



## Johnson Anti-Shear Accessory

Dual-pad accessory with adjustable fulcrum allows selection of counterforce required to control anterior shear during knee extension and prevent over stressing repaired, healing, or chronically lax ligaments. For use with the HUMAC NORM, CYBEX NORM, CYBEX 6000, CYBEX 300, and CYBEX II/II+ Extremity Systems.

The **Johnson Anti-Shear Accessory** makes it possible for patients and athletes with diagnosed or suspected injuries to the anterior cruciate and other ligaments of the knee to perform knee extension/flexion exercises...just weeks after sustaining the injury and without overstressing the ligaments. It also allows earlier exercise rehabilitation after surgical repair or reconstruction.

This dual-pad accessory for the CYBEX II/II+, 300, 6000, NORM, and HUMAC NORM counteracts anterior shear, controlling subluxation of the tibia and allowing the compression loaded articular surfaces to resume a more normal roll-and-glide relationship during terminal extension. It protects the knee while permitting full and efficient development of strength, power, and endurance.

The twin contour pads and fulcrum can be adjusted to provide an amount of shear force appropriate to the individual case, from minimal to nearly equal that provided by the standard shin pad. Shear force can also be progressively increased during the advanced stages of longer term rehabilitation.



## The Johnson Anti-Shear Accessory Can Help Solve Many Knee Problems

### **Acute Injury to the Anterior Cruciate Ligament:**

The accessory's unique counterforce mechanism prevents the tibia from being pulled forward by the quadriceps. With limited stress on the ACL itself, the healing ligament can remodel along the lines of stress without elongating.

### **Repaired or Reconstructed ACL:**

Counterforce mechanism also allows earlier exercise and rehabilitation after surgical repair or reconstruction

### **Injury to Posterior Cruciate Ligament:**

By limiting posterior shear during flexion, the accessory promotes healing of an injured posterior cruciate ligament

### **Chronic Laxity That Hasn't Been Repaired:**

Individuals with chronic laxity can strengthen hamstrings and quadriceps to increase functional control with eliminating or reducing tibiofemoral crepitus and pain that may have previously accompanied knee extension.

### **Post-Meniscectomy:**

Because the meniscus acts as a secondary stabilizer during knee extension, removal of meniscus, especially a large portion, often results in increase anterior laxity.

### **Any Significant Knee Injury Than Might Involve or Compromise the ACL:**

Because the ligaments, capsule and cartilage of the knee have overlapping functions and multiple movement, injuries are common. The accessory should be used as a precautionary measure until ACL involvement or compromise has been ruled out.

## Easily adjustable and adaptable to the CYBEX II, 300, 6000, NORM and HUMAC NORM Extremity Systems.

The shin pads of the Anti-Shear Accessory can be easily adjusted to accommodate vary leg lengths and secured in place with locking knob. The amount of counterforce to anterior shear is selected by adjusting the fulcrum position. The pads surround the tibia, distributing force over a large area with minimum weight. This helps reassure patients and makes leg extensions more comfortable, providing further motivation.

Safe Exercise and Testing is the Clinician's Responsibility  
The Johnson Anti-Shear Accessory is an extremely useful tool for earlier rehabilitative exercise of diagnosed ACL injuries, surgical repairs and reconstructions, chronic anterior laxity and a number of injuries to other joint structures that can cause increased stresses on the ACL. However, it is the clinician's responsibility to ascertain when a patient is ready for resistance exercise.

For more detailed information about the Johnson Anti-Shear Accessory, consult the following articles:

Controlling Anterior Shear During Isokinetic Knee Extension Exercise, Dave Johnson, PT, Journal of Orthopedic and Sports Physical Therapy, Summer 1982.

Validation of the Johnson Anti-Shear Accessory as an Accurate and Effective Clinical Isokinetic Instrument, Kent E. Timm, MS, PT, ATC, Journal of Orthopaedic and Sports Physical Therapy, May 1986.

Clinical Use of the Johnson Anti-Shear Device: How and Why Use it, Terry Malone, ED, PT, ATC, Journal of Orthopedic and Sports Physical Therapy, May 1986.

