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Treatment Satisfaction and Psychological Well-being in Patients with Type 1 Diabetes, Treated with a New Long-acting Insulin, Insulin Glargine.

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Insulin glargine, a new long-acting insulin, provides constant, peakless insulin release and is designed for once daily administration. Satisfaction with treatment (Diabetes Treatment Satisfaction Questionnaire (DTSQ) and psychological well-being (Well-being Questionnaire (W-BQ) were assessed in a multicentre, randomised controlled, open clinical trial comparing the effects of insulin glargine and NPH human basal insulin, conducted in the USA. Analysis of covariance was performed on the change from baseline scores, using treatment and pooled site as main effects with baseline scores as covariate.

The self-completed questionnaires, were administered at baseline, and at least once at weeks 8, 20 or 28 to the 474 participants (235 male and 239 female; mean age 38.6±12.0 yrs; mean duration of diabetes 17.5±10.8 yrs; mean GHb at baseline 7.7±1.2 %). Baseline scores of the DTSQ (mean 28.8±5.5; maximum possible score =36) and of the W-BQ (mean 51.6±9.0; maximum possible score = 66) were high in this population. While Treatment Satisfaction improved in both treatment groups the improvement was more pronounced with insulin glargine at all time points and at endpoint (last on-treatment assessment). The difference was significant at week 20 (change from baseline +1.66 vs +0.76 points; p = 0.0460). Perceived Frequency of Hyperglycaemia and Hypoglycaemia were more markedly improved in participants treated with insulin glargine. The difference was statistically significant for Perceived Frequency of Hyperglycaemia at week 8 (p = 0.0162). There was also a statistically non-significant trend for better outcomes in psychological well-being in patients treated with insulin glargine. Mean W-BQ scores in these patients were mostly higher compared with baseline whereas in the NPH group they decreased from baseline. Analysis of the W-BQ subscales shows that the observed effects on General Well-being are mainly attributable to effects on the Depression and Positive Well-being subscale scores.

The psychological outcomes observed in this study include small effects on General Well-being which may reflect a combination of treatment and study effects. More substantial effects were seen on Treatment Satisfaction; there was a trend, reaching statistical significance at some time points, for improvement with insulin glargine, coupled with a decrease in Perceived Frequency of Hyperglycaemia and Hypoglycaemia compared with NPH.