

THE EFFECT OF GENTLE ARM EXERCISE AND DEEP BREATHING ON SECONDARY ARM LYMPHEDEMA

A.L. Moseley, N.B. Piller, C.J. Carati

Department of Surgery & Lymphoedema Assessment Clinic (ALM,NBP), Flinders University and Medical Centre, Bedford Park, and Department of Anatomy (CJC), School of Medicine, Flinders University, Adelaide, South Australia, Australia

ABSTRACT

The aim of this study was to explore the benefits of gentle arm exercise combined with deep breathing for secondary arm lymphedema. 38 women participated in 10 minutes of standardized arm exercise and deep breathing and were measured every 10 minutes for 1 hour, then 24 hours and 1 week post regime. A smaller cohort of 24 women continued the 10 minute exercise regime morning and evening for 1 month, with measurements being repeated at the end of this time. Directly after performing the regime, there was a reduction in arm volume of 52 mls (5.8%), with the reduction being sustained at 30 minutes (50 mls, 5.3%). Even though participants were told not to further do the exercise, at 24 hours the volume reduction was 46 mls (4.3%) and at 1 week, 33 mls (3.5%). At the one month follow-up, the reduction was 101mls (9.0%). All reductions were statistically significant. Reported arm heaviness and tightness also statistically significantly decreased directly after the regime with the reduction in tightness being sustained at 24 hours. The reduction in heaviness was sustained at 24 hours, 1week, and even one month after the program. Perceived limb size was significantly reduced at 1 week and at the 1 month follow-up. There was also a significant improvement in the anterior thorax tonometry reading at the 1 month follow-up.

This study indicates that combined arm exercise and deep breathing is an easy to perform and implement regime which significantly reduces arm volume and subjective symptoms both initially after treatment and when performed over a 1 month period.