

## Differences in Insulin Treatment Satisfaction Following Addition of Biphasic, Prandial, or Basal Insulin to Oral Therapy in Type 2 Diabetes

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In the Treat-To-Target for Type 2 diabetes (4-T) trial, no differences in EuroQol 5-item measured health status were observed at one year between groups randomized to addition of biphasic, prandial or basal insulin to oral therapy. We further investigated insulin treatment satisfaction between groups.

708 patients with suboptimal glycated hemoglobin levels (7.0 to 10.0%) taking maximally tolerated doses of metformin and sulfonylurea were randomized to biphasic insulin aspart twice daily, prandial insulin aspart thrice daily, or basal insulin detemir once daily (twice daily if deemed necessary) using a Flexpen. Differences between groups at one year were measured with the self-completed Insulin Treatment Satisfaction Questionnaire (ITSQ) with lower scores indicating lower treatment satisfaction. We tested for differences between the three groups for each of the five ITSQ domains and the total score with the Kruskal-Wallis rank sum test.

88.4%(626) subjects completed at least one sub-scale of the ITSQ. 64.1% (454) were male, mean(SD) age was 61.7(9.8) years, weight 85.8(15.9)kg and median(IQR) diabetes duration 9(6,13) years. [table1]Treatment satisfaction measured with the ITSQ was consistently lower in the prandial group in all 5 domains compared to other groups at twelve months.

Specific measurement of insulin treatment satisfaction identifies clinically relevant differences between regimens used to intensify treatment for type 2 diabetes. Impact of treatment on lifestyle needs to be considered as a factor in choice of regimen.

Mean (IQR) Insulin Treatment Satisfaction Score at One Year by Randomized Group

	n	Biphasic Median (IQR)	Prandial	Basal	Overall P-value
Regimen inconvenience	611	93.3(83.3, 100)	86.7(70.0, 100)	93.3(83.3, 100)	<0.001
Lifestyle flexibility	613	77.8(61.1, 88.9)	72.2(55.6, 88.9)	83.3(72.2, 100)	<0.001
Glycemic control	605	83.3(66.7, 88.9)	72.2(59.7, 88.9)	77.8(61.1, 88.9)	0.048
Hypoglycemic control	613	78.3(66.7, 86.7)	73.3(56.7, 83.3)	83.3(70.0, 93.3)	<0.001
Device delivery satisfaction	591	88.9(77.8, 97.2)	83.3(72.2, 94.4)	88.9(75.7, 97.2)	0.021
Total ITSQ score	554	83.3(74.2, 90.2)	76.5(68.0, 88.6)	84.1(73.5, 93.2)	<0.001