

# Intradialytic exercise: a non-pharmacological solution to a uraemic problem?

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## Background

- In patients undergoing maintenance haemodialysis (HD), symptom burden is comparable with other advanced chronic diseases.
- Increasing symptom burden in HD patients has been shown to lead to a poorer quality of life and comorbidities, which in turn increases mortality risk.
- Intradialytic exercise (IE) programmes are an emerging therapeutic intervention, which have been shown to abrogate some of these patient symptoms.
- Few studies have examined the effects of IE upon patient symptomatology and self-reported quality of life.

## Results

- There was a significant reduction in itching reported in the EX group, whilst the CON group experienced worsening of this symptom (See Table 1).
- There was a mean improvement across HADS scores in the EX group, which was statistically significant for anxiety and a trend to significance overall (See Table 2).
- There was no significant time x group interaction effect in any symptoms assessed by the POS-R, EQ5D scores, HADS total or HADS depression.

**Table 1:** Changes in itching and anxiety scores assessed by the POS-S over 3 months

	POS-S Renal	IE (n)	CON (n)	P value
Itching	Reduced	8	3	0.01
	No change	7	8	
	Increased	3	15	
Anxiety	Reduced	3	6	0.91
	No change	11	16	
	Increased	4	7	

**Table 2:** Changes in anxiety scores as assessed by HADS over 3 months

HADS Anxiety	Baseline (Mean ± SD)	3 months (Mean ± SD)	P value
IE	6.42 ± 4.31	4.22 ± 3.32	0.02
Con	6.06 ± 4.40	6.17 ± 3.85	

## Discussion

- IE improved itching, which previous studies have shown to be both highly prevalent and intrusive.
- Current treatment options for itching in HD patients are mostly pharmacological and relatively ineffective.
- IE may be a potential therapy for those in whom pharmacological solutions are ineffective.
- IE may also improve anxiety as assessed by self-report of psychological symptoms.
- No statistically significant changes were observed in the anxiety section of the POS-R.
- This indicates that whilst patients acknowledge anxiety related symptoms, they do not report the condition itself.



**Aim:** To evaluate the effect of a 3 month IE programme on the uraemic symptoms and self-reported health status of HD patients.

## Methods

- 47 prevalent HD patients were randomised into a 3 month programme of intradialytic exercise (IE) or into a usual care control (CON) group.
- Those in the IE group performed aerobic exercise for at least 30 mins per dialysis session at a moderate intensity (Borg Rating of Perceived Exertion 12-14).
- At baseline and three months, patients completed three questionnaires:

Palliative Care Outcome Scale Renal Version (POS-R)

Hospital Anxiety and Depression Scale (HADS)

EuroQoL 5 Dimensions Questionnaire (EQ5D)

- ANOVA and Chi Squared methods were performed to assess between group (IE v CON) differences at 3months compared to baseline using SPSS.
- Statistical significance was accepted at the  $P < 0.05$  level.