

# Locking, Buckling and Giving Way,

## The mysteries of an unstable knee

By Alan M. Reznik, MD MBA



“Standing still, I turned to get something off a shelf behind me, and bam, my knee just went;” “Every time I get up from a squatting position, my knee won’t straighten;” and “Going down stairs, my knee gives out. I just don’t trust it.” frequently statements like these are the first clue that a patient has an unstable knee. So why does this happen and what should be done?

The knee is the joint connecting the femur, the ‘thigh’ bone, to the tibia, the ‘shin’ bone. In the knee joint, the end of the thigh bone is rounded and the top of the shin is relatively flat. The two together are very much like a rolling pin sitting on a narrow table. Given even a small push, the rolling pin will fall off. That’s why the knee’s cartilage and ligaments are so important. They hold the two together and still allow the knee to bend and straighten smoothly. Without the ligaments and the cartilage we wouldn’t be able to run, jump, twist, turn, squat or pivot. And, it’s when they are injured or not working properly we have knee problems.

The examples above are stories of locking, the knee gets stuck in one position and won’t move, buckling, the knee is made unstable by a twist or turn, and giving way, the force of a

routine activity causes the knee to stop supporting the body’s weight.

Locking, can be caused by a piece of torn cartilage (the meniscus) stuck between the two bones. Until it’s pushed or put back into place the knee remains locked and often difficult to straighten. This can be both painful and disabling. If an examination is positive for signs of injury to the cartilage a tear may be the reason for the problem. A Magnetic Resonance Image, MRI, or a diagnostic arthroscopy, looking into the knee with a fiber optic telescope, can show the cartilage tear so the problem can be treated properly.

Giving way, can be caused by a cartilage tear or a ligament problem. Here’s where the physician’s examination of the knee is key. Telling the difference can be difficult. This is especially true, if the knee is swollen or if it is painful, both common findings in a recent injury. Fortunately, there are specific clinical tests, parts of a good routine knee exam, to help us find the cause. Sometimes special instruments like the KT-1000 (a very sensitive knee testing device that allows us to measure small movements between the femur and the tibia) can help us decide if one of the major ligaments like the ACL (anterior cruciate ligament) or PCL (posterior cruciate ligament) is damaged.

Buckling, can be caused by cartilage problems, ligament injury or knee cap problems. The knee cap is part of the quads mechanism. This muscle and tendon unit allows us to kick, jump, and squat. It also prevents us from falling when going down hill or down stairs. The body can sense when the knee cap is going to hurt and frequently causes the quads mechanism to release or give (hence the term give-way) to protect itself and you from pain.

Once your doctor makes the diagnosis, the treatment for these problems varies. They can include simple exercises, physical therapy, bracing, and arthroscopy (fiber optic, out-patient surgery.) The early correction of these mechanical problems can lead to a speedy recovery greatly reducing the risk of recurrence, future injury, long term problems, and early degenerative arthritis.