

Ketone and Sick Day Guidelines for Pump

When to Check for Ketones:

- Blood Sugar >240 mg/dL or CGM >240 mg/dL consistently for more than 3 hours
- Vomiting or Nausea - no matter what the blood sugar is
- Any illness or infection (ex. flu, stomach virus)

Call 911 or go to the ER if moderate/large ketones AND any of the following:

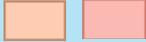
- vomiting that will not stop
- inability to drink or keep fluids down
- labored or fast breathing
- altered mental status (change in how your child is acting)
- signs of dehydration (ex: dark urine, dry mouth/lips, rapid heart rate, decreased diapers, fewer trips to the bathroom)

DON'T FORGET

Change pump site immediately if you suspect a bent cannula, site failure, or bad insulin absorption

Remember: When in doubt, change it out.

- Always keep backup insulin pens or syringes available
- Know how to find your current insulin settings (carb ratio, correction factor, long acting insulin dose) Look for these by checking:
 - Your insulin pump profile settings
 - MyChart - AVS insulin instructions
 - Pump data management platform (ex. Glooko, Tandem Source, Carelink, Beta Bionics, Tidepool)

Ketone Level	Action Plan																
Negative 	Follow regular diabetes care. Check ketones again if your child meets above criteria																
Trace or Small Urine Ketones  Blood Ketones: 0.6 - 0.9	<ol style="list-style-type: none"> 1. Drink age in ounces of sugar free fluid every hour (example an 8 year old would drink 8 oz of fluid per hour) 2. Check ketones every 2 - 3 hours → continue checking until ketones are negative 																
Moderate or Large Urine Ketones  Blood Ketones: >1 *Contact the Diabetes Team if your child has moderate or large ketones for >12 hours	<ol style="list-style-type: none"> 1. Drink age in ounces of fluid every hour (example an 8 year old would drink 8 oz of fluid per hour) <table border="1"> <thead> <tr> <th>Blood Glucose range</th> <th>Fluid Type (adjusted based on blood sugar)</th> </tr> </thead> <tbody> <tr> <td><100</td> <td>Sugary fluids (example: juice, Gatorade, regular soda)</td> </tr> <tr> <td>100-180</td> <td>½ sugary + ½ sugar free fluids (example: ½ juice and ½ water)</td> </tr> <tr> <td>>180</td> <td>Sugar free fluids (example: water, diet soda, Gatorade zero)</td> </tr> </tbody> </table> 2. Give insulin correction dose using your correction formula → repeat correction every 2 hours until ketones reduce to small/trace/negative (continue to follow guidelines overnight/if patient sleeping). 3. Increase Basal Rate on Pump <table border="1"> <thead> <tr> <th>Pump</th> <th>Setting Change Needed</th> </tr> </thead> <tbody> <tr> <td>Tandem Control IQ +</td> <td>Set temp basal of 20% (120%) increase for 12 hours</td> </tr> <tr> <td>Tandem Control IQ</td> <td>Place pump in Sleep Activity for 12 hours</td> </tr> <tr> <td>Omnipod 5, Medtronic 780, or Manual Pump</td> <td>Place pump in manual mode & set temp basal to increase by 20% (120%) for 12 hours</td> </tr> </tbody> </table> 3. Check ketones every 2-3 hours and follow action plan until negative 	Blood Glucose range	Fluid Type (adjusted based on blood sugar)	<100	Sugary fluids (example: juice, Gatorade, regular soda)	100-180	½ sugary + ½ sugar free fluids (example: ½ juice and ½ water)	>180	Sugar free fluids (example: water, diet soda, Gatorade zero)	Pump	Setting Change Needed	Tandem Control IQ +	Set temp basal of 20% (120%) increase for 12 hours	Tandem Control IQ	Place pump in Sleep Activity for 12 hours	Omnipod 5, Medtronic 780, or Manual Pump	Place pump in manual mode & set temp basal to increase by 20% (120%) for 12 hours
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How to Calculate an Insulin Correction Dose

Formula: (Blood Sugar - Target BG) ÷ Sensitivity or Correction Factor = Units of Insulin

Example Only (NOTE: use your own formula provided by your Diabetes Team)

Blood Sugar = 255 Target = 130 Correction Factor = 20

Calculation: (255 - 130) = 125 ÷ 20 = 6.2 → Round down to 6 units