

## Appendix 7: Types of insulin regimens

### *Basal:*

A basal regimen consists of administering insulin once or twice daily using intermediate-acting (N, NPH) or long-acting (detemir, glargine) insulin and titrating to a target fasting glucose level. Because this regimen is intended to mimic basal insulin secretion, there is little impact on postprandial blood glucose levels, and oral antihyperglycemic agents are often continued.<sup>1,2</sup>

### *Premixed, twice daily:*

This insulin injection consists of an intermediate-acting insulin together with a bolus insulin (rapid-acting or regular insulin) and is typically given with breakfast and supper. The morning injection's rapid-acting or regular insulin provides the bolus insulin for breakfast, and the intermediate-acting insulin provides the basal insulin for the daytime. The evening injection's rapid-acting or regular insulin provides the bolus insulin for dinner, and the intermediate-acting insulin provides the basal insulin for the evening and night. Although this regimen is less intensive than the basal-bolus regimen (see below), it is less flexible; variations in the timing and size of meals may result in hypoglycemia.<sup>3</sup>

### *Basal-bolus:*

A basal-bolus regimen involves three to five injections daily, involving basal insulin with intermediate-or long-acting insulin and pre-prandial rapid-acting or regular insulin (bolus insulin). This regimen typically requires more frequent self-monitoring of blood glucose levels, but it allows for greater flexibility permitting variable mealtimes, and variable pre-prandial insulin dosage for the amount of carbohydrates consumed.<sup>4</sup>

## References

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2. Elrishi MA, Jarvis J, Khunti K, Davies MJ. Insulin glargine and its role in glycaemic management of Type 2 diabetes. *Expert Opin Drug Metab Toxicol* 2008;4(8):1099-110.
3. Christiansen JS, Liebl A, Davidson JA, Ligthelm RJ, Halimi S. Mid- and high-ratio premix insulin analogues: potential treatment options for patients with type 2 diabetes in need of greater postprandial blood glucose control. *Diabetes Obes Metab* 2010;12(2):105-14.
4. King AB, Armstrong DU. Basal bolus dosing: a clinical experience. *Curr Diabetes Rev* 2005;1(2):215-20.