

INTEGRATIVE APPROACHES FOR SUCCESSFUL REHABILITATION

Ki-Kwang Lee

Sports Biomechanics Lab., Kookmin University, Seoul, Korea

Currently it is common that sport biomechanists and orthopedic surgeons work together for sports injury prevention and rehabilitation training in Korea. Functional training is the latest issue in not sports injury prevention but rehabilitation at the moment. It works on the premise that the body is designed to work by performing patterns of movement which engages muscles in natural way rather than in one plane of movement. Understanding how each of the body's joints or systems works independently is essential to see whether that section has the capacity to function as part of the whole. A biomechanical screen will provide this information and is used as a precursor to functional screening and training. Once each joint or system has the capacity to function correctly, functional training using combinations of joints and systems, then becomes more likely and the movements are pure not compensatory. Dr. Junggi Hong is the most active scholar and practitioner in the performance training and sports medicine for athletes in Korea. He contributes athletic rehabilitation and injury prevention field in Korea through co-work with many athletic trainers in various professional sports teams and physicians in sports medical centers in Korea.

Allowing a patient to return to sport and unrestricted physical activity after ACL injury and reconstruction is one of the most challenging and difficult decisions an orthopaedic surgeon has to make. Indeed, many factors have to be taken into account before it can be considered safe for a patients to load a reconstructed knee. Dr. Jin Koo Kim is the best physician for athlete's ACL reconstruction and researcher in sports medicine, especially at evaluating return to sport. As a director of sports medical center at Kunkuk general hospital, he works with many trainers who graduated sports science major from the athletes' ACL reconstruction to successful return to sports through evidence based rehabilitation training. While currently they are using one-legged hop test, muscle co-contraction test, Carioca test, and isokinetic muscle strength test to evaluate rehabilitation progress and to make decision the return to sports, they also are doing many research for application of information and communication technology, such as various sensor technology and virtual reality system to athletic rehabilitation training and evaluation the return to sport.