

Maximizing Quadriceps Strength After ACL Reconstruction

Riann M. Palmieri-Smith, PhD, ATC^{abc}, Abbey C. Thomas, MEd, ATC^a, Edward M. Wojtyls, MD^{bc}

The primary objectives of ACL surgery and rehabilitation are to restore knee function to preinjury levels and promote long-term joint health. Often these goals are not achieved, however. The quadriceps is critical to dynamic joint stability, and weakness of this muscle group is related to poor functional outcomes. Because of this, identifying strategies to minimize quadriceps weakness following ACL injury and reconstruction is of great clinical interest. This article reviews the current literature and critically discusses current rehabilitation approaches to restore quadriceps muscle function after ACL reconstruction.

^a Division of Kinesiology, University of Michigan, 401 Washtenaw Avenue, Ann Arbor, MI 48109-2214, USA

^b Department of Orthopaedic Surgery, University of Michigan, 1500 East Medical Center Drive, 2912 Taubman Center, Box 0328, Ann Arbor, MI 48109, USA

^c Bone and Joint Injury Prevention and Rehabilitation Center, University of Michigan, Domino Farms, 24 Frank Lloyd Wright Drive, MedSport, Lobby A, Ann Arbor, MI 48106, USA