

**Recommended Maximum Storage Recommendations for Human/Analog Insulin Products**  
(Per manufacturer guidelines, Revised 10/08)

Product	Refrigerated (36-46°F; 2-8°C)		Room Temperature (59-86°F; 15-30°C)	Notes
	Opened*	Unopened	Open/Unopened	
<b>Novo-Nordisk vials</b>				
Novolin R®	30 days	Until exp. date	30days	Manufacturer sites United States Pharmacopoeia Dispensing Information and the American Diabetes Association for recommendations.
Novolin N®				
Novolin ®70/30				
Novolog®	28 days	Until exp. date	28 days	
Novolog® Mix ®70/30	28 days	Until exp. date	28 days	
Levemir®	42 days	Until exp. date	42 days	
<b>Novo-Nordisk Novolin® Innolet ®</b>				
Novolin R® Innolet®	Not recommended	Until exp. date	28 days	In-use Innolet® doses should not be refrigerated.
Novolin N® Innolet®	Not recommended	Until exp. date	14 days	
Novolin ®70/30 Innolet®	Not recommended	Until exp. date	10 days	
<b>Novo-Nordisk FlexPen®</b>				
Novolog® FlexPen®	Not recommended	Until exp. date	28 days	In-use FlexPen® prefilled insulin syringe should not be refrigerated.
Novolog® Mix 70/30 FlexPen®	Not recommended	Until exp. date	14 days	
Levemir® Flexpen®	Not recommended	Until exp. date	42 days	
<b>Novo-Nordisk Novopen®3, InDuo®, and Innolet®, Novopen® Junior cartridges</b>				
Novolin® R PenFill®	Not recommended	Until exp. date	28 days	PenFill® cartridges currently in use should not be refrigerated after insertion into the insulin delivery device.
Novolin® N PenFill®	Not recommended	Until exp. date	14 days	
Novolin® 70/30 PenFill®	Not recommended	Until exp. date	10 days	
Novolog® PenFill®	Not recommended	Until exp. date	28 days	
Novolog Mix® 70/30 PenFill®	Not recommended	Until exp. date	14 days	
Levemir® PenFill®	Not recommended	Until exp. date	42 days	
<b>Lilly vials</b>				
Humulin® R	28 days	Until exp. date	28 days	
Humulin® R Concentrated U-500				
Humulin® N				
Humulin® 70/30				
Humalog®				
Humalog® Mix 75/25™				
Humulin® 50/50				
Humalog ®Mix 50/50™				
<b>Lilly cartridges</b>				
Humalog® 3ml cartridge	28 days	Until exp. date	28 days	Opened cartridges should be stored in the Pen at room temperature and may be stored outside of the Pen in the refrigerator.
<b>Lilly pens</b>				
Humulin ®N	Not recommended	Until exp. date	14 days if opened*	*For unopened pens stored at room temperature, it is recommended to call Lilly with “approximate temperature and length of exposure” for stability determination.
Humulin® 70/30	Not recommended	Until exp. date	10 days if opened*	
Humalog®	Not recommended	Until exp. date	28 days if opened*	
Humalog ®Mix 75/25™	Not recommended	Until exp. date	10 days if opened*	
Humalog ®Mix 50/50™				
<b>Aventis products</b>				
Lantus® vial	28 days	Until exp. date	28 days	In-use should not be refrigerated.
Lantus® cartridge	Not recommended			
Lantus® Solostar Pen				
Apidra® vial	28 days			
Apidra® cartridge	Not recommended			
<b>MISC. NON-INSULIN INJECTABLE AGENTS</b>				
<b>Amylin products</b>				
Byetta® pen	30 days	Until exp. date	30 days	
Symlin® vial	28 days		28 days	
Symlin® pen				

\*Open defined as a vial or cartridge that has been entered or punctured

## **Manufacturer Contact Information**

Novo Nordisk 1-800-727-6500

Eli Lilly 1-800-545-5979

Sanofi-Aventis 1-800-207-8049

Amylin 1-858-552-2200, Symlin specific information 1-800-349-8919, Byetta specific information 1-800-868-1190

## **General Storage Guidelines for Insulin Products**

In addition to some simple “dos” and “do nots” regarding the storage of insulin, there are multiple factors in determining how long insulin products should be kept once in-use. Generally, insulin not in-use (meaning never opened) should be stored in the refrigerator. Insulin vials in-use (or once opened) may be stored in the refrigerator or at room temperature. However, insulin should be at room temperature at the time of administration. Pens and other insulin devices available today are typically stored at room temperature once in-use. The following are more specific recommendations set forth by various organizations and manufacturers to help in counseling your patients with diabetes on the proper storage of insulin.

### **DO NOT:**

- Use insulin beyond the manufacturer’s expiration date stamped on bottle
- Use insulin abnormal in appearance
- Freeze insulin or use product that has been frozen
- Shake insulin excessively

### **DO:**

- Protect insulin from heat and light
- Inspect insulin prior to each use for abnormal appearance

Specific storage guidelines provided by the manufacturer of the particular insulin should be followed.

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