

## RECTUS FEMORIS SYNDROME

The *Rectus Femoris Syndrome* is generally identified solely on the basis of the DSR survey. Its presence is sometimes suspected when the patient complains of diffuse anterior thigh or knee pain, or has failed to respond to normally effective treatment of a low back pain problem. In these cases, a DSR survey is conducted of the upper thigh area. If the syndrome is present, a zone of relatively high skin resistance will be found just over the originating rectus femoris tendon, as it progresses into the rectus femoris muscle, and overlying the femoral nerve. No discernible swelling has been associated with this syndrome.

We are unsure of what causes this syndrome. No causative agents have yet been identified or associated with this syndrome. It is apparent that once it establishes itself, it may cause the patient to unconsciously arch the back in an attempt to reduce pressure on the femoral nerve. This, of course, may predispose the patient to back muscle strain and low back pain.



**The high skin resistance pattern commonly associated with the Rectus Femoris Syndrome**

## Treatment

In chronic cases, the tissues in and around the inflamed zone are generally highly congested with adhesions. This condition is noted to interfere with the healing of inflammatory conditions that occur in the leg distal to it, prolonging or preventing treatment resolution. It is thought, by some, that the pressure over the femoral nerve may in some way interfere with normal capillary circulation. This interference may impede the body's ability to reduce inflammation, in the affected tissues (reducing capillary blood flow and enzyme destruction of the inflammatories).

### Application:

In **acute** conditions:

- Icepack the inflamed zone for 10 minutes.
- Manipulate the soft tissues in and around the inflamed zone to eliminate any adhesions that may be present.
- Preset the ultrasound unit to deliver a 1 MHz pulsed waveform, at 1.5 W/cm<sup>2</sup>. Ultrasound the inflamed zone utilizing an effective non-steroidal anti-inflammatory as a coupling agent, for six minutes.
- Preset an electrical stimulation unit set to deliver a visible contraction at 7 Hz. Place a negative electrode over the inflamed zone and a positive electrode more distal on the muscle. Stimulate for 20 minutes.

In **chronic** conditions:

- Place a negative electrode over the inflamed zone and a positive electrode over a more distal portion of the muscle. Preset an electrical stimulation unit to deliver a visible contraction, at 7 Hz. Stimulate for 10 minutes.
- Then, set the unit to deliver a medium frequency current, with a duty cycle of 10-seconds on and 10-seconds off, sufficient to produce a near tetanic contraction of the involved muscles. Stimulate for a 10 minutes.
- Manipulate the tissues in and around the inflamed zone to eliminate any adhesions that may be present.
- Preset the ultrasound unit to deliver a 1 MHz pulsed waveform, at 1.5 W/cm<sup>2</sup>. Ultrasound the inflamed zone utilizing an effective non-steroidal anti-inflammatory as a coupling agent, for six minutes.

***The following treatment forms have also been effective.***

### Variation:

- Preset the ultrasound unit to deliver a 1 MHz pulsed waveform, at 1.8 W/cm<sup>2</sup>. Ultrasound the inflamed zone, utilizing an effective non-steroidal anti-inflammatory as a coupling agent, for six minutes. This procedure is designed to soften the adhesions that may be present.
- Manipulate the tissues in and around the inflamed zone to eliminate any adhesions that may be present.
- Twenty minutes after the first ultrasound, preset the ultrasound unit to deliver a 1 MHz pulsed waveform, at 1.5 W/cm<sup>2</sup>. Ultrasound the inflamed zone, utilizing an effective non-steroidal anti-inflammatory as a

coupling agent, for six minutes. This is performed to “cool off” the manipulated zone by effectively halting the production of prostaglandins by the stressed tissues.

- Apply mechanical vibration, delivered at 60 to 120 Hz, to the origin, insertion, or tendon of the rectus femoris muscle, for two minutes. Apply the vibration at a relatively high but tolerably comfortable level for the patient. This is performed to increase capillary circulation in the involved tissues.

**Variation:**

- Preset the ultrasound unit to deliver a 1 MHz pulsed waveform, at 1.8 W/cm<sup>2</sup>. Ultrasound the inflamed zone, utilizing an effective non-steroidal anti-inflammatory as a coupling agent, for six minutes. This procedure is designed to soften the adhesions that may be present.
- Manipulate the tissues in and around the inflamed zone to eliminate any adhesions that may be present.
- Apply cold laser (with or without simultaneous electrical stimulation provided by the laser applicator) to the inflamed zone for approximately six minutes. This is performed to “cool off” the manipulated zone by effectively halting the production of prostaglandins (or facilitating enzyme destruction of **all** inflammatories being produced) by the stressed tissues.
- Apply mechanical vibration, delivered at 60 to 120 Hz, to the origin, insertion, or tendon of the rectus femoris muscle, for two minutes. Apply the vibration at a relatively high but tolerably comfortable level for the patient. This is performed to increase capillary circulation in the involved tissues.

Effective treatment generally relieves this condition in one or two sessions. If the condition continues, a survey of the anterior abdominal trigger points should be made. If any are present, they may have to be relieved before the *Rectus Femoris Syndrome* will respond to treatment.

**Trigger Points**

The following is a list of trigger point formations which may, singly or in combination, imitate or contribute to the pain associated with the *Rectus Femoris Syndrome*: External Oblique [B], Adductor longus, Biceps femoris (hamstring), Vastus medialis, Gastrocnemius and Anterior tibialis.