

## **Medial Implantable Shock Absorber for Medial Compartment Knee Osteoarthritis**

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### **Background:**

Isolated medial compartment knee osteoarthritis presents a challenging problem to treat for knee surgeons, with a multitude of options from conservative management including injections and unloader braces, meniscal procedures, osteotomies, and unicompartmental knee arthroplasty. A new medial implantable shock absorber allows for the offloading of the medial compartment during stance phase of gait via a polycarbonate urethane cylindrical shock absorber affixed to the femur and tibia by titanium baseplates.

### **Purpose:**

This video overview and case presentation demonstrates indications, surgical technique, postoperative rehabilitation and evidence-based outcomes of the medial implantable shock absorber procedure.

### **Methods:**

A case example of a 55 year old male with isolated medial compartment Kellgren-Lawrence grade 3 osteoarthritis, that has failed nonoperative management and is indicated for a medial implantable shock absorber procedure is presented. This is followed by postoperative protocol, clinical follow-up and a literature review of level 1 and 2 evidence of the procedure.

### **Results:**

The patient is doing well at most recent follow up with full range of motion, no instability, and no hardware irritation. They are requesting their contralateral knee undergo the same procedure, however ongoing discussions are being held for unicompartmental knee arthroplasty given the more significant arthritis and medial osteophytes on that side.

### **Conclusion:**

The medial implantable shock absorber is a viable option for isolated medial compartment knee osteoarthritis that provides a joint preserving alternative to arthroplasty and a less morbid alternative to osteotomy. This treatment can be technically difficult to perform, but several pearls and techniques can offer a reproducible, minimally invasive surgery and good functional results.