This is a Sample version of the

**Insulin Treatment Satisfaction Questionnaire (ITSQ)**

The full version of the ITSQ comes without ‘sample’ watermark.

The full complete 17 page version includes –

- ITSQ Overview information
- ITSQ Scoring/ Administration instructions
- ITSQ Complete Questionnaire/ Assessment
- ITSQ Clinical Validity

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Development and Validation of the Insulin Treatment Satisfaction Questionnaire

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ABSTRACT

Background: Treatment of diabetes mellitus (DM) is complex, requiring multifaceted lifestyle change or regulation and, for many, self-regulation of insulin levels in the blood. Historically, daily insulin treatment has been viewed as burdensome to patients, prompting newer formulations and improved delivery methods.

Objective: This multicenter, clinical study was designed to develop a conceptually sound, clinically meaningful, and psychometrically valid measure of insulin treatment satisfaction, applicable to a wide range of insulin therapies.

Methods: A 3-phase iterative process was employed to develop and validate the Insulin Treatment Satisfaction Questionnaire (ITSQ): (1) conceptual development of items, (2) preliminary validation among patients with DM, and (3) confirmatory validation among patients with DM.

Results: The ITSQ was validated with 170 patients in phase 2 and 402 patients in phase 3. Confirmatory factor analysis produced a 5-factor, 22-item instrument assessing regimen inconvenience, lifestyle flexibility, glycemic control, hypoglycemic control, and satisfaction with the insulin delivery device. Results for reliability and construct validity of the final version were consistent in both samples of patients treated with insulin, with different data collection methods. Internal consistency (using Cronbach α coefficient) of the subscales ranged from 0.79 to 0.91. Test–retest reliability (using Spearman rank correlation coefficients) ranged from 0.63 to 0.94. ITSQ scores showed moderate to high correlation with related measures of treatment burden. The ITSQ differentiated among insulin delivery methods, glycosylated hemoglobin values, the number of times the patient required assistance administering insulin, and insulin adherence.

Conclusion: In our study samples, the ITSQ appeared to be conceptually and psychometrically sound and applicable to a wide range of insulin therapies. (Clin Ther. 2004;26:565–578) Copyright © 2004 Excerpta Medica, Inc.

Key words: treatment satisfaction, insulin, diabetes mellitus.

This is the end of the SAMPLE ITSQ clinical validity. Please return to page 1 to purchase complete version.
Insulin Treatment Satisfaction Questionnaire (ITSQ)

Scoring & Administration

The ITSQ was developed specifically for use with insulin treatment and does not address satisfaction with noninsulin (tablet) medications, for which other instruments are needed.

The ITSQ is clinically meaningful because it is able to discriminate between methods of taking insulin, difficulty with the regimen, recent HbA1c values, and patients’ adherence to insulin therapy. Notably, patients with poor adherence to insulin had significantly lower treatment satisfaction and higher HbA1c values, demonstrating that difficult or demanding treatment regimens may appreciably lower treatment effectiveness, which may be possible to achieve with less burdensome treatment.

Scoring:

ITSQ subscale scores were calculated by imputing the missing values based on the mean of the non-missing items. All subscales were transformed to a scale of 0 to 100%, with higher scores indicating better treatment satisfaction.

ITSQ contained 22 items among 5 content clusters, forming a total ITSQ score transformed as 0 to 100% where 100% indicates complete satisfaction with insulin treatment.

The Table below is used for calculating Subscale Totals and the complete ITSQ total –

<table>
<thead>
<tr>
<th>ITSQ Subscales</th>
<th>ITSQ Question Items</th>
<th>Subscale Score Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inconvenience of regimen</td>
<td>1, 2, 3, 4, 5,</td>
<td>35 = 100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% = \left( \frac{1 + 2 + 3 + 4 + 5}{35} \right) \times 100</td>
</tr>
<tr>
<td>Lifestyle flexibility</td>
<td>6, 7, 8,</td>
<td>21 = 100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% = \left( \frac{6 + 7 + 8}{21} \right) \times 100</td>
</tr>
</tbody>
</table>

This is the end of the SAMPLE ITSQ scoring instructions. Please return to page 1 to purchase complete version.
Insulin Treatment Satisfaction Questionnaire (ITSQ)

People who take insulin can have many different experiences with their treatment. Some people who take insulin may find it difficult and burdensome, while others feel that it is not much of a bother at all.

The following questions are about your perceptions of your current insulin treatment and how it affects you in your daily life. When you think of your insulin treatment, please keep in mind the type of insulin you take, the dose or amount of insulin, your schedule for taking insulin, and the device or method you use to give yourself insulin.

Please think about your experiences during the past 4 weeks when you answer the questions.

Please answer each question by circling the number that best represents your answer. If you are unsure about how to answer a question, please give the best answer you can.

1. How much of a bother is it for you to take all your daily insulin doses as prescribed?

   No bother at all

   A tremendous bother

   1  2  3  4  5  6  7

2. How much does your current insulin treatment interfere with your ability to enjoy social or leisure activities?

   Does not interfere at all

   Interferes tremendously

   1  2  3  4  5  6  7
3. How much does your current insulin treatment interfere with your work or school activities? (If you do not work or attend school, think about your regular daily activities).

<table>
<thead>
<tr>
<th>Does not interfere at all</th>
<th>Interferes tremendously</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

4. How much do you have to plan the timing of your meals or snacks around the insulin you currently use?

<table>
<thead>
<tr>
<th>No planning at all</th>
<th>A tremendous amount of planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

5. How much do you have to plan what you eat with your current insulin treatment?

<table>
<thead>
<tr>
<th>No planning at all</th>
<th>A tremendous amount of planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

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