



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. | | | |