ABSTRACT

This invited clinical commentary summarizes the current state of knowledge in the area of prevention of anterior cruciate ligament (ACL) injuries. ACL injuries occur with a four to six fold greater incidence in female compared to male athletes playing the same high risk sports. The combination of increased risk of ACL injury and a 10-fold increase in sports participation since the enactment of Title IX in 1972 has led to an almost epidemic rise in ACL injuries in female athletes. Examination of the mechanisms responsible for this sex disparity in ACL rupture accelerated in the last two decades. A summary of these findings and a synthesis and framework for understanding the results of the intense investigation of this research are detailed herein. This clinical commentary focuses on the current understanding, identification and interventional targeting of the primary neuromuscular and biomechanical risk factors associated with the ACL injury mechanism in high-risk individuals.

Key Words: Female, ACL injury, prevention strategies