Anterior cruciate ligament (ACL) injuries are among the most common and functionally disabling conditions in orthopaedics and sports medicine. The incidence of ACL reconstruction (ACLR) in the United States has increased dramatically over the past 20 years. In 1994, an estimated 86,687 ACLR procedures were performed. By 2013, the yearly number of procedures had increased by 58% to 148,714. Over this 20-year period, the fastest-rising demographic to undergo ACLR has been females younger than 20 years of age, especially high school–aged female athletes. There are several well-documented risk factors for sustaining a noncontact ACL injury. These include hip musculature weakness, faulty muscle-firing patterns, and improper running, jumping, landing, and cutting mechanics; and they often lead to valgus collapse of the knee. Many of these risk factors are readily identifiable through a functional and clinical evaluation, and can be corrected through education and a dedicated exercise program.

The individuals at greatest risk of sustaining an ACL injury are those who have sustained a previous ACL injury. Although it may seem counterintuitive, Paterno et al have reported that individuals are more likely to sustain a second ACL injury to their contralateral knee, as opposed to the previously injured side. In my opinion, the following factors are associated with sustaining a second ACL injury: incomplete or inappropriate rehabilitation; premature return to sports or strenuous work activities, particularly when the patient is not physically and mentally ready; and, finally, engaging in physical activities too advanced for the level of the patient’s achieved recovery. The reinjury rates post-ACLR highlight the need for better rehabilitation of the injured limb as well as for implementation of prevention strategies for the uninjured limb.

Anterior cruciate ligament injuries and ACLRs are extremely costly to patients and to the US health care system, which is transitioning toward value-based reimbursement for services rendered. With regard to ACLR specifically, the costs include surgeon and hospital/surgery center fees plus the cost of rehabilitation. I have estimated that an ACLR costs between $32,000 and $50,000. Despite this high price tag, the procedure has been shown to be cost-effective in terms of restoring function and reducing long-term morbidity. In addition to these costs, the patient may sustain lost wages, loss of employment, and, in the case of high school–or college-aged individuals, negative academic impact secondary to undergoing an ACLR. Often, there is also a psychological aspect associated with this injury and surgery that is left unaddressed. Perhaps most importantly, the long-term impact of an ACL injury can be substantial—to patients and to the health care system. Patients sustaining an ACL tear are more likely to develop osteoarthritis of that knee later in life, potentially leading to decreased lower extremity function, disability, and
the possibility of having to eventually undergo a total knee arthroplasty. In long-term follow-up studies, looking at the development of osteoarthritis in patients post-ACLR, 61% to 74% of all patients exhibited radiographic changes 7 to 20 years following surgery.\(^6\)\(^\text{,8}\)

As professionals, we need to do a better job of screening individuals to determine who is at greatest risk of sustaining an ACL injury, as well as implementing injury prevention programs. We also need to do a better job with programs that return individuals to their preinjury activity levels, including implementing thorough functional testing to determine if a patient is ready to return to sports or strenuous activities post-ACLR. Often, patients exhaust physical therapy visits that are authorized or covered by insurance prior to being cleared to return to sport, recreation, or work activities. And, when the patient visits his or her physician prior to being cleared to return to higher-level activity, the examination is often limited to a Lachman test, manual muscle strength testing, and a discussion about what the patient is doing in preparation to return to the desired sport or activity. I do not believe that this is enough, nor does it objectively determine the patient’s readiness to return to any level of activity.

Insurance companies should consider it in their best interest to pay for ACL injury screening assessments in uninjured scholastic athletes, and most especially for a thorough, objective, functional-testing evaluation before returning patients to sports or strenuous work. The cost of these assessments should be covered by insurance, even when the patient has exhausted coverage for skilled physical therapy. In the long run, patients would most likely sustain fewer second ACL injuries and the insurance industry would see a decrease in the costs associated with another injury, surgery, and rehabilitation.

Proven, well-documented, evidence-based ACL injury prevention programs are readily available.\(^3\)\(^\text{,5,7,8}\) These programs have demonstrated reduced ACL injury rates when they are implemented and appropriately followed. We should routinely screen active and athletic young people before they sustain an ACL injury. Why does a person have to sustain an injury to obtain valuable knowledge about exercises and training skills and advice to prevent knee injuries? Let’s all get this right. Let’s implement both preventative ACL injury programs prior to sustaining injuries and functional testing before we allow our patients post-ACLR to return to strenuous activities. Let’s encourage the insurance companies to pay for these services. I contend that prevention and screening will save the insurance companies money, while decreasing the rate of ACL injury in people who just want to enjoy their sport of choice and lead an active and healthy lifestyle. Let’s all get this right, for everyone’s sake.

REFERENCES