blood sugar testing, ketone testing, and insulin injections

Diabetes Manual · Dayton Children’s endocrinology clinic

blood sugar (glucose) testing

blood sugar testing at home

The most accurate way to monitor a child’s diabetes control is by checking the child’s blood sugar (also called blood glucose). This can be done easily at home by using a glucose meter. The diabetes nurse educator will provide a glucose meter for your child and instruct you on how to use your meter.

Regardless of which meter you use, keep the following points in mind:

• You should only use a meter that has date, time and memory.
• Make sure the correct date and time are programmed in the meter. This is especially important to be able to review the blood sugars in the meter.

• Each meter also has a 1-800 number on the back for assistance. You can call that number 24 hours a day, seven days a week. The meter manual is also helpful if you have problems or forget information.
• It is important to use the proper strip for your glucose meter. Each meter has strips specifically made for that meter. Check the expiration date on each new bottle of strips.
• Your meter will alert you to when the batteries need to be replaced. The batteries can be purchased at local pharmacies.
• Do not expose the meter to extreme heat or cold, such as leaving it in the car in the winter or summer.

blood sugar testing at home

• For your child's safety and best interest, it is necessary to check the blood sugar at least four times a day (before breakfast, lunch, dinner and before bedtime snack).
• Check if your child complains of feeling ill or has symptoms of low blood sugar.
• You will need to check more frequently when your child starts a sport or their activity increases as this will affect their blood sugar.
• For your child's safety when insulin changes are made, you will need to occasionally check the blood sugar at midnight and/or 3:00 am. Follow your nurse or doctor's instructions.
what to do with blood sugar results

1. Initially, keep a written record of your results. These records will help you learn about pattern management and understand dose adjustments. The diabetes team can provide you with blood sugar records that you can use.

   **Example of a glucose record:** You will need to write the following information in the hour closest to the time the event occurs.

<table>
<thead>
<tr>
<th>Date:</th>
<th>12am</th>
<th>3am</th>
<th>6am</th>
<th>7am</th>
<th>8am</th>
<th>9am</th>
<th>10am</th>
<th>11am</th>
<th>12pm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood sugar</td>
<td>BG</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of carbs eaten</td>
<td>Carbs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Units of insulin given</td>
<td>Insulin dose</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gym class, etc.</td>
<td>Exercise</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ketone level</td>
<td>Ketones</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. After being discharged from the hospital, you will need to call in blood sugars daily to the diabetes team. You will receive discharge instructions with your doses, basic daily instructions, and the phone numbers needed to contact the diabetes team. These numbers are in the beginning of this manual.

- There is software available for each glucose meter which allows you to download the blood sugars from the meter to a computer. The software is often available to download from the website for the meter.

3. After the diabetes physician (called an endocrinologist) sees you for your follow-up appointment, you should call as your physician directs and when you suspect a need for insulin adjustments.

- Blood sugars will increase when your child has growth spurts, has an illness or is stressed (example: school tests).
- Even though the child is doing nothing wrong, sometimes they will feel that they will get in trouble due to their blood sugars being high. It is important not to label blood sugars as good or bad; the numbers are just measurements.

Caution: Always confirm written records with the meter’s memory. If incorrect blood sugars are presented to the team, harmful dose adjustments could result.