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Scuba Fitness: Oxygen Utilization Testing for Scuba Divers



Gretchen M. Ashton, Photographer



Gretchen Ashton
Carlsbad Scuba Fitness Examiner

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Oxygen utilization (VO_2) is typically discussed as an advanced training tool for endurance athletes. Although not widely considered for diving, VO_2 testing provides both cardiovascular fitness and metabolic feedback that may be helpful to divers. The more oxygen a diver can uptake and utilize, the greater the aerobic capacity and the better the cardiorespiratory fitness of the diver.

VO_2 testing may be interesting to divers new to fitness who want to measure improvement or train more efficiently, for divers who are exercising regularly but have reached a plateau in their fitness endeavors, and for divers who are athletes.

Oxygen utilization for general fitness purposes is measured in millimeters of

oxygen per kilogram of body weight per minute (ml/kg/min).

- An oxygen uptake score of less than or equal to 30ml/kg/min indicates a low level of fitness.
- An oxygen uptake score of 30 to 50 ml/kg/min indicates a moderate level of fitness.

- An oxygen uptake score of 50 to 90 ml/kg/min indicates a high level of fitness.

Divers with lower cardiorespiratory fitness can improve by participating in lower intensity exercise. Divers with higher cardiorespiratory fitness levels require more increased exercise intensity for improvement.

V02 max is the absolute maximum amount or volume of oxygen processed by the heart, lungs and muscles per minute while exercising at a strenuous maximum intensity. For most divers, physical activity cannot be sustained for long at this level, intensity may not be appropriate to the diver's current health status and fitness level, and/or injury is more likely to occur beyond the benefit of exercise. Consequently, resting V02 and other testing methods are available.

Divers interested in V02 testing should seek out a human performance and health enhancement laboratory such as, **The Fit Stop**, owned and operated by Ken Nicodemus. In addition to elite endurance athletes, Ken's clients include the **California Department of Fish and Game, California Department of Corrections, California Highway Patrol, the FBI, DEA**, and numerous Fire and Police Departments. For more information or to schedule testing, contact Ken at kjnico@fitstop-lab.com, 760-634-5169.

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