Impact of Aging on Recreational Surfers’ VO2peak During Simulated Paddling

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Abstract

Background: There is a growing body of literature characterizing peak oxygen consumption (VO2peak) of young surfers during simulated paddling. Conversely, no data on VO2peak during simulated paddling has been collected in surfers over the age of 30. This paucity of data is surprising given the increasing participation rates of older adults in the sport of surfing. Purpose: The purpose of this study was to characterize VO2peak during simulated paddling in recreational surfers between the ages of 18 to 69. Methods: Forty-eight male recreational surfers between the ages of 18 and 69 years participated in this study. Subjects performed a maximal graded exercise test on a surfboard attached to a swim bench ergometer (VAna). Power output began at 20 watts and increased by 10 watts every minute. Oxygen consumption and heart rate were measured continuously using an integrated metabolic measuring system (ParvoMedics TrueOne 2400) and heart rate monitor (Polar RCX5), respectively. Results: Average VO2peak, during simulated paddling for subjects from the second, third, fourth, fifth, and sixth decades of age were 31.9±7.1, 26.1±5.3, 25.8±5.7, 19.8±0.7, and 32.9±5.0 mL/kg/min, respectively. VO2peak during simulated paddling on a swim bench ergometer was significantly lower in older adults. Paddling, an upper body exercise, shows similar age-related decline in VO2peak as that of lower and whole body exercise.

Conclusions

• Among the group of sixty-eight recreational surfers (ages 18-69) there was a significant decrease in VO2peak and maximal HR with an increase with age (Figures 1&3).
• RER decrease in older subjects (Figure 2).
• Paddling, an upper body exercise, shows similar age-related decline in VO2peak and maximal HR as that of lower and whole body exercise.

References

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Acknowledgements

We would like to acknowledge the California State University, San Marcos Kinesiology 326 Exercise Physiology class for their help in data collection.