

Nursing Alert

The human insulins from various manufacturers may be interchangeable, but human insulin and pork insulin or pure pork insulin should never be substituted for one another.

Box 28-14

Types of Insulin

There are four types of insulin, based on the following criteria:

- How soon the insulin starts working (onset)
- When the insulin works the hardest (peak time)
- How long the insulin lasts in the body (duration)

However, each person responds to insulin in his or her own way. That is why onset, peak time, and duration are given as ranges.

Rapid-acting insulin (e.g., NovoLog) reaches the blood within 15 minutes after injection. The insulin peaks 30 to 90 minutes later and may last as long as 5 hours.

Short-acting (regular) insulin (e.g., Novolin R) usually reaches the blood within 30 minutes after injection. The insulin peaks 2 to 4 hours later and stays in the blood for about 4 to 8 hours.

Intermediate-acting insulins (e.g., Novolin N) reach the blood 2 to 6 hours after injection. The insulins peak 4 to 14 hours later and stay in the blood for about 14 to 20 hours.

Long-acting insulin (e.g., Lantus) takes 6 to 14 hours to start working. It has no peak or a very small peak 10 to 16 hours after injection. The insulin stays in the blood between 20 and 24 hours.

Some insulins come mixed together (e.g., Novolin 70/30). For example, you can buy regular insulin and NPH insulins already mixed in one bottle, which makes it easier to inject two kinds of insulin at the same time. However, you cannot adjust the amount of one insulin without also changing how much you get of the