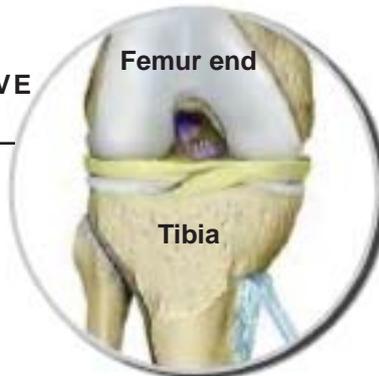




**ACL RECONSTRUCTION WITH HAMSTRING**

**KNEE BEFORE RECONSTRUCTIVE SURGERY**



**Overview**

This procedure replaces a damaged or torn anterior cruciate ligament (ACL) with a portion of hamstring tendon from the patient's leg. The ACL connects the front top of the tibia (lower leg bone) to the rear bottom of the femur (thigh bone). The hamstring tendons attach the hamstring muscles to the lower leg.

**Autograft Prepared**

Through a small incision below the knee, portions of the hamstring's semitendinous and gracilis tendons are separated from the muscle but left connected to the tibia. These strips are braided together to create a section of tendon called an autograft, which will be used to replace the damaged ACL.

**Torn ACL Removed**

The rest of the procedure is performed through small incisions on the sides of the knee. The surgeon uses a small video camera called an arthroscope to see inside the knee during the procedure. With the knee flexed, the damaged ACL is cleared away.

**Guide Pin Inserted**

A pin is inserted diagonally, from the tibia to the femur. The surgeon will use the pin as a guide to recreate the ACL.

**Tunnel Created**

The surgeon follows the guide pin, drilling a tunnel through the tibia and femur.

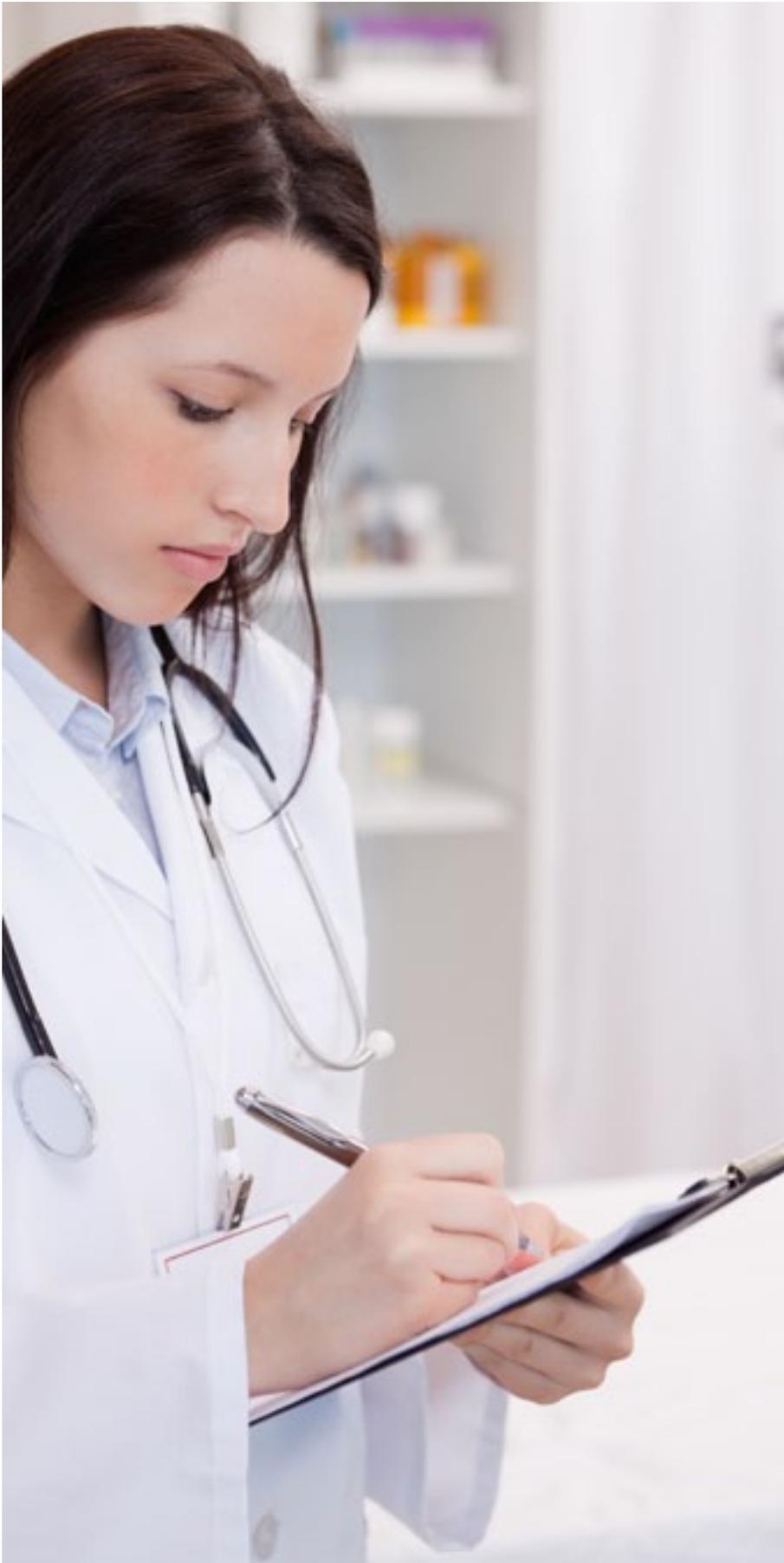
**Horizontal Screw Inserted**

A second tunnel is drilled to intersect with the femoral tunnel, and a horizontal screw is partially inserted. The hamstring grafts will be looped over this screw.



**KNEE AFTER RECONSTRUCTIVE SURGERY**

## ACL RECONSTRUCTION WITH HAMSTRING



### **Graft Strand Secured**

In order to pull the hamstring grafts over the horizontal screw, a graft-passing strand is captured by the bone mulch screw within the femoral tunnel. The horizontal screw is then advanced and embedded into the bone securely.

### **New ACL Created**

The hamstring grafts are tied to one end of the strand and pulled up through the joint and over the horizontal screw to create the new ACL.

### **Knee Straightened**

After the knee is straightened, the loose ends of the grafts are pulled tight and held securely to the tibia bone with a washer that has nail-like spikes and a screw.

### **End of Procedure**

The excess autografts are trimmed away. The new parts of the knee are then tested by flexing and extending the knee through its full range of motion.