















## Insulin Drug Information

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Type	Generic Name	Brand Name	Appearance	after opening	
				Storage duration	Storage Temp.
Rapid-acting	Insulin aspart 	NovoRapid Penfill	Clear	4 weeks	< 30°C
	Insulin aspart 	NovoRapid FlexPen	Clear	4 weeks	< 30°C
	Insulin Glulisine 	Apidra	Clear	4 weeks	< 25°C
Short-acting	Human Insulin (Regular) 	Actrapid HM (RI)	Clear	6 weeks	< 30°C
Pre-mixed (fixed ratios; combination of short and long-acting, or combination of insulin and GLP-1receptor agonist )	Insulin Aspart30%, Protamine70% 	NovoMix 30 FlexPen	Cloudy	4 weeks	< 30°C
	Insulin Aspart50%, Protamine50% 	NovoMix 50 FlexPen	Cloudy	4 weeks	< 30°C
	Insulin Lispro25%, Lispro Protamine75% 	Humalog Mix 25 KwikPen	Cloudy	4 weeks	< 30°C
	Insulin Lispro50%, Lispro Protamine50% 	HUMALOG MIX 50 KwikPen	Cloudy	4 weeks	< 30°C
	Insulin degludec70%, Aspart30% 	Ryzodeg	Clear	4 weeks	< 30°C
	Insulin glargine (100U/ml) + Lixisenatide (50mcg/mL) 	Soliqua	Clear	4 weeks	< 30°C
Intermediate-acting	Human Insulin (Lente) 	Insulatard HM (NPH)	Cloudy	6 weeks	< 25°C
Long-acting	Insulin degludec 	Tresiba	Clear	4 weeks	< 30°C

	Insulin Glargine				
		Toujeo SoloStar	Clear	4 weeks	$<30^{\circ}\text{C}$

### 1. What is this drug used for?

Human insulin is used to control blood sugar in people who have type 1 diabetes (condition in which the body does not make insulin and therefore cannot control the amount of sugar in the blood) or in people who have type 2 diabetes (condition in which the blood sugar is too high because the body does not produce or use insulin normally) that cannot be controlled with oral medications alone. Human insulin is in a class of medications called hormones. Human insulin is used to take the place of insulin that is normally produced by the body. It works by helping move sugar from the blood into other body tissues where it is used for energy. It also stops the liver from producing more sugar. All of the types of insulin that are available work in this way. The types of insulin differ only in how quickly they begin to work and how long they continue to control blood sugar.

### 2. What are some things I need to know or do while I take this drug?

- (1) Your doctor will prescribe your exact dose and tell you how often it should be given. Always use your insulin and adjust your dose exactly as your doctor has told you. Before drawing into the syringe and injection, roll the vial between your hands until the temp is not cold.
- (2) Rapid-acting insulin should be injected immediately before meals or within 10-15 minutes of starting a meal. Short-acting insulin should be injected 30 minutes before a meal. Have food containing carbohydrates ready before injection. If hypoglycemia occurs before injection (blood sugar  $<70\text{mg/dl}$ ), please deal with hypoglycemia first.
- (3) Before use, roll the pre-mixed insulin between your hands about 20 times until it is evenly suspended.
- (4) If you have to mix two types of insulin, rapid-acting or short-acting insulin should draw up first and then intermediate-acting insulin.

### 3. Possible Side Effect

- (1) Low blood sugar (hypoglycaemia) is a very common side effect. It may affect more than 1 in 10 people. Signs of low blood sugar: Cold sweat; cool pale skin; headache; rapid heartbeat; feeling sick; feeling very hungry; temporary changes in vision; drowsiness; unusual tiredness and weakness; nervousness or tremor; feeling anxious; feeling confused; difficulty in concentrating. At this time, you should immediately eat foods containing 10-15 grams of easily absorbed sugar, such as 3-4 sugar cubes or a tablespoon of honey. If there is no improvement or you experience confusion, cramps, or

coma, you should go to the hospital immediately.

- (2) Sometimes redness, swelling, and itching at the injection site usually subside after a few days or weeks.
- (3) If you inject insulin at the same place, the fatty tissue may shrink (lipoatrophy) or thicken (lipohypertrophy) (may affect less than 1 in 100 people). Move site where you give the shot each time.
- (4) Some side effects are severe but rare, like systemic allergic reactions. It may induce rash and/or itching over the whole body, shortness of breath, wheezing, sudden drops in blood pressure, sweating, or a fast heartbeat. You should go to the emergency department immediately when these signs and symptoms happen.

#### **4. What do I do if I miss a dose?**

If you forget to take your insulin your blood sugar may get too high (hyperglycaemia). Please measure the blood sugar level and adjust it according to the blood sugar adjustment method informed by your doctor. If in doubt, please ask your doctor, diabetes health care provider, or pharmacist.

#### **5. How do I store this drug?**

- (1) Before opening: Insulin that is not being used is to be stored in the refrigerator at 2 °C to 8 °C, away from the cooling element. Do not freeze.
- (2) During use or when carried as a spare: Do not refrigerate or freeze. You can carry it with you and keep it at room temperature (below 25 °C) for up to 4-6 weeks. (See above table) Any remaining insulin must be discarded. When traveling, please put insulin in your carry-on luggage, away from shaking, light and heat.
- (3) Always keep the glass vial (eg. Actrapid, Insulatard) in the outer carton when you are not using it, in order to protect from light.

#### **6. How do I store and/or throw out this drug?**

- (1) Do not throw your medical sharps (lancets and pen needles) directly into the trash or flush them down the toilet.
- (2) Put them into a sharps container. You can use an empty, hard, opaque (not see-through) plastic container that has a screw-on cap, such as a laundry detergent bottle. Do not store sharps in glass bottles, soda bottles, milk jugs, aluminum cans, coffee cans, or paper or plastic bags.
- (3) Please go to a pharmacy or clinic that provides medical waste disposal services near your home or the hospital for instructions.

\*This leaflet cannot provide complete drug information.  
Please consult doctors or pharmacist if you have any questions.  
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