

Blunted, more variable insulin action in lipohypertrophy

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(HealthDay)—Insulin lispro injection into lipohypertrophic tissue (LHT)

results in considerable impairment and increased variability in insulin absorption and action, according to a study published in online July 13 in *Diabetes Care*.

Susanne Famulla, Ph.D., from Profil in Neuss, Germany, and colleagues conducted a crossover study involving 13 patients with type 1 diabetes who received subcutaneous abdominal injections of insulin lispro into LHT and normal adipose tissue (NAT). A euglycemic clamp was performed with two injections each into LHT and NAT on one day; on another day, one injection per region was given before a standardized mixed meal.

The researchers found that LHT reduced [insulin](#) absorption and effect compared with NAT, but increased intrasubject variability. Postprandial blood glucose concentrations were increased by 26 percent or more with LHT, and maximum concentrations occurred later. With LHT injections, hypoglycemia occurred numerically less frequently (two versus six patients), while profound hyperglycemia only occurred with LHT injections (two patients). There was no difference for $T_{\max\text{-INS}}$ in either study.

"Insulin absorption and action are blunted and considerably more variable with LHT injection, leading to profound deterioration in postprandial glucose control," the authors write.

Several authors disclosed financial ties to the biopharmaceutical industry.

More information: [Full Text \(subscription or payment may be required\)](#)

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