EXPLOITING AEROBIC FITNESS TO REDUCE RISK OF HYPOBARIC DECOMPRESSION SICKNESS

J Conklin, ML Gerhardt, JH Wessel, 1

Center 2, Wyle Laboratories, Life Sciences Systems & Services 3, Houston, Texas, USA 77058.

INTRODUCTION

Decompression sickness (DCS) is a hazard of human exposure to increased pressure. Aerobic fitness has been shown to reduce DCS risk, but the current study examined whether the exercise level during decompression (PB) could influence DCS outcomes. Two groups of subjects were studied: one that performed PB and one that did not. The results showed a significant decrease in DCS risk for those who performed PB, with a 2.3% increase in DCS risk for those who rested during the PB.

RESULTS

The VO2pk for subjects who perform no PB or resting PB has no bearing on the DCS outcomes as seen in Fig. 1, the slope is essentially zero. The relationship between VO2pk and DCS risk is shown in Fig. 2, where the relationship is significant with a p-value of 0.008. In Fig. 3, it is shown that the VO2pk for subjects who perform no PB or resting PB has no bearing on the DCS outcomes.

CONCLUSIONS / DISCUSSION

The VO2pk for subjects who perform no PB or resting PB has no bearing on the DCS outcomes as seen in Fig. 1, the slope is essentially zero. The relationship between VO2pk and DCS risk is shown in Fig. 2, where the relationship is significant with a p-value of 0.008. In Fig. 3, it is shown that the VO2pk for subjects who perform no PB or resting PB has no bearing on the DCS outcomes.

METHODS

Two general classes of experiments that include VO2pk information are available from the NASA Hypobaric Decompression Sickness Database. The VO2pk for subjects who perform no PB or resting PB has no bearing on the DCS outcomes as seen in Fig. 1, the slope is essentially zero. The relationship between VO2pk and DCS risk is shown in Fig. 2, where the relationship is significant with a p-value of 0.008. In Fig. 3, it is shown that the VO2pk for subjects who perform no PB or resting PB has no bearing on the DCS outcomes.

REFERENCES