

# Concerns about insulin therapy in type 2 diabetic patients

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## Background

Fears and emotional problems related to insulin therapy could be a powerful barrier for a timely initiation of insulin therapy in type 2 diabetic patients. In this study, fears and emotional problems towards insulin therapy of type 2 diabetic patients, in which an initiation of insulin therapy is scheduled, are compared to type 2 diabetic patients already performing an insulin therapy.

## Methods

126 type 2 diabetic patients took part in this study. In 39 patients an initiation of an insulin therapy was scheduled in the next days, whereas 87 patients were already performing an insulin therapy (table 1). At the beginning of a hospital stay, these patients completed a newly developed questionnaire measuring fears and emotional problems related to insulin therapy (FPRIT), the Hospital Anxiety and Depression Scale (HADS) and a questionnaire for emotional problems related to diabetes (PAID). The newly developed FPRIT consists of 14 items arranged in 3 scales, rated by a 5-point Likert - Scale (0 = no agreement 4= strong agreement):

- \* "Barriers against insulin therapy" (4 items)
- \* "Fears against insulin therapy" (6 items)
- \* "Emotional problems related to insulin therapy" (4 items).

The reliability (Cronbach's  $\alpha$ ) of the scales is good (see table 2)

## Results

Patients with a scheduled insulin therapy described significantly more barriers, fears against insulin therapy and

emotional problems related to insulin therapy compared to patients who have already been switched to insulin treatment (figures 1-3). There were also higher emotional problems associated with diabetes in patients before the initiation of an insulin therapy (figure 4). There were no significant differences in anxiety and depression scores in these two patients groups (figure 5-6). Interestingly, there were the highest correlations between the scales of the FPRIT and the PAID (table 3).

## Conclusions

Perceived barriers, fears against insulin therapy and emotional problems related to insulin therapy seem to be greater before than after the start of an insulin therapy.

Correlational analyses seem to indicate that this negative psychological sequela of insulin therapy are primarily associated to diabetes specific problems, than to diabetes non-specific anxiety and depressive symptoms. From this cross sectional survey, it can be speculated that anticipation of an insulin therapy seems to evoke more barriers, fears and emotional problems than the real experience of practicing insulin therapy. It also could be assumed that emotional problems associated with insulin therapy will decrease if insulin treatment is started. Admittedly, this assumption needs to be validated by a longitudinal study.

Nevertheless, barriers and fears against insulin therapy in type 2 diabetes should be taken seriously, because they have the potential to delay initiation of an inevitable insulin therapy. Therefore, these emotional problems associated with insulin therapy should be addressed in diabetes education.

Parameter	insulin therapy scheduled n=39	insulin therapy performed n=87
ager (yrs)	58.6±10.5	61.0 ±10.5
female gender (%)	38.5	47.1
Diabetes duration (yrs.)***	8.8±7.7	14.4 ±8.3
HbA1C (%)	8.6 ±1.8	8.6±1.7
no. of late complications	1.4±1.3	1.8±1.2

table 1: sample characteristics  
note: \*\*\* P<.001

Barriers	$\alpha = .91$
- restrictions in every day living	
- overwhelming	
- negative social consequences	
- financial burden	
Fears	$\alpha = .95$
- anxiety against injection	
- side effects of insulin	
- aversion against injection	
- pain	
- fear against hypoglycemia	
- fear against therapy mistakes	
Emotional problems	$\alpha = .91$
- increased severity of diabetes	
-feelings of failure	
-worsening of diabetes	
- feelings of guilt	

table 2: Items of FPRIT and reliability (Cronbach's  $\alpha$ )

	Diabetes related emotional problems (PAID)	Anxiety HADS	Depression HADS
Barriers	.69***	.34**	.40**
Emotional problems	.43***	.11 <sup>ns</sup>	.21 <sup>ns</sup>
Fears	.63***	.24 <sup>ns</sup>	.35**

table 3: Correlation table  
note: \*\*\* P<.001; \*\* P<.01, Bonferoni adjusted

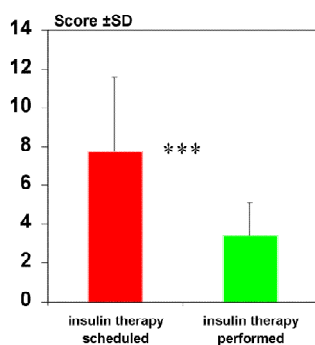


figure 1: Barriers

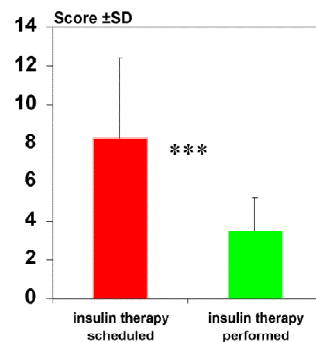


figure 2: Fears

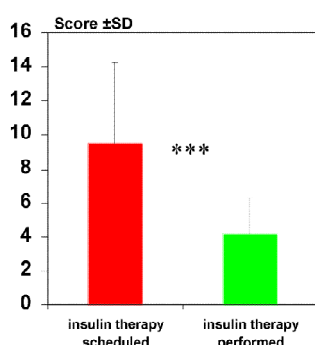


figure 3: Emotional problems

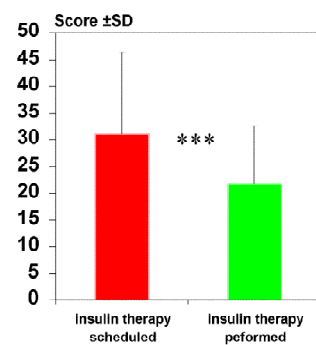


figure 4: Problem areas in Diabetes (PAID)

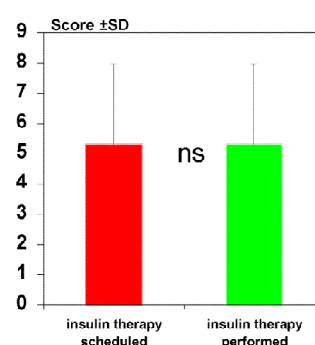


figure 5: Depression (HADS-D)

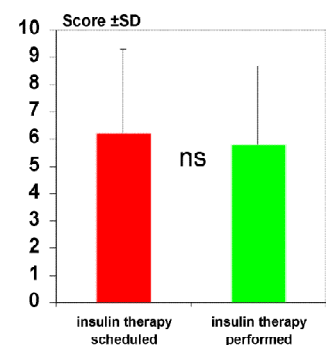


figure 6: Anxiety (HADS-A)