



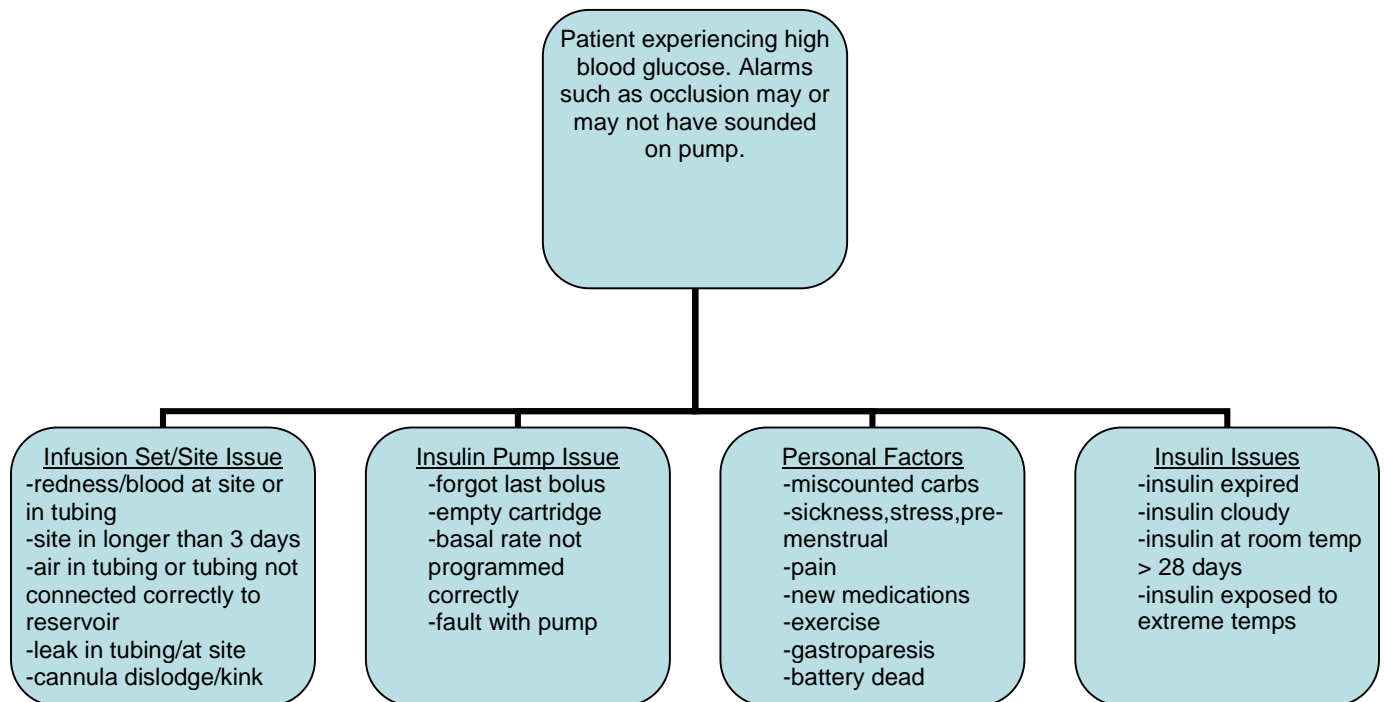
# perfecting pumps: unexplained highs and ketones

## why worry?

High blood glucose (BG) leads to complications of diabetes and Diabetic Ketoacidosis (DKA) can occur very rapidly if a pump problem occurs. DKA is a very dangerous condition that can occur quickly and needs to be treated quickly.

| most common causes of highs                                      | solution   |
|--|--|
| <input type="checkbox"/> Miscalculated Carbs                     | Do a 24hr diet history to assess carb counting skills.                       |
| <input type="checkbox"/> Insulin delivery issue at infusion site | Run through the following "flow chart" with patient to diagnose the problem. |

## unexplained highs flow chart



### smart pumping tip

#### when in doubt change it out!!!!

If you have unexplained high BG'S readings >12-14mmol/l or more then twice in a row, change the cartridge, reservoir and tubing and check for ketones.

#### Caution:

Nausea is an early sign of DKA.

If you are feeling sick to your stomach, check for ketones.



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## Solutions to pump problems

| problem                     | potential cause   | trouble shooting   |
|-----------------------------|---|--|
| <b>Clog</b>                 | -#1 cause is a kink in cannula or a scar at infusion site<br>-pump was suspended for several hours<br>-expired insulin<br>- you may have used lotions/skin products in the insertion site area<br>-tubing exposed to extreme temperatures | 1. Remove entire infusion set from body and prime tubing as per manufacturers guidelines. If no insulin appears it is a safe assumption that there is a clog/blockage somewhere in the tubing.<br>2. Change the ENITRE set including reservoir, site and tubing.<br>3. Use new batch of insulin.<br>4. Call your pump company support line if needed.<br>5. Use the appropriate size cannula for your body type. |
| <b>Leaks</b>                | line leaks  | Replace your entire set.   |
|                             | hub leaks   | Replace your entire set.   |
|                             | o-ring leaks  | Replace your entire set.   |
| <b>Tunneling of insulin</b> | -may happen if you site gets pulled or dislodged slightly<br>-more common with 90 degree sites  | 1. Make sure you tuck in loops of tubing so they do not get caught.<br>2. Change your site every 3 days.   |

