



## Appendix E: Insulin: Therapeutic Considerations and Availability

### Basal Insulin (Long-acting)<sup>a</sup>

Generic Name (Trade Name), Dosages	Cost/ 100 units <sup>b</sup>	Pharmacare Coverage	Therapeutic Considerations 10, 11
<b>Insulin NPH (neutral protamine Hagedorn)</b> <i>Humulin N</i> <i>Novolin ge NPH</i> Pre-filled pen, cartridge, vial: 100 units/mL	\$4	Full benefit under Plan NP	<ul style="list-style-type: none"> <li>Duration of action: up to 18 hours</li> <li>Once a day at bedtime or twice a day dosing</li> <li>Must be re-suspended by gently rolling the pre-filled syringe or vial before repeated use.</li> <li>Only basal insulin which can be mixed in same syringe with bolus insulin (i.e., regular, aspart, lispro): draw up regular insulin first; generally, not advised to mix with aspart or lispro as binding occurs rapidly, must inject immediately after mixing</li> <li>Prefilled pen provides 1 to 60 units per single injection</li> </ul>
<b>Insulin glargine</b> <i>Basaglar (biosimilar)</i>  <i>Lantus</i> Pre-filled pen, cartridge, vial: 100 units/mL  <i>Toujeo</i> Pre-filled pen: 300 units/mL (high concentration)	Basaglar: \$5  Lantus: \$7  Toujeo: \$7	Basaglar: Full benefit under Plan NP  Lantus: Non-benefit  Toujeo: Non-benefit	<ul style="list-style-type: none"> <li>Duration of action: up to 24 hours</li> <li>Once a day or twice a day dosing</li> <li>Health Canada: biosimilar = no clinically meaningful differences in pharmacokinetics, pharmacodynamics, clinical efficacy, safety or immunogenicity</li> <li>Prefilled pen provides 1 to 80 units per single injection</li> <li>Toujeo is not bioequivalent to glargine 100 units/mL</li> </ul>
<b>Insulin detemir</b> <i>Levemir</i> Pre-filled pen, cartridge: 100 units/mL	\$8	Non-benefit	<ul style="list-style-type: none"> <li>Duration of action: 18 to 24 hours</li> <li>Once a day or twice a day dosing</li> <li>Prefilled pen provides 1 to 80 units per single injection</li> </ul>
<b>Insulin degludec</b> <i>Tresiba</i> Pre-filled pen: 100 units/mL; 200 units/mL (high concentration)	\$8	Non-benefit	<ul style="list-style-type: none"> <li>Duration of action: 42 hours</li> <li>Once a day dosing</li> <li>Minimum time between dose increases: 3 to 4 days</li> <li>100 units/mL prefilled pen provides 1 to 80 units per single injection</li> <li>200 units/mL prefilled pen provides 2 to 160 units per single injection; dose counter shows exact number of insulin units, if switching from another insulin, no dose recalculation required</li> </ul>

## Prandial Insulin (Mealtime)<sup>a</sup>

Generic Name (Trade Name), Dosages	Cost/ 100 units <sup>b</sup>	Pharmacare Coverage	Therapeutic Considerations 10,11
<b>Insulin glulisine</b> <i>Apidra</i> Prefilled pen, cartridge, vial: 100 units/mL	\$4	Full benefit under Plan NP	<ul style="list-style-type: none"> <li>Onset of action: 10 to 15 minutes</li> <li>Duration of action: 3.5 to 5 hours</li> </ul>
<b>Insulin lispro</b> <i>Admelog</i> Pre-filled pen, cartridge, vial: 100 units/mL  <i>HumaLOG</i> Prefilled pen, cartridge, vial: 100 units/mL; 200 units/mL (high concentration)	<i>Admelog</i> : \$4  <i>HumaLOG</i> : \$5	<i>Admelog</i> : Full benefit under Plan NP  <i>HumaLOG</i> , <i>HumaLOG Mix 25</i> , <i>HumaLOG Mix 50</i> : Non-benefit	<ul style="list-style-type: none"> <li>Onset of action: 10 to 15 minutes</li> <li>Duration of action: 3.5 to 5 hours</li> <li>ADMELOG is biosimilar to <i>HumaLOG</i>; these insulin lispro 100units/mL products have similar pharmacokinetic profiles (same onset and duration) and adverse effects.<sup>11</sup></li> </ul>
<b>Insulin lispro/lispro protamine</b> <i>HumaLOG Mix 50</i> <i>HumaLOG Mix 25</i>			
<b>Insulin aspart</b> <i>Trurapi</i> Pre-filled pen, cartridge: 100 units/mL  <i>Novorapid</i> Prefilled pen, cartridge, vial: 100 units/mL  <i>Fiasp</i> Pre-filled pen, cartridge, vial: 100 units/mL	<i>Trurapi</i> : \$4  <i>Novorapid</i> : \$5  <i>Fiasp</i> : \$5	<i>Trurapi</i> : Full benefit under Plan NP  <i>Novorapid</i> , <i>Novomix 30</i> : Non-benefit  <i>Fiasp</i> : Non-benefit	<i>Trurapi</i> <ul style="list-style-type: none"> <li>Onset of action: 10 to 20 minutes</li> <li>Duration of action: 3 to 5 hours</li> <li>Biosimilar to Novorapid</li> </ul> <i>Novorapid</i> <ul style="list-style-type: none"> <li>Onset of action: 10 to 15 minutes</li> <li>Duration of action: 3 to 5 hours</li> </ul> <i>Fiasp</i> : <ul style="list-style-type: none"> <li>Onset of action: 5 minutes</li> <li>Duration of action: 3 to 5 hours</li> <li>Not biosimilar to Novorapid</li> </ul>
<b>Insulin aspart/aspart protamine</b> <i>NOVOMIX 30</i>			
<b>Insulin regular</b> <i>HumuLIN R</i> Pre-filled pen, cartridge, vial: 100 units/mL  <i>NovoLIN ge Toronto</i> Cartridge, vial: 100 units/mL  <i>Entuzity</i> Pre-filled pen: 500 units/mL (high concentration)	<i>HumuLIN R</i> : \$4  <i>NovoLIN ge Toronto</i> : \$4  <i>Entuzity</i> : \$4	Full benefit under Plan NP	<i>HumuLIN R. Novolin ge Toronto</i> : <ul style="list-style-type: none"> <li>Onset of action: 30 to 60 minutes</li> <li>Duration of action: 5 to 8 hours</li> </ul> <i>Entuzity</i> : <ul style="list-style-type: none"> <li>Onset of action: 15 minutes</li> <li>Duration of action: 17 to 24 hours</li> <li>Reserved for people with severe insulin-resistant i.e. requiring &gt;200 units of insulin per day (basal and/or prandial)<sup>11</sup>; recommended to be used by experienced clinicians only.</li> <li>Not biosimilar to insulin regular; e.g. <i>HumuLIN R</i>; pharmacokinetic profile is similar to NPH (high concentration delays onset &amp; lengthens duration of action).<sup>11</sup></li> </ul>
<b>Insulin regular/NPH</b> <i>NovoLIN ge 50/50</i> <i>NovoLIN ge 40/60</i> <i>NovoLIN ge 30/70</i> <i>HumuLIN 30/70</i>			

## Glucagon

Generic Name (Trade Name), Dosages	Adult Dosage <sup>b</sup>	Cost/unit <sup>c</sup>	PharmaCare Coverage	Therapeutic Considerations
Glucagon <i>Glucagen, Glucagen Hypokit, G</i> Vial: 1 mg	1 mg SC; may repeat in 15 minutes as needed	Vial: \$110	Vial/Hypokit: Limited coverage	IV dextrose should be administered as soon as it is available; if patient fails to respond to glucagon, IV dextrose must be given.
<i>Baqsimi</i> Nasal powder: 3 mg single dose	Hypokit: IM/IV Nasal powder: intranasal	Nasal powder: \$145	Nasal powder: Regular Benefit	Nasal powder come as a single use, pre-filled nasal device.

**Footnotes:** a Not an exhaustive list; b for reference only; pricing is approximate of usual dose as of September 2021 for generics, and does not include dispensing fees or additional markups; only include the lowest price for drugs with multiple dosage forms and package sizes; c Special Authority Required; please refer to this link for specific criteria: [https://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/pharmacare/prescribers/special-authority#\\_Special\\_Authority\\_drug](https://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/pharmacare/prescribers/special-authority#_Special_Authority_drug)

**Note:** Please review product monographs at <https://www.canada.ca/en/health-canada/services/drugs-health-products/drug-products/applications-submissions/guidance-documents/product-monograph.html> and regularly review current Health Canada advisories, warnings and recalls at <https://recalls-rappels.canada.ca/en>.

**PharmaCare Coverage Definitions: Regular Benefit:** Eligible for full reimbursement\*; does not require Special Authority. **Partial Benefit:** Eligible for limited reimbursement\*.

**Limited Coverage:** Requires Special Authority to be eligible for reimbursement\*. **Non-benefit:** Not eligible for coverage under any circumstances.

\*Subject to a patient's PharmaCare plan including any deductibles and co-pays.

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