

PCL sparing vs. PCL sacrificing

There are two basic implant types available for total knee surgeons. These are posterior cruciate ligament retaining (CR) and posterior cruciate ligament sacrificing (PS). Within each category, options exist for cemented or press-fit implants. Dr. Rosenberg has been implanting press-fit CR implants for 15 years in athletic patients. Figure 11 shows the preservation of the PCL during surgery.

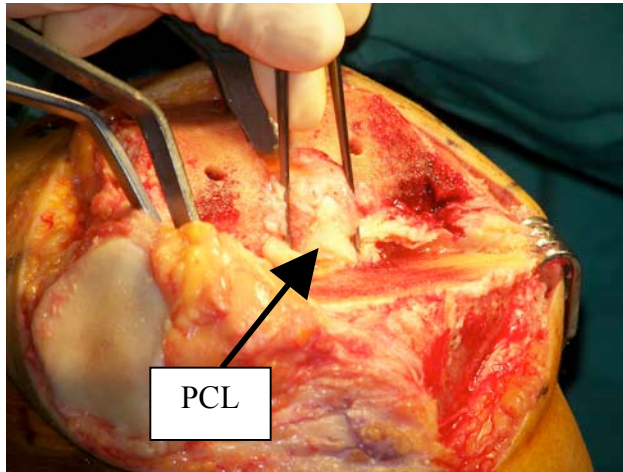


Figure 11. Preservation of the PCL ligament demonstrated after tibial cut.

The posterior cruciate ligament (PCL) stabilizes and contributes balance function (proprioception) to the knee joint and should be retained whenever possible. By protecting the PCL and balancing the soft tissues surrounding the knee, patients are able to safely engage in a variety of sports like golfing, skiing and hiking. Table 1 lists the key features of CR and PS implants.

Table 1. Important features of PCL retaining (CR) and PCL sacrificing (PS) implants.

Description	PCL Retaining (CR)	PCL Sacrificing (PS)
Sacrifices PCL	No	Yes
Ligament balance in extension	Yes	Yes
Ligament balance in flexion	Yes	No
Maximum bone preservation	Yes	No
Optimizes implant wear	Yes	No
Knee rotation restricted by implant post	No	Most designs
High loosening risk in athletic patients	No	Yes
Rare breakage of tibial insert	No	Yes