

Insulin specific properties - Basal insulin

Agent (100 units/mL unless otherwise specified)	Onset ¹	Peak ¹	Duration ¹	Comments	Coverage (ODB ²⁸ , NIHB ²⁹)	Dosage forms ²⁸	Drug cost for dosage forms ³⁰	Drug cost for usual dose* (for 100 days supply)	
								50 units/day (basal alone)	25 units/day (basal + bolus; cost is for the basal component)
Intermediate-acting									
NPH (Humulin® N)	1-2h	5-8h	14-18h	<ul style="list-style-type: none"> • More erratic absorption vs. long-acting analogues • If a patient is dosed bid, the need for a lunch dose of prandial (bolus) insulin may be delayed¹¹ • Max units/dose:** 60 for prefilled and reusable pens¹¹ 	ODB ✓ NIHB ✓	5x3mL prefilled pens	\$71	\$185	\$127
(Novolin®ge)						5x3mL cartridges	\$62	\$167	\$114
						10mL vial	\$36	\$143	\$89
						5x3mL cartridges	\$60	\$167	\$114
						10mL vial	\$35	\$143	\$89
†NPH pork (Hypurin®)	1-3h	6-12h	24-48h	<ul style="list-style-type: none"> • Not often used in practice due to a lack of coverage, cost and inconvenience with vial/syringes 	ODB × NIHB ×	10mL vial	\$125	\$584	\$355
Long-acting									
Degludec (Tresiba®)	1h	No peak	>42h	<ul style="list-style-type: none"> • Duration useful for shift workers¹ • Can increase the dose by increments of 1 unit • Max units/dose:** 80 for prefilled pen³¹ 	ODB ✓ NIHB ✓	5x3mL prefilled pens	\$129	\$370	\$250
Degludec 200 units/mL (Tresiba®)	1h	No peak	>42h	<ul style="list-style-type: none"> • Duration useful for shift workers¹ • 200 units/mL can be started if larger doses are required • Can increase the dose by increments of 2 units • Bioequivalent to degludec 100 units/mL³¹ • Max units/dose:** 160 for prefilled pen³¹ 	ODB ✓ NIHB ✓	3x3mL prefilled pens	\$153	\$442	\$298
Detemir (Levemir®)	1.5h	Al- most peak- less	6-24h	<ul style="list-style-type: none"> • Duration of action may be shorter at lower doses and may require bid dosing (cut-off varies by patient)¹ • If a patient is experiencing nocturnal hypoglycemia with a bedtime dose, lower the dose, inject the dose in the morning or split daily dose to bid • Max units/dose:** 80 for prefilled pen, 60 for reusable pen¹¹ 	ODB ✓ NIHB ✓	5x3mL prefilled pens 5x3mL cartridges	\$129 \$128	\$370 \$367	\$250 \$247
Glargine (Basaglar™)	1.5h	Al- most peak- less	24h	<ul style="list-style-type: none"> • Acidic formulation may cause irritation³² • Basaglar™ is biosimilar to Lantus® (Health Canada: no clinically meaningful differences in pharmacokinetics, pharmacodynamics, clinical efficacy, safety or immunogenicity)³³ • If a patient is experiencing nocturnal hypoglycemia with a bedtime dose, lower the dose or inject the dose in the morning • Max units/dose:** 80 for prefilled pens, 60 for Basaglar™ reusable pen, 80 for Lantus® reusable pen¹¹ 	ODB ✓ NIHB ✓	5x3mL prefilled pens	\$84	\$234	\$159
(Lantus®)						5x3mL cartridges	\$84	\$234	\$159
						5x3mL prefilled pens	\$109	\$310	\$209
						5x3mL cartridges	\$109	\$310	\$209
						10mL vial	\$75	\$209	\$142
Glargine 300 units/mL (Toujeo®)	1.5h	No peak	Up to 36h	<ul style="list-style-type: none"> • Recommend for patients who require >20 units of basal insulin/day, and counsel on change of concentration • NOT bioequivalent to glargine 100 units/mL (longer duration and delayed peak; starting dose when switching can be the same but a higher daily dose may eventually be needed)³⁴ • If a patient is experiencing nocturnal hypoglycemia with a bedtime dose, lower the dose or inject the dose in the morning • Max units/dose:** 80 for 1.5mL prefilled pen, 160 for 3mL prefilled pen¹¹ 	ODB ✓ NIHB ✓ (1.5mL) × (3mL)	3x1.5mL or 5x1.5mL prefilled pen 3x3mL or 2x3mL prefilled pen	\$37 \$66	\$323 \$351	\$180 \$180

* Prices reflect the cost to the consumer and include a markup and dispensing fee (the cost per dosage form and the 100-day cost both include one dispensing fee and reflect the usual pharmacy practice of dispensing a full box or vial; e.g., 5x3mL pens). The cost for a usual dose assumes a 100 kg patient. The price for vials does not include the cost of syringes.

** This reflects the maximum amount given for 1 injection, not the maximum amount of insulin that is required. Multiple injections may be required to achieve blood glucose targets.

† = not on Ontario drug formulary, ✓ = general benefit, × = not a benefit, **bid** = twice daily, **h** = hour, **kg** = kilogram, **LU** = limited use, **max** = maximum, **µg** = microgram, **mg** = milligram, **mL** = milliliter, **NIHB** = non-insured health benefits for First Nations and Inuit, **NPH** = neutral protamine Hagedorn, **ODB** = Ontario Drug Benefit, **SC** = subcutaneous