

Max VO₂, Vertical Jump And Sprint Velocity As Predictors Of Selection To An NHL Roster

John N. Nash Award for Best Multi-Disciplinary Abstract

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PURPOSE: The purpose of this investigation is to determine if the max VO₂ is a valid predictor of selection to a NHL roster (ROSTER) when compared with the vertical jump (VJ) and skating sprint velocity (SSV). The selection process for an NHL roster is always complex and is determined by abilities that are sometimes difficult to define. However, physical performance is measured and these parameters can be clearly defined. Historically, professional hockey teams have used the aerobic efficiency test, max VO₂, as a major determining factor of fitness and selection to a team. The max VO₂ is an aerobic test and the sport of hockey is primarily an anaerobic sport characterized by multiple shifts with rest between shifts; stoppages in play for penalties, puck traveling out of play, time-outs, and breaks between periods. Athletes who were highly skilled, but had poor max VO₂ performances were made to train often on long stationary bike rides during training camp and the season. **METHODS:** The VJ was measured on a Vertec unit with a counter-movement without steps. The sprint was measured from goal line to far-blue line (in this case 40 yards) using infrared sensors at the start and finish. The max VO₂ was measured using a stationary bike. **RESULTS:** The ROSTER (n=25) mean max VO₂ was 53.896 ml/kg/min with a standard deviations (SD) of 2.3917 and for players who were not selected (NONROSTER) (n=26) was 53.962 ml/kg/min with SD of 5.20746 and p=.956. The ROSTER VJ (n=23) was 28.143" with SD of 3.8765 and NONROSTER VJ (n=25) was 28.140" with SD of 3.3237 and p=.997. The ROSTER SSV (n=17) was 4.7965 seconds with SD of 0.11723 and NONROSTER SSV (n=22) was 4.8577 seconds with SD of 0.13784 and p=.232. No statistical significance was found between max VO₂ score, VJ or SSV and being selected for the ROSTER. **CONCLUSION:** It is the conclusion of these authors that the max VO₂ should not be given any weight by professional coaches or management in the selection of roster players as there is no statistical correlation between the max VO₂ and making the NHL roster. The VJ or SSV alone are not reliable selection criteria.

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