Blood Glucose Monitoring

Many people are frightened to check their blood sugar levels because they do not want to see levels that are higher or lower than their target range. However, checking your blood sugars puts you in control of your diabetes. Remember, your blood sugar levels are what they are whether you know about them or not but when you know what they are; you can make adjustments, if needed.

Monitoring your blood sugar levels is the most accurate way of you seeing the effectiveness of your lifestyle changes and medications. Monitoring provides you with the ability to identify possible causes of blood sugar fluctuations.

**Tips for Monitoring**

- Wash your hands with soap in warm water before checking your blood sugar
- Ensure your test strips have not expired
- Remember to calibrate your meter (if your meter requires this)
- Use the sides of your fingers and remember to use different fingers
  - Do not use alternate site testing if you think your blood sugar is very high or low – finger checks give you the most accurate result
- Discuss the with your healthcare team the best times to check your blood sugar level – which may include:
  - Prior to your meal and / or 2 hours after the meal
  - Overnight
  - If you feel unwell
- Record your results in a logbook; this will help you to identify patterns in your levels and make the required changes to get your blood sugar back to your target range; bring your blood sugar records and meter(s) to your healthcare visit - it will help you and your healthcare team to determine your diabetes management needs.
- Never leave your meter or strips in a hot car, it may damage them and give false readings
Most blood sugar meters have the ability to give you your average blood sugar values. This is a great feature for helping you to estimate your glycated hemoglobin (HbA1c) result.

Your HbA1c is a blood test that you can have done every 3 months. This blood test tells you and your healthcare team about your blood sugar control over the previous 3 months.

It is completely normal for blood sugar levels to change throughout the day but sometimes living with diabetes can make you feel like you are riding a rollercoaster; blood sugars are changing from very high to very low & back again.

Monitoring helps you to identify possible reasons for blood sugar changes. If your blood sugar value is out of range, spend one minute to explore possible causes, such as:

- Testing technique - not washing your hands before testing or using expired test strips
- Food – time of last meal, quantity of carbohydrates, type of food
- Alcohol – can increase or decrease your blood sugar levels depending on the type of alcohol and mixers used
- Exercise – amount, type, or timing of exercise with regard to your meal or medication
- Medications – may increase (i.e steroids) or decrease (insulin, sulfonylureas) blood sugar; expired medications may cause a rise in blood sugar
- Illness – Cold or flu can increase your blood sugar levels; treatment may also raise your blood sugar
- Stress – physical and emotional stress can increase your blood sugar levels

People with diabetes are not the same and neither are their blood sugar targets. Here are some general blood sugar targets:

<table>
<thead>
<tr>
<th>measure</th>
<th>ADA</th>
<th>AACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>HbA1c</td>
<td>&lt; 7.0%</td>
<td>&lt; 6.5%</td>
</tr>
<tr>
<td>FPG (mg/dl)</td>
<td>80-120</td>
<td>&lt;110</td>
</tr>
<tr>
<td>2-hr BG (mg/dl)</td>
<td>100-180</td>
<td>&lt;140</td>
</tr>
<tr>
<td>HS BG (mg/dl)</td>
<td>100-140</td>
<td>100-140</td>
</tr>
</tbody>
</table>

For most people with diabetes the desired glycated hemoglobin result is between 6-7% - this relates to an average blood sugar of between 120 to 150mg/dL.