



Appendix 6

Types of Insulin

Types of insulin			
Insulin type (trade name)	Onset	Peak	Duration
Bolus (preprandial or mealtime) insulins			
Rapid-acting insulin analogues (clear) • Insulin aspart (NovoRapid®) • Insulin glulisine (Apidra®) • Insulin lispro (Humalog®) U-100 U-200 • Faster-acting insulin aspart (Fiasp®)	9–20min 10–15min 10–15min 4min	1–1.5h 1–1.5h 1–2h 0.5–1.5h	3–5h 3.5–5h 3–4.75h 3–5h
Short-acting insulins (clear) • Insulin regular [Humulin®-R, Novolin® ge Toronto] • Insulin regular [Entuzity® (U-500)]	30min 15min	2–3h 4–8h	6.5h 17–24h
Basal insulins			
Intermediate-acting (cloudy) • Insulin neutral protamine Hagedorn (Humulin® -N, Novolin® ge NPH)	1–3h	5–8h	Up to 18h
Long-acting insulin (clear) • Insulin detemir (Levemir®) • Insulin glargine U-100 (Lantus®) • Insulin glargine U-300 (Toujeo®) • Insulin glargine biosimilar (Basaglar®) • Degludec U-100, U-200 (Tresiba®)	90min	Not applicable	U-100 glargine 24h, detemir 16–24h U-300 glargine >30h degludec 42h
Premixed insulins			
Premixed regular insulin –NPH (cloudy) • Humulin® 30/70 • Novolin® ge 30/70, 40/60, 50/50	A single vial or cartridge contains a fixed ratio of insulin		
Premixed insulin analogues (cloudy) • Biphasic insulin aspart (NovoMix® 30) • Insulin lispro/lispro protamine (Humalog® Mix25 and Mix50)	(% of rapid-acting or short-acting insulin to % of intermediate-acting insulin)		
Data represents estimations derived from pooled data analysis using various experimental conditions. There is significant inter- and intra-individual variation in pharmacokinetics and pharmacodynamics depending on a variety of clinical factors, including dose.			
Physicians should refer to the most current edition of <i>Compendium of Pharmaceuticals and Specialties</i> (Canadian Pharmacists Association; Ottawa, Ontario, Canada) and product monographs for detailed information.			