

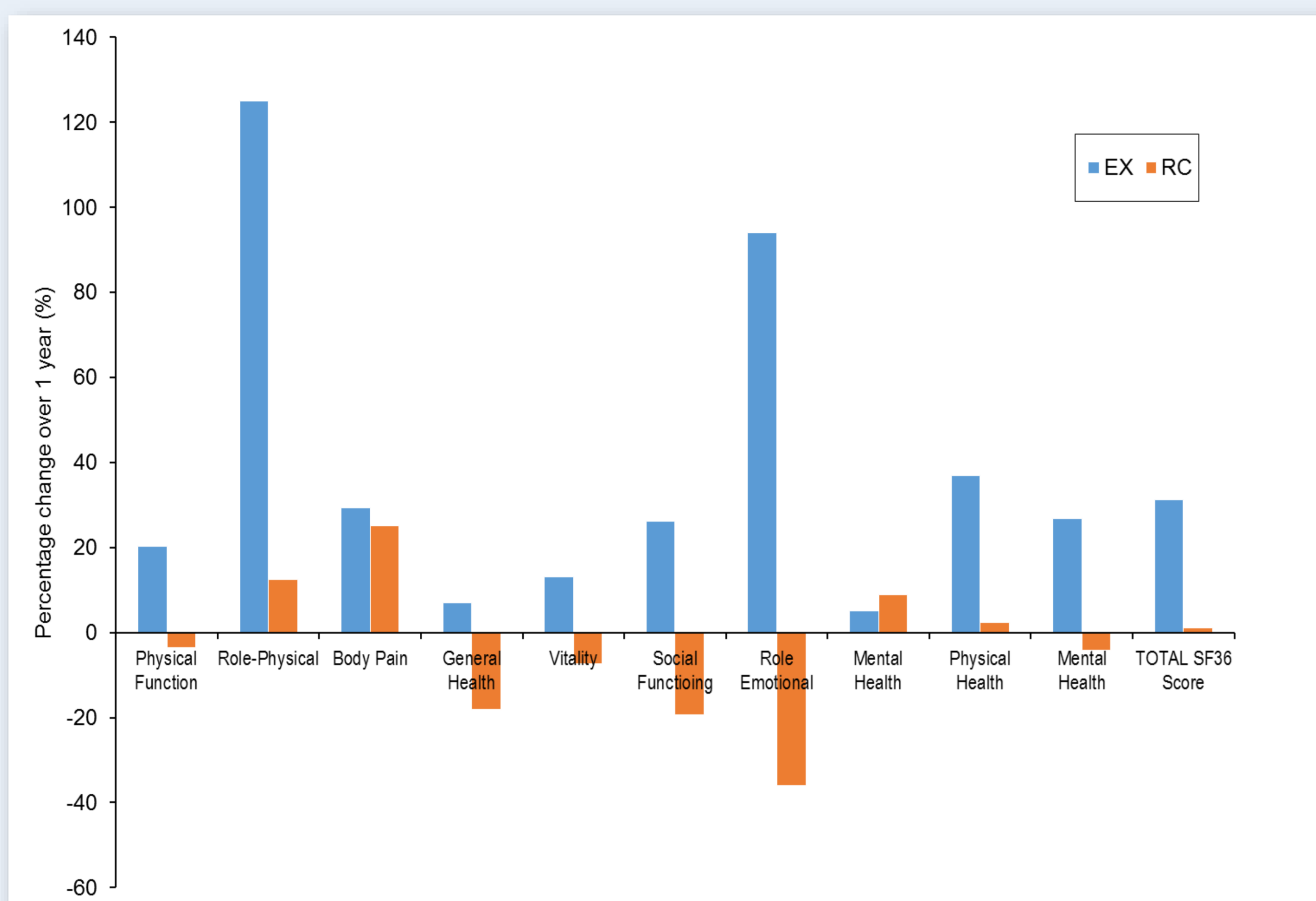
# Long Term Intra-dialytic Cycling and the Impact on Quality of Life

## BACKGROUND:

Patients receiving maintenance haemodialysis (HD) suffer from a variety of co-morbidities which can contribute to poor quality of life (QOL). Exercise therapy has the potential to ameliorate these issues but research in this area has tended to focus on those patients at minimal risk and is often evaluated over only short-term periods

## AIM:

To evaluate the **long-term effects of a physiotherapist lead cycling programme on quality of life** in a representative sample of HD patients.



## METHODS:

- **14 exercise patients** (age:  $70.5 \pm 17.3$  years).
- **10 patients acted as routine care controls** (age:  $67.8 \pm 11.1$  years).
- All patients completed a Medical Outcomes Short Form 36 (SF-36) to assess QOL at baseline.
- Exercise patients cycled (MOTomed letto2 cycle ergometer) for approximately 20 mins at low / moderate intensities during the first hour of HD treatment.
- QOL was evaluated (using repeated-measures ANOVA) for all patients after 1 year.
- **Graph: Exercise Group / Routine Care Controls**

**RESULTS:** Improvements in QOL were demonstrated in all aspects of the SF-36 in the exercising group with percentage improvements ranging from **5 – 125%**. Significant differences were seen between the exercise and routine care groups for both mental health composite scores ( $P = 0.043$ ) and for social functioning ( $P = 0.050$ ) aspects of the SF-36 assessment.



## CONCLUSION:

**Intra-dialytic cycling substantially improves long-term QOL** in a wide spectrum of HD patients.

Significant improvements in social functioning and mental health are of particular importance for older HD patients who are more likely to suffer feelings of isolation and suffer a loss of independence.

**ACKNOWLEDGEMENTS:** Thank you to Helen Doyle, Physiotherapy Technical Instructor, who runs the intra-dialytic exercise programme, and to the nurses and patients in the Renal Unit.

The most important findings of this study was:

- **that it is feasible to embed intra-dialytic cycling into the routine care of almost all HD patients**
- **it offers long-term benefits in QOL for those patients.**