Heart transplant recipients can improve fitness and perform high intensity workouts

July 6 2009

Heart transplant recipients' cardio-respiratory fitness is around 30 to 50 per cent lower than age-matched healthy sedentary individuals. As a result, exercise rehabilitation should be very important to these patients, and a University of Alberta study shows they can improve their overall physical fitness.

Mark Haykowsky, in the Faculty of Rehabilitation Medicine, led the largest randomized exercise intervention trial in heart-transplant patients, which was published in the April edition of *American Journal of Transplantation*. The study involved 43 participants, half sedentary, and the other half on a 12-week exercise program. He found that exercise improved cardio-respiratory fitness, muscle mass and maximal strength; surprisingly, however, exercise training didn't improve heart or blood-vessel function. Those exercising improved the size of the muscle mass, but blood vessels were still hardened and the heart's ability to fill and relax was not improved.

The study's findings show that people who are classified as "long-term post-transplant" are trainable. The results also served as a springboard for Dwight Kroening, who went on to become the first heart-transplant recipient to complete an Ironman triathlon (2.4 mile swim, 112 mile bike and 26 mile run). And the inspiration goes both ways, as Haykowsky went on to train and complete his first marathon because of Kroening's own determination.

Source: University of Alberta (news : web)