

Cardiac Rehabilitation Reduces Depression and Improves Quality of Life in Men and Women

Amber Green, MS¹, Michael McNamara, MS, FAACVPR², Carrie Oser, MPH², Chantal A. Vella, PhD¹

¹Department of Movement Sciences, University of Idaho

²Cardiovascular Health Program, Montana Department of Public Health & Human Services

Research suggests participation in cardiac rehabilitation (CR) improves both physical and mental health outcomes. However, women entering CR have been shown to have higher incidences of depression compared with men. This may affect adherence to CR and physical and mental health outcomes following CR. Few studies have investigated the benefits of CR in women and even less have compared differences in mental and health outcomes following CR between men and women. **PURPOSE:** To investigate the differences in quality of life (QOL) and depression in men and women at baseline and post CR. **METHODS:** Participants included 10,721 men (65.4 ± 11.2 years) and 4,589 women (67.1 ± 11.7 years) from programs participating in the Montana Outcomes Project. Participants completed the Short Form Health Survey (SF-36) to assess quality of life (QOL) (1007 men and 419 women) and the Patient Health Questionnaire (PHQ-9) to assess depression (5900 men and 2455 women) pre and post CR. **RESULTS:** The top three diagnoses for men and women were coronary artery bypass graft (28 and 18%, respectively), percutaneous transluminal intervention (PCI) (26 and 29%, respectively), and myocardial infarction with PCI (22 and 20%, respectively). The average number of cardiac rehabilitation visits was 21.5 ± 11.9 for men and 20.9 ± 12.1 for women. Prior to CR, women had a higher prevalence of mild-to-moderate depression when compared with men (45% vs. 38%; $p < 0.001$), while there was no difference in prevalence of severe depression ($p > 0.05$). Men had higher QOL scores prior to CR compared with women (physical score: 39.4 vs. 34.5 and mental score: 48.4 vs. 46.3; $p < 0.001$). Post CR, mild-to-moderate depression remained higher in women; however, prevalence of mild-to-moderate and severe depression decreased in both men and women ($p < 0.001$). Post CR, QOL scores remained lower in women; however, scores improved for both genders (physical score: 47.7 for men vs. 45.6 for women; $p < 0.001$ and mental score: 53.4 for men vs. 52.3 for women; $p < 0.05$). **CONCLUSIONS:** Our novel findings suggest that there are gender differences in QOL and depression in CR patients, with women appearing to suffer more from depression and lower QOL before and after CR. Our findings also suggest that depression level at the onset of CR does not affect adherence to CR and that despite higher levels of mild-to-moderate depression, women benefit from CR similarly to men.