Peak Flow Meter Education Plan

What I need to learn about my Peak Flow Meter

By the time I leave the hospital I will be able to show or tell staff:

1. I will be able to show staff how I use my Peak Flow Meter
2. I will be able to tell the staff how often I should use my Peak Flow Meter.
3. I will be able to tell staff why I am monitoring my Peak Expiratory Flow (PEF) values
4. I will be able to tell staff what I need to do when my PEF is in the Green Zone 80-100% of my personal best.
5. I will be able to tell the staff what I need to do when my PEF is in the Yellow Zone 50-80% of my personal best
6. I will be able to tell staff what I need to do when my PEF is in the Red Zone <50% of my personal best.

The staff will use three questions to teach me about Peak Flow Meter:

1. When should you use your Peak Flow Meter?
2. How do you use your Peak Flow Meter?
3. Why is this important to me?

The staff will ask me to repeat back important points in my own words, or ask me to show what I have learned. They want to make sure that I know why I need to monitor my lung function with my Peak Flow Meter and how it can help me manage my asthma

What is my main problem?

Asthma: I may develop breathing problems because of my asthma using a peak flow meter is a good tool to help guide my care

Daily monitoring may be helpful for people who

1. Have a difficult time controlling asthma symptoms
2. Have a sudden, severe asthma attack
3. Have a hard time noticing that their symptoms are getting worse
4. Want to monitor their lung function.

What do I need to do?

Measure you peak flow in the morning before taking your medications

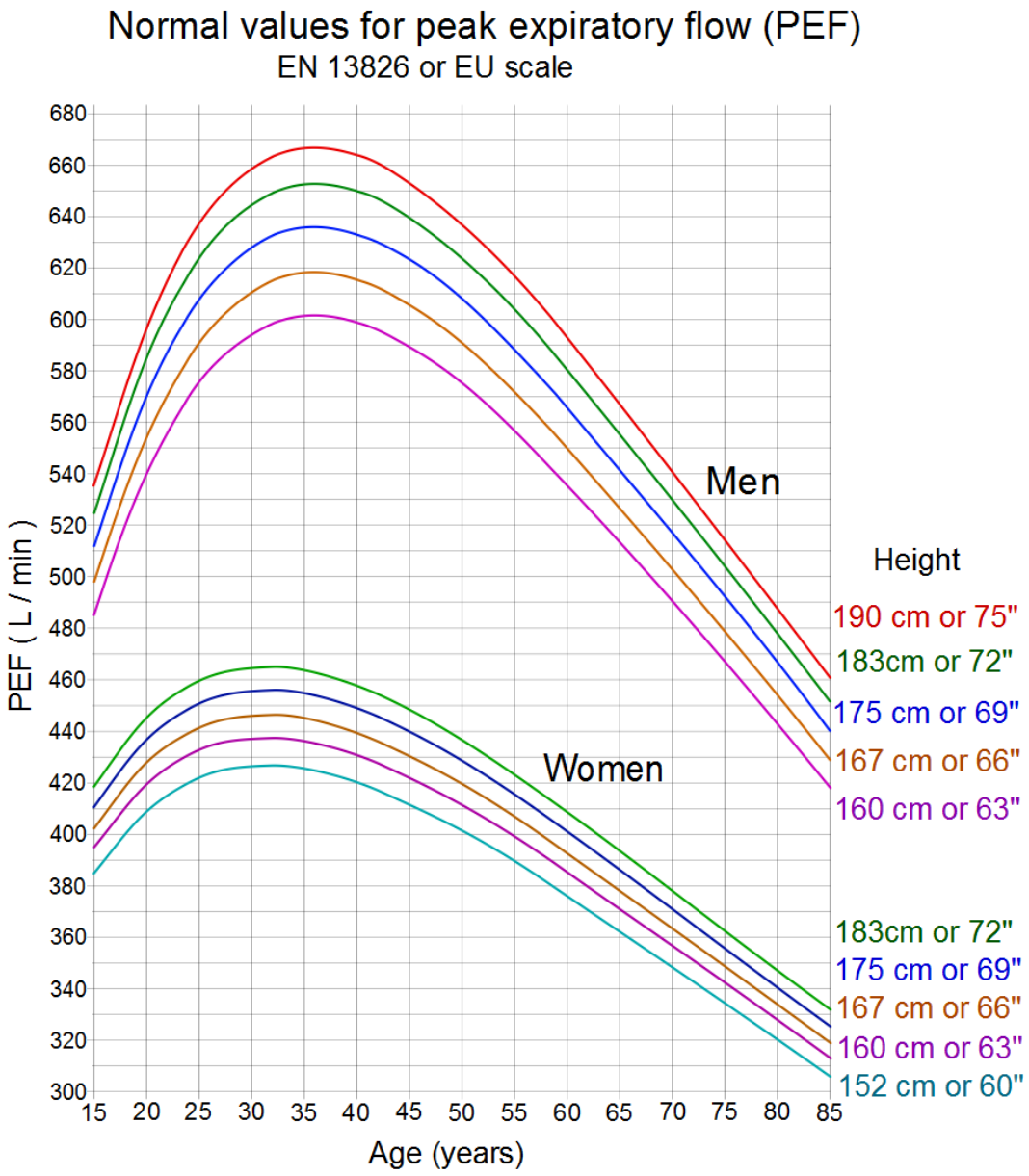
Instructions for using your peak flow meter

1. Move the personal best high marker to the number that is 80% of your personal best (if there is one)
2. Move the personal best low marker to the number that is 50% of your personal best
3. Move the flow indicator marker to the bottom of numbered scale
4. Connect the mouthpiece to the Peak flow meter if needed
5. Stand up
6. Take a deep breath. Fill your lungs completely
7. Place the mouthpiece in your mouth and close your lips around it. Do not put your tongue in the hole.
8. Blow (Blast) out as hard and fast as you can in one single blow. If you cough or make a mistake, do not count this attempt
9. Note flow indicator marker position on numbered scale. This is your peak flow
10. Write down the number you get
11. Move the flow indicator marker back to the bottom of the numbered scale
12. Repeat steps 3 through 10 two more times. Write the best measurement in your asthma diary
13. After use rest and breath slowly and easily

Keep your peak flow meter clean and available where you will remember to use it daily.

How do I find my Personal Best Peak Expiratory Flow (PEF)?

1. Measure your PEF twice a day for 2 to 3 weeks. Take one reading in the early morning and another in the late afternoon or evening
2. Measure your PEF 15 to 20 minutes after taking your rescue inhaler
3. The highest measurement in the 2 to 3 week period is your personal best PEF


Normal values for peak expiratory flow (PEF)
EN 13826 or EU scale
PEF (L / min)
680
660
640
620
600
580
560
540
520
500
480
460
440
420
400
380
360
340
320
300
15 20 25 30 35 40 45 50 55 60 65 70 75 80 85
Age (years)
Men
Women
Height
190 cm or 75"
183cm or 72"
175 cm or 69"
167 cm or 66"
160 cm or 63"
183cm or 72"
175 cm or 69"
167 cm or 66"
160 cm or 63"
152 cm or 60"

Average peak flow rate for healthy children and teenagers

Height in inches	Average peak flow	Yellow Zone 50-80% of average peak flow	Red Zone less than 50% of average peak flow
43	147	74 - 118	< 74
44	160	80 - 128	< 80
45	173	87 - 139	< 87
46	187	94- 150	< 94
47	200	100 - 160	< 100
48	214	107 - 171	< 107
49	227	114 - 182	< 114
50	240	120 - 192	< 120
51	254	127 - 203	< 127
52	267	134 - 214	< 134
53	280	140 - 224	< 140
54	293	147 - 234	< 147
55	307	154 - 246	< 154
56	320	160 - 256	< 160
57	334	167 - 267	< 167
58	347	174 - 278	< 174
59	360	180 - 288	<180
60	373	187 - 298	< 187
61	387	194 - 310	< 194
62	400	200 - 320	< 200
63	413	207 - 330	< 207
64	427	214 - 342	< 214
65	440	220 - 352	< 220
66	454	227 - 363	< 227

How do I use the results?

Your peak flow meter measures your peak expiratory flow (PEF). One sign that your asthma is well controlled is that the PEF is similar each time. When you see changes from the green zones to yellow or red zones this can indicate poor asthma control.

- Determine the severity of your Asthma.
- Determine when to use or add medications;
- Recognize when to seek medical attention

1. **Green Zone= Stable**
   - Your peak flow rates are 80-100 % of your personal best. This means your Asthma is under control
   - Take your preventive medications as usual

2. **Yellow Zone= Caution**
   - Your peak flow rates are 50-80% of your personal best. This means your asthma is getting worse and could be improve
   - You may have asthma signs & symptoms such as coughing, wheezing or chest tightness. Your peak flow rates may decrease before symptoms appear
   - You may need to take your rescue inhaler. Call your doctor to talk about making the change to your medication

3. **Red Zone=Danger**
   - Your peak flow rates are less than 50% of your personal best. This means you may be in danger of a medical emergency
   - You may have severe coughing, wheezing and shortness of breath. Stop whatever you are doing. Use your rescue inhaler (albuterol) to open up your airways
   - Your asthma action plan will help you decide whether to call your caregiver or seek emergency care

Why is this important to me?

Your peak flow meter can be used for short-term monitoring in certain situations. It also can be useful for long-term daily monitoring

Short-term monitoring:

1. Starting or changing medications, to see how well they are working
2. Monitoring an increase in asthma symptoms that indicate an attack is starting
3. Monitoring your recovery after an asthma attack
4. Identifying triggers at work or in the environments
5. Monitoring pregnancy-related changes in lung function at prenatal visits

Long-term monitoring can indicate airway narrowing before an asthma attack starts. If you can detect airway narrowing early, you can start taking your medication right away and may be able to avoid a severe asthma attack.

Are there any contraindications to this teaching?

Age and ability of the patient help to determine type of delivery device to use. Cognitive ability to follow directions is essential for teach back.

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References:

Global Initiative for Asthma. Global Strategy for Asthma Management, 2018. www.ginasthma.org

National Heart, Lung and Blood Institute. Expert panel report 3 (EPR-3): Guidelines for the diagnosis and management of asthma (2007). https://www.nhlbi.nih.gov/health-topics/guidelines-for-diagnosis-management-of-asthma

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