

insulin timing and rotation

before or after?

We often have families ask if they should give the insulin before the meal or after the meal. Giving mealtime insulin before meals is best (unless told by your diabetes doctor to do it after) because the blood glucose (BG) doesn't go up as high as it does when the insulin is given after meals. If your child is very young, throwing up or has a low BG, the doctor may recommend giving it after the meal. If a child is given insulin before the meal, but doesn't finish all of the carbs, those carbs can be replaced with another carb-containing item like milk, crackers, juice, etc. For example, if you gave your child insulin for 60 grams of carbs, but he only ate 40 grams, you need to give him something that has 20 grams of carbs to make up for what he didn't finish.

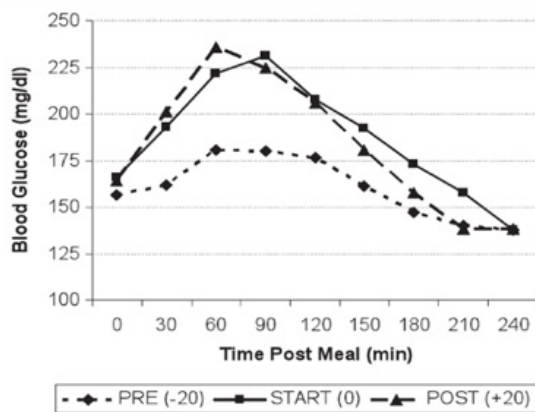


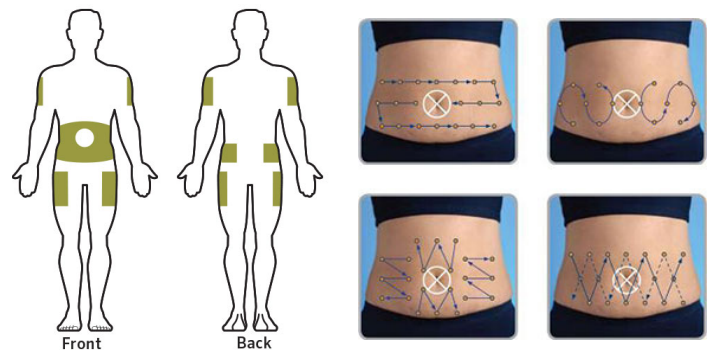
FIG. 1. Mean BG levels after meal initiation in three treatment arms: PRE, bolus 20 min before the meal; START, bolus at the meal start; and POST, bolus 20 min after the meal start. $P < 0.05$ for PRE versus START for 60, 90, and 120 min and for PRE versus POST for 30, 60, 90, 120, and 150 min.

Graph provided by old.childrenwithdiabetes.com

The graph above shows what happens to the blood glucose when giving the insulin before the meal (20 minutes before), at the start of the meal, or after the meal (20 minutes after the start of the meal).

rotating sites

It's very important to move around, or rotate, where you give your child's insulin. Insulin must be given in fatty tissue, so the areas in the picture below are best.

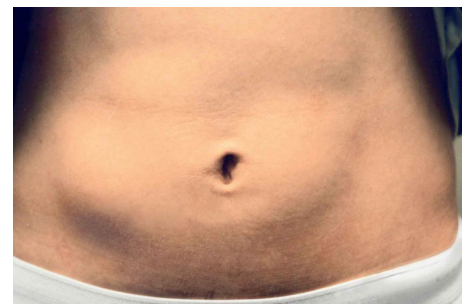


Picture provided by diabetesforecast.org

Picture provided by clinidiabet.com

Some people rotate by giving the shots in a different site each time. Other people rotate within a site like in the picture on right above for a week, then move to another site like the leg, arm or hip.

If your child only gets insulin in one area, fatty tissue can build up. This is called lipohypertrophy. If this happens and they keep getting insulin in that same area, the insulin isn't able to work as well, causing the BGs to be higher. The fatty tissue buildup can go away if you stop giving insulin in that area. Moving the injection sites around helps to prevent the build-up from happening.



Picture provided by mylife-diabetescare.com