



## Another ultra-short-acting insulin PBS listed: insulin glulisine



Insulin glulisine (Apidra) is the third ultra-short-acting insulin analogue listed on the PBS, the others being insulin lispro and insulin aspart (see [Table 1](#)). The PBAC agreed that insulin glulisine was no less effective than insulin lispro at reducing HbA<sub>1c</sub> levels in people with type 1 and type 2 diabetes.<sup>1</sup>

The safety and efficacy of insulin glulisine has not been established in children ( $\leq 12$  years) or in pregnant women.<sup>2</sup> As such, prescribers should continue to use other rapid-acting insulin analogues for these patients.

Like other ultra-short-acting insulins, insulin glulisine is a clear solution injected subcutaneously immediately before meals. One unit of insulin glulisine is equivalent to one unit of insulin lispro. Carefully monitor blood glucose levels and concomitant medication if switching a patient between different types or brands of insulin.

**Table 1. Pharmacokinetic profiles of non-mixed insulins available in Australia\***

Insulin type	Onset of action	Peak action	Duration of action
<b>Ultra-short acting</b>			
insulin lispro (Humalog) aspart (Novorapid)	15 minutes	1 hour	4-5 hours
<b>insulin glulisine (Apidra)<sup>†</sup></b>	<b>15 minutes</b>	<b>~1 hour</b>	<b>4 hours</b>
<b>Short acting</b>			
neutral (Actrapid/Humulin R/Hypurin Neutral)	30 minutes	2-3 hours	6-8 hours
<b>Long acting</b>			
non-mixed (Humulin NPH/Protaphane/Hypurin Isophane)	1-2.5 hours	4-12 hours	16-24 hours
insulin detemir (Levemir)	3-4 hours	9 hours	12-20 hours
insulin glargine (Lantus)	1-2 hours	no peak	24 hours

\* Adapted from *Australian Medicines Handbook*<sup>3</sup>

<sup>†</sup> Source: Dailey G (2006)<sup>4</sup>

## References

1. Pharmaceutical Benefits Advisory Committee. March 2007 PBAC outcomes — positive recommendations. Canberra: Australian Government Department of Health and Ageing, 2007. <http://www.health.gov.au/internet/wcms/publishing.nsf/Content/pbacrec-mar07-positive> (accessed 13 June 2007).
2. Sanofi-Aventis Australia Pty Ltd. Apidra product information. 31 January 2007.
3. Rossi S, ed. *Australian Medicines Handbook* 2007. Adelaide: Australian Medicines Handbook Pty Ltd, 2007.
4. Dailey G. Rapid acting insulin glulisine: a new tool for postprandial glucose control. *Expert Rev Endocrinol Metab* 2006;1:469-78.

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