



## Changing from *Short-acting (Humulin R)* to *Rapid acting analog (Humalog)* insulin **What you need to know**



Key points for families and youth living with type 1 diabetes

### What is different between Humalog and Humulin R?

Rapid acting insulin such as Humalog works more like the body's natural insulin that is produced after we eat a meal. It is preferred to short acting human insulin such as Humulin R because:

1. Humalog takes 15-30 minutes to start working, which is faster than Humulin R insulin that takes 30–60 minutes to work.
  - ❖ This means it can be injected closer to a meal. It should be injected 10-15 min before a meal, or before starting the meal, especially if blood glucose level is less than 100 mg/dL (less than 5.6mmol/L).
  - ❖ In toddlers/children who are unpredictable eaters, the Humalog dose can be given straight after the meal and the dose adjusted to the amount of carbohydrate eaten.
2. The strongest action of Humalog is 1-2 hours after injection, while Humulin R has its strongest action between 2-4 hours.
  - ❖ This means hypoglycemia can occur earlier after a meal, but generally the risk of hypoglycemia is lower compared to Humulin R.
  - ❖ Check blood glucose levels around 2 hours after a meal, to see if the dose was right for the meal
3. Humalog doesn't last as long as Humulin R; it wears off around 3-5 hours after injection while Humulin R can last 6-8 hours
  - ❖ This means that a snack between meals is not usually needed with Humalog (with Humulin R snacks are often needed to prevent hypoglycemia in between meals).

**REMEMBER - watch out for hypoglycemia around 2 hours after a meal when using Humalog as it works faster than Humulin R.**

**Always carry sugar with you/your child such as juice, sugar cubes or soft sweets.**

- ❖ On the other hand, if you do eat a snack, you will need a small dose of Humalog to cover it.

### What are the benefits of changing to rapid acting Humalog insulin

- Can fit better with school/work/life schedules
- Lowers stress and anxiety for families when a child's appetite is unpredictable
- Can make daily diabetes care more flexible and safer, with decreased risk of hypoglycemia and after-meal hyperglycemia.

### Take-home message for parents and youth



Humalog works faster and doesn't last as long as Humulin R. This can make it easier, more flexible and safer to use. But pay close attention to blood glucose levels in the first 2 hours after a meal.

Hypoglycemia (and hyperglycemia- high blood glucose) can be minimized if the Humalog dose is adjusted to the amount of carbohydrate food eaten with the meal (called carbohydrate counting) – ask if you are unsure.

**Your diabetes healthcare professional will help you with the change. Don't be afraid to ask questions!**