

# Warm-up routine could save your knees

By Gretchen Reynolds, New York Times

Rupturing an anterior cruciate ligament in the knee is a nightmare. As the parent of a teenage son who is seven months out from ACL reconstruction surgery, I can attest to the physical and psychological toll it can take, not to mention the medical bills. But a practical new study suggests that changing how sports teams warm up before practices and games could substantially lower the risk that athletes will hurt a knee, at a cost of barely a dollar per player.

Injuries to the ACL, which connects the tibia and femur and stabilizes the knee joint, are soaring, with an estimated 150,000 cases a year. The ligament is prone to tearing if the knee shears sideways during hard, awkward landings or abrupt shifts in direction – the kind of movements that are especially common in sports like basketball, football, soccer, volleyball and skiing.

Motivated by the growing occurrence of these knee injuries, many researchers have been working in recent years to develop training programs to reduce their number. These programs, formally known as neuromuscular training, use a series of exercises to teach athletes how to land, cut, shift directions, plant their legs, and otherwise move during play so that they are less likely to injure themselves. Studies have found that the programs can reduce the number of ACL tears per season by 50 percent or more, particularly among girls, who tear their ACLs at a higher rate than boys do (although, numerically, far more boys are affected).

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