

Exercise-based cardiac rehabilitation for chronic heart failure: the EXTRAMATCH II individual participant data meta-analysis

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Declared competing interests of authors: Rod S Taylor is currently co-chief investigator on a National Institute for Health Research (NIHR)-funded programme grant designing and evaluating the clinical effectiveness and cost-effectiveness of a home-based cardiac rehabilitation intervention for patients who have experienced heart failure (RP-PG-1210-12004). He is also a member of the NIHR Priority Research Advisory Methodology Group (August 2015–present). Previous roles include the NIHR South West Research for Patient Benefit Committee South West (2010–14); core group of methodological experts for the NIHR Programme Grants for Applied Research programme (2013–October 2017); NIHR Health Technology Assessment (HTA) Themed Call Board (2012–14); NIHR HTA General Board (2014–June 2017); and chairperson of the NIHR Health Services and Delivery Research Researcher-led Panel (March 2014–February 2018).

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Plain English summary

The EXTRAMATCH II individual participant data meta-analysis

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Plain English summary

Exercise-based cardiac rehabilitation (ExCR) is currently recommended in both the UK and international clinical guidelines for people with heart failure (HF). However, it remains uncertain as to whether or not the effects of cardiac rehabilitation are consistent across patient subgroups (e.g. men vs. women). This study sought to review available scientific evidence using individual participant data (IPD) to look at this issue.

Electronic literature databases were searched for published studies and anonymised IPD from the researchers who conducted these research studies was sought. It was possible to bring together data from 3900 people with HF.

Although the analyses of these data show that participation in ExCR does not appear to have an impact on the risk of death or hospitalisation, participation does offer some improvement in the physical fitness and quality of life of people with HF. It was also found that these benefits were irrespective of a patient's age, sex, ethnicity, initial level of physical fitness or disease severity.

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This report

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