

SINGLE-LEG AEROBIC CAPACITY, MUSCULAR STRENGTH, BALANCE, AND  
AGILITY IN HEALTHY AND SURGICALLY REPAIRED ANTERIOR CRUCIATE  
LIGAMENT LEGS IN COLLEGE AGE STUDENTS (107 pp.)

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Following anterior cruciate ligament (ACL) surgery there is known inconsistency of return to play criteria, which may explain why cleared athletes are at a greater risk for re-injury of the surgical limb or injury of the bilateral limb. The purpose of this study was to examine whether there are limb differences in single-leg aerobic capacity in subjects who have undergone ACL surgery. Our goal was to compare single-leg aerobic capacity to traditional return to play outcomes to determine if this novel outcome provides an additional criteria for clinicians to consider. Our secondary purpose was to compare the data from the ACL injured limb with a matched limb from a non-ACL surgery control. Eight non-ACL surgery controls and eight subjects with ACL surgery (average time since clearance 12.9 months) aged 18-29 completed two separate visits to determine strength, agility, balance, and single-leg aerobic capacity for each limb. Although there were some minor differences observed within the traditional return to play criteria, indices of aerobic capacity were no different between the ACL and control groups or the uninjured or injured limbs in the ACL group. Only minor differences were found in some of the more

traditional tests that evaluated strength, agility, and balance. Additional research needs to be performed to determine the role of aerobic testing as a clinical measure following ACL or other lower limb injuries.