



a target dose of 30 or 60 μg .

In patients with type 2 diabetes, the starting dose is 60 μg before meals, which can be increased to 120 μg if there has been no nausea for 3 to 7 days.

In either type of diabetes, the insulin dose

is adjusted to achieve optimal glycemic control after the pramlintide dosage is stable.

Symlin is available in vial form, but since many injectable compounds for diabetes come in pen form, it is reasonable to assume this delivery device may be available in the future. ■

REFERENCES

1. Perley MJ, Kipnis DM. Plasma insulin responses to oral and intravenous glucose: studies in normal and diabetic subjects. *J Clin Invest* 1967; 46:1954–1962.
2. Nielsen LL, Baron AD. Pharmacology of exenatide (synthetic exendin-4) for the treatment of type 2 diabetes. *Curr Opin Investig Drugs* 2003; 4:401–405.
3. Kolterman OG, Buse JB, Fineman MS, et al. Synthetic exendin-4 (exenatide) significantly reduces postprandial and fasting plasma glucose in subjects with type 2 diabetes. *J Clin Endocrinol Metab* 2003; 88:3082–3089.
4. Nielsen LL, Young AA, Parkes DG. Pharmacology of exenatide (synthetic exendin-4): a potential therapeutic for improved glycemic control of type 2 diabetes. *Regulatory Peptides* 2004; 117:77–88.
5. Fineman MS, Bicsak TA, Shen LZ, et al. Effect on glycemic control of exenatide (synthetic exendin-4) additive to existing metformin and/or sulfonylurea treatment in patients with type 2 diabetes. *Diabetes Care* 2003; 26:2370–2377.
6. Buse JB, Henry RR, Han J, et al. Effects of exenatide (exendin-4) on glycemic control over 30 weeks in sulfonylurea-treated patients with type 2 diabetes. *Diabetes Care* 2004; 27:2628–2635.
7. Kendall DM, Riddle MC, Rosenstock J, et al. Effects of exenatide (exendin-4) on glycemic control in patients with type 2 diabetes treated with metformin and a sulfonylurea. *Diabetes Care* 2005; 28:1083–1091.
8. DeFronzo RA, Ratner RE, Han J, et al. Effects of exenatide (exendin-4) on glycemic control and weight over 30 weeks in metformin-treated patients with type 2 diabetes. *Diabetes Care* 2005; 28:1092–1100.
9. Purnell JQ, Weyer C. Weight effect of current and experimental drugs for diabetes mellitus: from promotion to alleviation of obesity. *Treat Endocrinol* 2003; 2:33–47.
10. Turrel C, Bailbe D, Meile M-J, Kergoat M, Portha B. Glucagon-like peptide-1 and exendin-4 stimulate β cell neogenesis in streptozotocin-treated newborn rats resulting in persistently improved glucose homeostasis at adult age. *Diabetes* 2001; 50:1562–1570.
11. Turrel C, Bailbe D, Lacombe M, et al. Persistent improvement of type 2 diabetes in the Goto-Kakizaki rat model by expansion of the β -cell mass during the prediabetic period with glucagon-like peptide-1 or exendin-4. *Diabetes* 2002; 51:1443–1452.
12. Bliss M. *The Discovery of Insulin*. Chicago: University of Chicago Press, 1984.
13. Thompson RG, Pearson L, Kolterman OG. Effect of 4 weeks' administration of pramlintide, a human amylin analogue, on glycemic control in patients with IDDM: effects on plasma glucose profiles and fructosamine concentrations. *Diabetologia* 1997; 40:1278–1285.
14. Nyholm B, Orkov L, Hove KY, et al. The amylin analog pramlintide improves glycemic control in patients with type 1 diabetes mellitus. *Metabolism* 1999; 48:935–941.
15. Whitehouse F, Kruger DF, Fineman M, et al. A randomized study and open-label extension evaluating the long-term efficacy of pramlintide as an adjunct to insulin therapy in type 1 diabetes. *Diabetes Care* 2002; 24:724–730.
16. Weyer C, Gottlieb A, Kim DD, et al. Pramlintide reduces postprandial glucose excursions when added to regular insulin or insulin lispro in subjects with type 1 diabetes. *Diabetes Care* 2003; 26:3074–3079.
17. Hollander PA, Levy P, Fineman MS, et al. Pramlintide as an adjunct to insulin therapy improves long-term glycemic and weight control in patients with type 2 diabetes: a 1-year randomized controlled trial. *Diabetes Care* 2003; 26:784–790.
18. Ratner RE, Dickey R, Fineman M, et al. Amylin replacement with pramlintide as an adjunct to insulin therapy improves long-term glycemic and weight control in type 1 diabetes mellitus: a one year randomized controlled trial. *Diabet Med* 2004; 21:1204–1212.
19. Hollander PA, Maggs DG, Ruggles JA, et al. Effect of pramlintide on weight in overweight and obese insulin-treated type 2 diabetes patients. *Obes Res* 2004; 12:661–668.
20. Weyer C, Fineman MS, Strobel S, et al. Properties of pramlintide and insulin upon mixing. *Am J Health Syst Pharm* 2005; 62:816–822.

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CORRECTION

Primary hyperparathyroidism

(DECEMBER 2005)

The article "Primary hyperparathyroidism: 7,000 years of progress" by Dr. Michael A. Levine in the December 2005 issue of the *Cleveland Clinic Journal of Medicine* (Cleve Clin J Med 2005; 72:1084–1098) contained a typographical error. On page 1095, in the discussion of familial hypocalciuric hypercalcemia, the defect is in fact due to an inactivating mutation in the gene encoding the calcium-sensing receptor (CASR), not an activating mutation as printed. We would like to thank Dr. Paul Sacks, of Phoenix, AZ, for pointing this out.