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## Twice-daily mixed regular and NPH insulin injections with new jet injector versus conventional syringes: pharmacokinetics of insulin absorption.

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### **Abstract**

The purpose of the present study was to evaluate the feasibility of using a jet injector in a split and mixed regular and NPH insulin regimen and to compare serum glucose and free-insulin profiles obtained with the injector and the conventional syringe and needle. Twelve insulin-dependent diabetic patients were hospitalized for 5 days. After a stabilization day, six patients received their insulin injection with the injector for 2 days and with the syringe and needle for the following 2 days; the regimen was reversed for the other six patients. Diet, exercise, and insulin dosage remained constant. The serum glucose levels with the injector were consistently lower than those obtained with the syringe at all times of the day except at 5:00 a.m. and 7:30 a.m., when mean values were similar for both treatments. Free-insulin levels were higher with the injector from 10:30 a.m. to 4:30 p.m. These findings suggest that insulin absorption is faster and possibly greater with the injector than with the syringe. When switching from a syringe to an injector insulin program, insulin dose adjustment may be necessary.

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