五　'95アジアスポーツ医学会

——1994年　広島——

Cardiovascular Responses of Middle-Aged and Aged Women During Walking in the Water

T. MATSUI, M. KOEDA, T. HARADA, K. TKAMI
T. TERASHIMA, Y. SUGAJIMA[1)], T. ISHIKO and Y. KONDO[2)]

The purpose of this study was to clarify the characteristics of cardiovascular responses of middle-aged and aged women during walking in the water. Nine women aged from 44 to 63 years participated in this study as the subjects. Their mean height was 156.1±4.0 cm and mean weight was 49.6±4.9 kg. At first they walked in the swimming pool whose depth was kept about 1.1 m. The walking speeds were set at 20, 26, 36 and 44 $m \cdot min^{-1}$ and the each duration was 3 minutes. Oxygen uptake ($\dot{V}O_2$), ventilatory volume ($\dot{V}E$), heart rate (HR), blood pressure (systolic and diastolic) were measured during the walking. One or two days later they walked on the treadmill at four intensities which corresponded to $\dot{V}O_2$ obtained during walking in the water. Same parameters were measured during the treadmill walking. Mean $\dot{V}E$ and HR showed smaller values during walking at 26, 36 and 44 $m \cdot min^{-1}$ speeds in the water than on the treadmill. Mean systolic and diastolic blood pressures also indicated smaller values during walking at all speeds in the water. From these results, it was suggested that cardiovascular responses of middle-aged woman during walking in water was smaller than those on land.

Chukyo University, Aichi 470-03, Japan
[1)] *Nagoya University of Arts, Aichi 481, Japan*
[2)] *The Society to popularize Jikyo-jutsu, Tokyo 114, Japan*