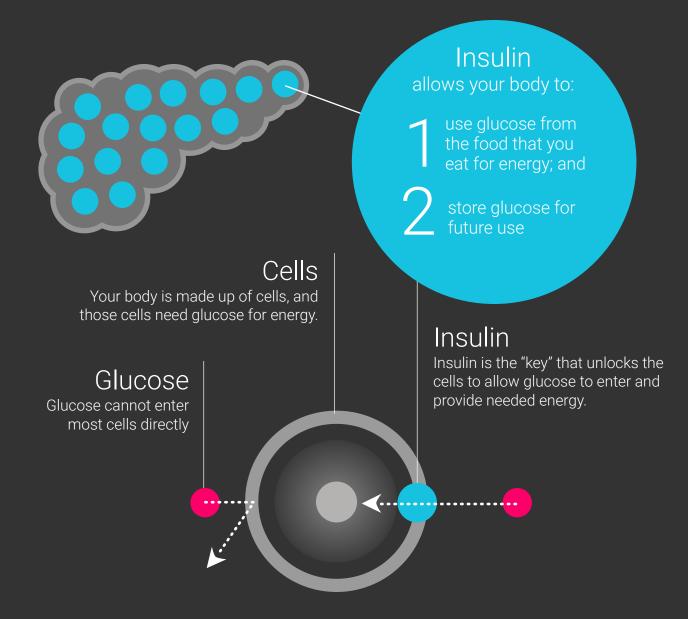
is a hormone made in the pancreas that helps to regulate the amount of glucose (sugar) in your blood.





bloodstream. Insulin attaches to the body's cells and signals them to absorb sugar from the surrounding blood. As sugar moves from the bloodstream and into

When food is consumed and blood glucose levels rise, the body releases insulin into the

get the energy they need.

the cells, blood glucose levels drop and cells



a condition where glucose builds up in the bloodstream due to a lack of insulin and/or insulin resistance.

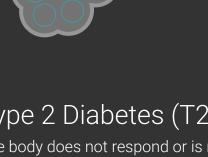
diabetes

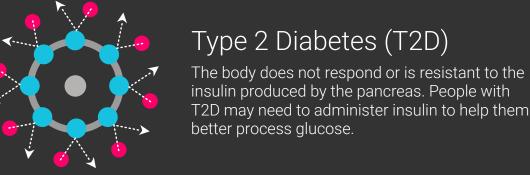
Type 1 Diabetes (T1D) The body does not make its own insulin



that the body can process glucose.

because the insulin-producing cells of the pancreas have been damaged or destroyed. People with T1D must administer insulin so



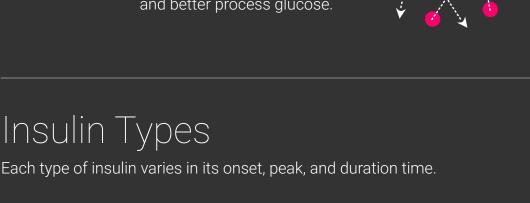


and better process glucose.

Gestational Diabetes

The body is not able to make and use all the insulin it needs for pregnancy. People with gestational diabetes may need to administer insulin to meet their bodies' insulin needs

Insulin Types



Onset how soon insulin starts to lower your blood glucose after you take it

Brand Name

Afrezza

Humulin R

Novolin R

Humulin N

The table below shows different types of insulin available today. Onset, peak, and duration times may vary from person to person — the times shown below are estimates based on manufacturer prescribing information and clinical studies.

Peak

how long after dosing

insulin has the maximum

blood glucose-lowering

effect

Manufacturer Generic Name

Technosphere

Inhaled Insulin

Regular

Regular

NPH or isophane

Duration

how long an insulin dose

lasts in your body, i.e., the

length of time a particular

insulin dose will have a blood glucose-lowering effect.

Onset Peak Duration 12 min 35-45 min 1.5-3 h

3 h

1.5-3.5 h

6-10 h

8 h

8 h

up to 24 h

30 min

30 min

1-1.5 h

Sanofi 15 min 2-4 h Apidra Glulisine 1 h Lilly 1 h 3-5 h Humalog Lispro 15 min Novo Nordisk 45 min 15 min 3-5 h Novolog **Aspart**

MannKind

Lilly

Lilly

Novo Nordisk

Intermediate-acting

Insulins

Type

Rapid-acting

Short-acting

	Novolin N	Novo Nordisk	NPH or isophane	1.5 h	4-12 h	up to 24 h
Long-acting	Lantus	Sanofi	Glargine	1 h	none*	up to 24 h
	Toujeo	Sanofi	Glargine	6 h	none*	up to 30 h
	Basaglar	Lilly	Glargine	1 h	none*	up to 24 h
	Levemir	Novo Nordisk	Detemir	1 h	none*	up to 24 h
	Tresiba	Novo Nordisk	Degludec	1 h	none*	up to 42 h
Pre-Mixed	Humalog Mix 75/25	Lilly	75% lispro protamine 25% lispro	15 min	2-3 h	up to 24 h
	Humalog Mix 50/50	Lilly	50% lispro protamine 50% lispro	15 min	2-3 h	up to 24 h
	Novolog Mix 70/30	Novo Nordisk	70% aspart protamine 30% aspart	15 min	1-4 h	up to 24 h
	Humulin 70/30	Lilly	70% NPH 30% regular	50 min	3.5 h	up to 24 h
	Novolin 70/30	Novo Nordisk	70% NPH 30% regular	30 min	2 h	up to 24 h
	Ryzodeg 70/30	Novo Nordisk	70% insulin degludec 30% insulin aspart	15 min	2 h	up to 42 h
* The blood glucose lowering effect is relatively constant with no pronounced peak.						
Relative Insulin Effects						
Relative	Insulir -	n Effec	ets			

Time (hours)

Pre-mixed Short- and Intermediate-acting (e.g., Humulin 70/30, Novolin 70/30)

Rapid-acting (e.g., Humalog, Novolog, Apidra)

Short-acting (e.g., Regular)

Intermediate-acting (e.g., NPH) Long-acting (e.g., Lantus, Levemir) Very Long-acting (e.g., Tresiba)

Pre-mixed Analog (e.g., Humalog Mix 75/25, Novolog Mix 70/30)

Insulin Type

We're in this together.





Manufacturer prescribing information and clinical studies.

References:

November 16, 2016