows in this zone and to have minimal symptoms. Continue your maintenance medications (minimum required to keep you well) even when you are feeling well.

The "Yellow" Zone:

(60% - 80% of your best peak flow level means Caution).

This indicates that you are losing control of your asthma and probably having more asthma symptoms. You may require some changes in your controller medications or additional medication to get back to the green zone. Prior written instructions by your doctor will allow you to make the necessary changes without delay.

The "Red" Zone:

(less than 60% of your best peak flow level signifies Danger).

Peak flow levels within this zone require immediate action. You may be having more asthma symptoms, sleep disturbances and not able to do your usual activities, with little or no help from your reliever inhaler. Follow your doctor's instructions for this zone then adjust your treatment and contact your doctor. If you are finding it difficult to speak or are concerned with your breathing difficulty, you should go to the nearest hospital. Delay in getting appropriate medical help may lead to unnecessary suffering or even death.

When Do I Use The Peak Flow Meter

Your doctor may suggest that you monitor your peak flows once daily, twice daily (morning and evening), before and 15 minutes after your reliever inhaler, or intermittently when medication is being adjusted or when you are not feeling well. It is important to monitor it regularly for a while when you are well to assess the daily changes and find what your best peak flow is. This value is used to develop an "Asthma Action Plan". If this is not known, an estimate of your target peak flow can be calculated using a peak flow chart.

Keeping Records (The Diary)

Keeping records of your daily peak flows as well as any asthma symptoms allows your doctor and you to compare values from when you feel well to when you don't feel well. It is especially useful when medication is being adjusted, or before and about 15 minutes after using your reliever inhaler, to assess its effectiveness. This will allow your doctor and you to follow the course of treatment and make the right decisions.

Tips

- Keep your meter in a handy place - perhaps by your bed
- Bring the meter and your diary with you when you visit your doctor
- Ensure your tongue doesn't block the mouthpiece and don't cough or spit into the meter
- Hold the meter correctly so that you don't prevent the marker from moving freely or block the air escape holes with your fingers
- Children's peak flows increase with age, whereas adult's generally decrease with age (over 45), therefore target peak flows will need periodic adjusting
- Do your peak flows at the same time in the same position (standing is best)

