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Heart rate recovery improves after exercise in water when compared with on land.

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Abstract

BACKGROUND:

Water immersion has demonstrated its effectiveness in the recovery process after exercise. This study presents for the first time the impact of water immersion on heart rate recovery after low-intensity cycle exercise.

METHODS:

Sixteen male volunteers were involved in the study. The experiment consisted of two cycling exercises: 1 h in ambient air and 1 h in water (temperature: $32 \pm 0.2^\circ\text{C}$). The exercise intensity was individually prescribed to elicit around 35%-40% of VO_2 peak for both conditions. Heart rate recovery was analysed according to recognized methods, such as the differences between heart rate at exercise completion and within the 2 min recovery period.

RESULTS:

Although the two exercises were performed both at same energy expenditure and heart rate, the indexes used to assess the fast and slow decay of the heart rate recovery were significantly shortened after exercise in water.

CONCLUSION:

The results of the present study suggest that cycling in thermoneutral water decreases the cardiac work after exercise when compared with cycling on land.

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KEYWORDS:

cardiac function; cycling; oxygen uptake; recovery; thermoneutrality

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