

LOUELLA COHEN, CARLEY DIGIACINTO, EMILY GIORDANO, DEEANN GREENE, SIERRA ROBINSON, DORA WALLACE, BRYLEE HENDERSON, PAYTON KNICELY, AUDRIANNA TAYLOR, HEATHER KALB, & NATALIA OMELCHENKO-COMER, STEM and Business Division, WVNCC, Wheeling, WV, 26003. Age of the subjects alone does not determine the maximal heart rate or the heart rate recovery after exercise.

A decline in the heart muscle strength is a well-recognized aspect of normal aging. Nonetheless, the resting heart rate (HR) in developing adults appears to be unchanged. The aim of this study was to determine if HR recovery after exercise is influenced by age. Healthy male and female volunteers, aged 12-61 years, were divided into two groups. The first group included participants younger than 30 (18.8 +/- 4.15), and the second group included individuals that were older than 30 (50.0 +/- 8.56 years). After resting HR in sitting position was recorded, the participants were asked to perform a basic step platform exercise for 3 minutes at a consistent pace of 14 lifts per minute. The HR was measured again right after the completion of the exercise and one more time 10 minutes post exercise. Resting HR recorded in the study was 77.7 +/- 10.22 beats/min. We observed 41% increase in HR immediately after the completion of the exercise ($p=0.001$). Only partial recovery was detected after 10 min of rest as HR remained 13% elevated compared to the resting baseline ($p=0.005$). Remarkably, there was no significant difference between two age groups in the resting HR, maximal HR, or HR change during recovery period ($p>0.05$). Our data suggest that the age alone does not define HR parameters measured here. Other contributors, like BMI and physical fitness are discussed. The findings of this study may be used for development of community-based strategies for improvement in health and life quality for increasingly aging population.