

## Insulin specific properties - Prandial (bolus) insulin

Agent (100 units/mL unless otherwise specified)	Onset <sup>1</sup>	Peak <sup>1</sup>	Duration <sup>1</sup>	Comments	Coverage (ODB <sup>28</sup> , NIHB <sup>29</sup> )	Dosage forms <sup>28</sup>	Drug cost for dosage forms <sup>30</sup>	Drug cost for usual dose* (25 units/day for 100 days supply)
<b>Rapid-acting</b>								
Aspart (Novorapid <sup>®</sup> )	9-20 min	1-3h	3-5h	<ul style="list-style-type: none"> <li>Inject immediately (not more than 5-10 minutes) before or immediately after a meal</li> <li>Max units/dose:** 80 for prefilled pen, 60 for reusable pen<sup>11</sup></li> </ul>	ODB ✓ <a href="#">LU 388, 389, 390</a> <sup>35</sup> NIHB ✓	5x3mL prefilled pens 5x3mL cartridges 10mL vial	\$78 \$75 \$42	\$147 \$142 \$107
(Trurapi <sup>™</sup> )	10-20 min <sup>88</sup>	1-3 hours <sup>88</sup>	3-5 hours <sup>88</sup>	<ul style="list-style-type: none"> <li>Inject immediately (not more than 5-10 minutes) before or immediately after a meal</li> <li>Trurapi<sup>®</sup> is biosimilar to Novorapid<sup>®</sup> (Health Canada: no clinically meaningful differences in pharmacokinetics, pharmacodynamics, clinical efficacy, safety or immunogenicity)<sup>33</sup></li> <li>Max units/dose:** 80 for prefilled pen, 60 for reusable pen</li> </ul>	ODB ✓ NIHB x	5x3mL prefilled pens  5x3mL cartridges	\$57  \$57	\$106  \$106
†(Fiasp <sup>®</sup> )	4 min	0.5-1.5h	3-5h	<ul style="list-style-type: none"> <li>Faster-acting insulin</li> <li>Suggested initial dose for type 2 diabetes in adults is 4 units at one or more meals</li> <li>Inject at the start of the a meal (up to 2 minutes before meal) or within 20 minutes after starting the meal</li> <li>Max units/dose:** 80 for prefilled pen, 60 for reusable pen<sup>11</sup></li> </ul>	ODB x NIHB x	5x3mL prefilled pens 5x3mL cartridges 10mL vial	\$84 \$81 \$45	\$157 \$152 \$115
Glulisine (Apidra <sup>®</sup> )	10-15 min	1-1.5h	3.5-5h	<ul style="list-style-type: none"> <li>Inject within 15 minutes before or within 20 minutes after starting a meal</li> <li>Max units/dose:** 80 for prefilled and reusable pens<sup>11</sup></li> </ul>	ODB ✓ NIHB ✓	5x3mL prefilled pens 5x3mL cartridges 10mL vial	\$67 \$66 \$38	\$124 \$123 \$95
Lispro (Humalog <sup>®</sup> )	10-15 min	0.75-2.5h	3.5-4.75h	<ul style="list-style-type: none"> <li>Inject within 15 minutes before a meal or within 20 minutes after starting the meal</li> <li>Admelog<sup>®</sup> is biosimilar to Humalog<sup>®</sup> (Health Canada: no clinically meaningful differences in pharma-cokinetics, pharmacodynamics, clinical efficacy, safety or immunogenicity)<sup>33</sup></li> <li>Max units/dose:** 60 for Humalog<sup>®</sup> prefilled and reusable pens, 80 for Admelog<sup>®</sup> prefilled and reusable pens<sup>11</sup></li> </ul>	ODB ✓ <a href="#">LU 599</a> <sup>36</sup> NIHB ✓	5x3mL prefilled pens 5x3mL cartridges 10mL vial	\$74 \$74 \$42	\$138 \$139 \$107
(Admelog <sup>®</sup> )				ODB ✓ NIHB x	5x3mL prefilled pens 5x3mL cartridges 10mL vial	\$63 \$63 \$37	\$112 \$112 \$87	
Lispro 200 units/mL (Humalog <sup>®</sup> )	10-15 min	0.75-2.5h	3.5-4.75h	<ul style="list-style-type: none"> <li>Higher concentration requires a smaller volume</li> <li>Recommend for patients who require &gt;20 units of prandial (bolus) insulin/day, and counsel on change of concentration</li> <li>Max units/dose:** 60 for prefilled pen<sup>11</sup></li> </ul>	ODB ✓ NIHB ✓	5x3mL prefilled pens	\$129	\$129
<b>Short-acting</b>								
Regular insulin (Humulin <sup>®</sup> R)	30-60 min	2-4h	5-8h	<ul style="list-style-type: none"> <li>Inject 15-30 minutes before meals</li> <li>Entuzity<sup>®</sup> should be reserved for patients who require &gt; 200 units/day and delivers insulin in 5-unit increments</li> </ul>	ODB ✓ NIHB ✓	5x3mL cartridges 10mL vial	\$62 \$36	\$115 \$89
(Novolin <sup>®</sup> ge Toronto)				5x3mL cartridges 10mL vial		\$61 \$36	\$112 \$88	
†Regular insulin 500 units/mL (Entuzity <sup>®</sup> )	3-5h min	0.5-8.0h	17-24h	<ul style="list-style-type: none"> <li>Entuzity<sup>®</sup> has a unique pharmacokinetic profile with an onset similar to regular insulin and a duration similar to some basal/premixed insulins</li> <li>Max units/dose:** 60 for Humulin-R<sup>®</sup> reusable pen, 60 for Novolin ge Toronto<sup>®</sup> reusable pen, 300 for Entuzity<sup>®</sup> prefilled pen<sup>11</sup></li> </ul>	ODB x NIHB x	2x3mL prefilled pens	\$120	\$120

\* 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, x = 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