Advancing Diabetes Care

By: By Margaret Corwin, RN, CDE Coordinator, Eisenhower Diabetes Program

Insulin pens deliver 60 to 80 units of insulin and are produced for both long and short acting insulin.
Over the past 15 years, studies have shown that better blood glucose control helps reduce diabetic complications. Such control requires insulin therapy in people with Type 1 diabetes and often the addition of insulin therapy for those with Type 2 diabetes. Because using a vial-and-syringe method to inject the insulin poses a number of problems, other devices, including insulin pens, were developed. Insulin pens are both easy to use and discreet. Insulin pens have also reduced the concerns some have with insulin injection via syringe and have helped overcome barriers to starting insulin therapy. In the coming months, Eisenhower Medical Center will begin using insulin pens with patients with diabetes during their hospital stays.

Insulin pens deliver 60 to 80 units of insulin and are produced for both long and short acting insulin and insulin mixes. Many of the pens are disposable and come pre-filled; others are reusable, with insulin cartridges the patient loads into the pen. The patient simply attaches a pen needle to the insulin pen, primes the device, turns the dosing knob to the appropriate insulin dose, and injects the needle into the skin. Minimal skill is required with this technique, making the pen easy to use, accurate and convenient, as well as discreet for use in social settings. The pen devices do not require refrigeration, so they can be conveniently carried in a pocket or purse for proper timing of an insulin dose.
"Minimal skill is required with this technique, making the pen easy to use, accurate and convenient, as well as discreet for use in social settings."

Several studies show that both patients and physicians prefer pen devices over the traditional vial-and-syringe method. One study observed 1,156 patients whose physicians converted them from vial-and-syringe to pen delivery systems. The researchers found that the percentage of patients who adhered to their insulin therapy rose from 36 to 55 percent after switching to the insulin pen. The study also noted a decrease in the episodes of hypoglycemia and hospital visits in these patients.

Investigators in a study conducted in Italy concluded that the pre-filled, disposable insulin pen was safe, efficacious, and highly accepted in patients with diabetes over age 50. Ease of accurate dosing is particularly important for older patients, who may have impaired vision, arthritis, or reduced motor coordination. Some companies are producing shorter pens to aid patients with arthritis.

While there are many benefits to the insulin pen, one drawback is cost. On a unit for unit basis, insulin pens on the average cost 22 percent more than the vial-and-syringe method. However, when all factors are considered, including ease of use, convenience for the patient, more accurate dosing, increased patient compliance (constant and accurate use) and decreased hospital admissions and emergency visits, the pens may reduce the overall cost to the patient.

Insulin Pen Devices

Healthy Living is a publication of Eisenhower Medical Center · © Copyright 2014 All Rights Reserved · www.emc.org