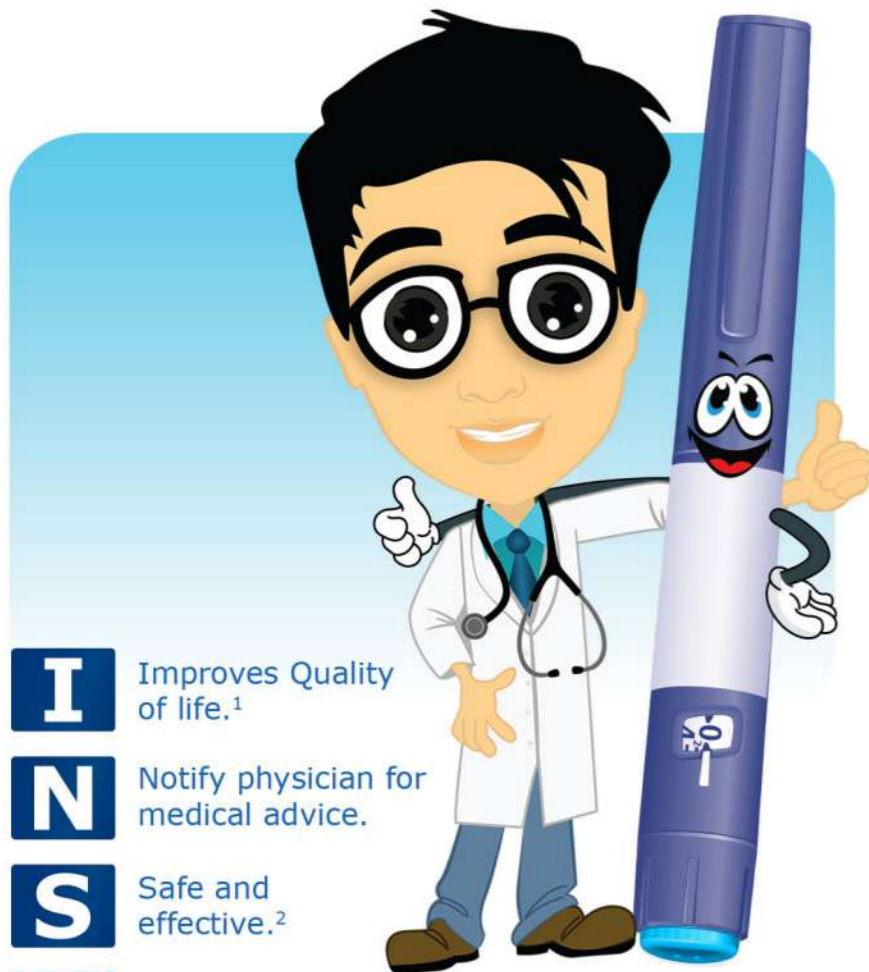


# INSULIN IS OUR FRIEND

(Understanding Diabetes and Insulin)



- I** Improves Quality of life.<sup>1</sup>
- N** Notify physician for medical advice.
- S** Safe and effective.<sup>2</sup>
- U** Upgraded treatment is not a sign of failure.<sup>3</sup>
- L** Live a longer life with less complications.<sup>2</sup>
- I** Initiate early.<sup>2</sup>
- N** Inject using the proper technique.<sup>4</sup>
- N** Never compromise on your health.

References:  
 1. <http://a1chieve.com/en/reports-generator/philippines> last accessed: 15 Aug 2016  
 2. UK Prospective Diabetes Study (UKPDS) Group. Intensive blood-glucose control with sulphonylureas or insulin compared with conventional treatment and risk of complications in patients with type 2 diabetes (UKPDS 33). *Lancet*. 1998 September; 352: 837-853.  
 3. Gupta K, Gupta S. Barriers to Insulin Therapy. *Journal of Diabetes Education*. 2013; 1(3): 17-23.  
 4. Frid A, Hirsch L, Gospar R, Hicks D, Koenig G, Lierack J, Letourneur C, Sawanet JF, Tubiana-Ruff N, Strauss K. New injection recommendation for patients with diabetes. *Diabetes & Metabolism*. 2010;36:53-58.

## FOREWORD

We hope that this insulin quick guide will be a useful reference for both patients and healthcare providers about insulin therapy and Diabetes. This should only be used as a guide and should not be intended to replace any medical advice provided by your doctor. If you need further information, or have any concerns, your doctor will be happy to help you.

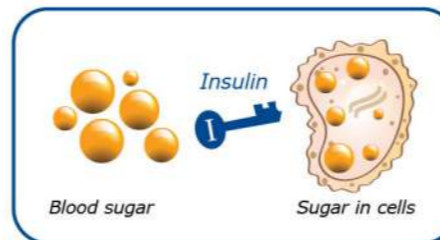
**Remember:**  
 Diabetes should not stop you from enjoying your life. We are here to support you!

**Insulin is the most effective anti-diabetic agent.**

Nathan DM et al. *Diabetes Care*. 2009;32:193-203.

### What is Insulin?

- A hormone produced by the pancreas
- Insulin is needed for blood glucose to enter into body cells like a "key" (fat tissue and muscles) to be used for energy production

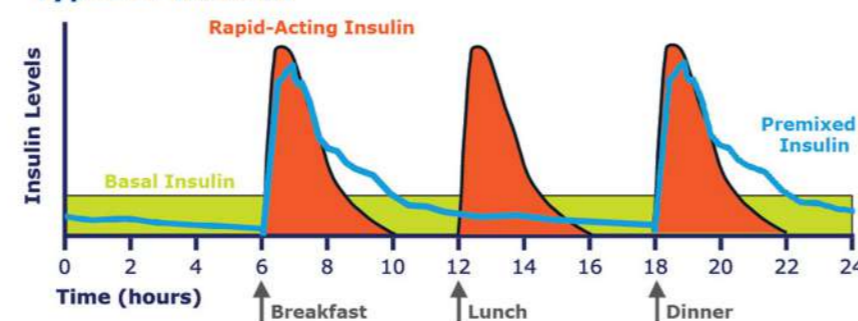


### How does insulin work?

- Once inside the cells, the sugar provides energy to the body
- The liver needs assistance from insulin to start the process of storage of glucose in the form of glycogen
- If insulin is absent, deficient or defective, glucose remain in high amounts in the blood

Reference: Cornerstone4Care Novo Nordisk USA 2013

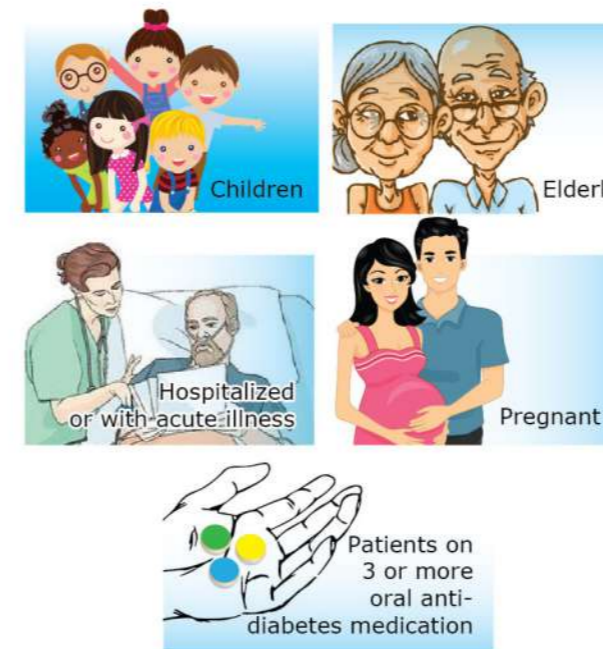
### Types of Insulin:



Adapted from Hirsch IB. *N Engl J Med*. 2005;352:174-183.

### Who will benefit from Insulin?

All patients with Diabetes, especially those who are:



### Possible Unwanted Effects of Insulin

Although insulin is a hormone that the body makes naturally, injecting it may cause some unwanted effects. Here are two to be aware of:

- **Redness, swelling, or itching at the place where you inject.** If this reaction happens, let your diabetes care team know. Changing to a different kind of insulin may solve the problem
- **Hypoglycemia or low blood sugar.** You may get low blood sugar if you take too much insulin, don't eat enough, or are more active than usual. When your blood sugar gets too low, you may feel:



and/or a blood sugar result of **<70mg/dL**

Some people may not have any signs of low blood sugar before they have a problem. This is another reason why regular blood sugar checks are important.

Cornerstones4Care™ January 2013

## Hypoglycemia Management

- 1 **Eat/Drink 15 grams of carbohydrates such as:**  
 1/2 cup of regular softdrinks (not diet)  
 1/2 cup of fruit juice  
 3 teaspoons of table sugar  
 3 pieces of hard candy
- 2 **Wait for 15 minutes**
- 3 **Check Blood Sugar**
- 4 **If less than 70 mg/dL, Repeat Steps 1-4**

Reference: <http://www.diabetes.org/living-with-diabetes/treatment-and-care/blood-glucose-control/hypoglycemia-low-blood.html>

## How can we prevent Hypoglycemia?

- Eat meals on time
- Take snacks in between meals
- Take bedtime snacks
- After a few minutes of injecting rapid or premixed insulin, a meal should follow
- Avoid over-exercising or doing unplanned physical activity
- Avoid injecting insulin in the muscle
- Inject only the prescribed dose



**HOTLINE:**  
 Mobile : 09162367936 (Globe)  
 Landline : 02-85885400 Ext. 7218  
 (08:00AM-5:00PM)



At Novo Nordisk we are changing diabetes. In our approach to developing treatments, in our commitment to operate profitably and ethically and in our search for a cure.

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