DID YOU KNOW?

PharMerica®

Did You Know Certain Insulins Can Be Mixed?

Why mix insulins?

Insulin administration can be a time-sink for nursing staff and an uncomfortable experience for residents. Mixing insulins decreases the frequency of potentially disagreeable administrations and expedites med pass time.

However, not all insulins are compatible for mixing.

Certain products may be inappropriate for mixing if they are in the same or similar classes (similar pharmacokinetic properties would contraindicate their concomitant administration), if they are produced by different manufacturers (different buffering agents and preservatives used may precipitate or alter insulin products), if the insulin is packaged in any dosage form other than a vial (i.e., pens), or if the product's label indicates it should not be mixed for any other reason.

Can I mix these insulins?

Yes Compatible Class AND product labels specifically support mixing

No Same Insulin Incompatible class / ≥ 1 product's label does not affirm admixture

	Novolog[1]	Fiasp[2]	Humalog[3]	Admelog[4]	Apidra[5]	Humulin R[6]	Novolin R[7]	Humulin N[8]	Novolin N[9]	Insulin Glargine[10]	Tresiba[11]
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- This chart summarizes compatibilities among available insulin types and highlights explicit guidance found in the "Mixing of Insulins" statements within the Warning & Precautions section of each products' FDA labels.
- This chart assumes a conservative approach to guiding insulin mixing by basing compatibility on explicit label statements from both involved products, such that mixing does not violate either insulin's package insert instructions.
- The decision to mix insulins should be informed by product specifications, applicable laws, and corporate policies, with ultimate determination contingent upon the most stringent parameter to your practice.

Don't see the type of insulin you're looking for?
Checkout this brand-generic cheat sheet!

Rapid acting Insulin

Insulin Aspart: Novolog®, Fiasp®
Insulin Lispro: Humalog®, Admelog®
Insulin Glulisine: Aprida®

Short Acting Insulin

Insulin Regular: Humulin®R, Novolin®R

Intermediate acting Insulin

NPH: Humulin®N, Novolin®N

Long Acting Insulin

Insulin Glargine: Lantus®, Basaglar®, Toujeo®
Insulin Degludec: Tresiba®

What do the package inserts say?

1. **NOVOLOG** can ONLY be mixed with NPH insulin.
    - NOVOLOG should be drawn into the syringe first, and the mixture should be injected immediately after mixing.

2. **FIASP** should NOT be mixed with any other insulin.

3. **HUMALOG** for subcutaneous injection should NOT be mixed with insulin preparations other than NPH insulin.
    - HUMALOG should be drawn into the syringe first and the injection should occur immediately after mixing.

4. **ADMELOG** should NOT be mixed with any other insulin.

5. **APIDRA** should NOT be mixed with insulin preparations other than NPH insulin.
   - APIDRA should be drawn into the syringe first and Injection should occur immediately after mixing.

6. **HUMULIN R** should NOT be mixed with insulins other than NPH insulin – specifically HUMULIN N.
   - To mix HUMULIN R and HUMULIN N, draw HUMULIN R into the syringe first. Inject immediately after mixing.

7. **NOVOLIN R** should ONLY be mixed with NPH insulin.
   - NOVOLIN R should be drawn into the syringe first and the mixture should be injected immediately after mixing.

8. **HUMULIN N** MAY be mixed with a prandial insulin if indicated – HUMULIN R or HUMALOG before injection.
   - If HUMULIN N is mixed with HUMULIN R, HUMULIN R should be drawn into the syringe first. Injection should occur immediately after mixing.
   - If HUMULIN N is mixed with HUMALOG, HUMALOG should be drawn into the syringe first. Injection should occur immediately after mixing.

9. **NOVOLIN N** CAN be mixed in the same syringe with NOVOLIN R.
   - When mixing, NOVOLIN R should be drawn into the syringe first, followed by the NOVOLIN N. The mixture should be injected immediately after mixing.

10. **LANTUS**, **BASAGLAR**, and **TOUJEO** (3 available forms of Insulin Glargine) must NOT be mixed with any other.

11. **TRESIBA** Do NOT dilute or mix with any other insulin or solution.

Rule of Thumb:

A. Both insulins proposed for mixing should be produced by the same manufacturer (as different manufacturers use varying buffer agents that may precipitate or otherwise cause incompatibility when mixed).

B. When mixing insulins, shorter-acting insulins should be drawn first and longer-acting insulins added to this syringe. Typically, this will cause a "clear-before-cloudy" approach, as intermediate- and long-acting insulins may have more cloudy appearances.

C. Insulin mixtures are NEVER appropriate for IV or pump administration.

Additional Resources: **Global RPh Insulin Mixing Tool**