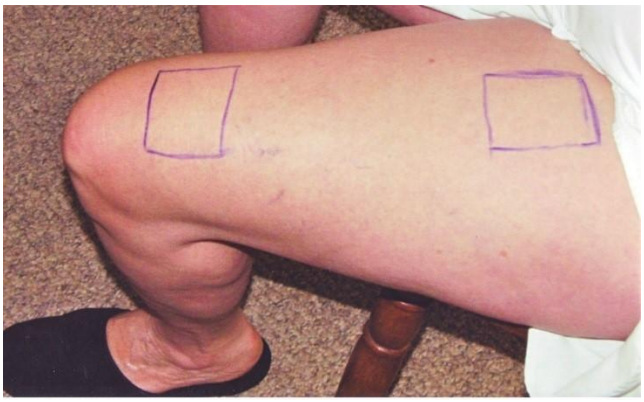
SCIATIC CHANNEL SYNDROME

The sciatic nerve arises from the L4, L5, S1, S2, and S3 nerve roots to form the main part of the sacral plexus. It passes through the greater sciatic foramen and extends from the inferior border of the piriformis muscle to the distal third of the thigh. This is where it bifurcates into the tibial and common peroneal nerves. As it passes down the posterior lateral aspect of the thigh, it lies over the adductor magnus muscle and is crossed obliquely a third of the way down the thigh by the long head of the biceps femoris. There is the surface appearance of a shallow concavity that runs down the posterior lateral aspect of the thigh, very near to where the sciatic nerve must be passing. DSR survey has demonstrated that this pathway (what the author defines as the ***sciatic channel***) may become inflamed.

The high skin resistance pattern commonly associated

with inflammation of the Sciatic Channel

If the sciatic channel is inflamed, the patient may complain of dull aching pain in the low back, in and around the hip joint, down the back side of the thigh, in and around the knee, and down the lateral aspect of the calf to the ankle (much like classic "sciatica"). Individuals may complain of pain in the complete pattern, or in just one or two of the involved areas. Patients rarely complain of numbness. The most common complaint is of restricted hip and knee ranges of motion (especially hip flexion with external rotation). The latter complaint seems to be associated with a peculiar set of inflammation patterns found over the proximal and distal aspects of the Rectus Femoris muscle (as illustrated below). These inflamed zones have been named by the author as the rectus components. They are generally only found in association with sciatic channel inflammation and will only appear with the knee flexed to 90^0.



The high skin resistance pattern commonly associated with inflammation of the Rectus Components

Treatment

Treatment focuses on reducing inflammation and swelling in the involved tissues, as well as eliminating any adhesions that may be present.

Application:

- Preset an ultrasound unit to deliver a 1 MHz pulsed waveform, at 1.8 W/cm^2. Ultrasound each inflamed zone, utilizing an effective non-steroidal anti-inflammatory as a coupling agent, for 6 minutes. This procedure is also designed to soften

the adhesions that may be present. Please note that the rectus component sites should be ultrasounded with the involved knee flexed to 90^{o}. The sciatic channel should be ultrasounded with the leg relatively straight.

- Manipulate the tissues in and around the inflamed zone(s) to eliminate any adhesions that may be present. Manipulate all sites with the knee flexed to 90^{o} and then relatively straight.

- Cold laser each inflamed zone, for 5 or 6 minutes. This is performed to denature or destroy **all** the remaining inflammatories.

- Apply mechanical vibration, delivered at 60 to 120 Hz into the sciatic channel, for 2 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.

All symptomology may disappear immediately, if all adhesions in the involved areas have been eliminated through soft tissue manipulation.

Post Treatment Suggestions:

Continued relief of the syndrome will depend on the patient being able to avoid sitting on hard surfaces for two weeks. All seats should be well padded. For example, leather car seats and "economy" airline seats are ***too hard.*** In general, restaurant seating is almost always too hard. The patient should be advised to carry a portable soft pad (like the portable pads designed for use at ball games and bleacher seating) to sit on, when appropriate.

Have the patient return for re-evaluation within the next day or two. If the patient avoids "hard seating" for the following two weeks, the condition may be "cured". Individual patients may have unusually "sensitive" rear ends and may have to confine themselves to "soft seating" for a more extended period, sometimes for months (as trial and error self-testing dictates); i.e., if "hard seating" seems to bring back the condition, go back to "soft seating".

Trigger Points

The following trigger point formations may, singly or in combination, imitate or contribute to the pain associated with the *Sciatic Channel Syndrome*: Multifidus (S4), Longissimus thoracis (T10-T11), Multifidus (L2-L3), Multifidus (S1-S2), Iliocostalis lumborum (L1), Caudal (lower) rectus abdominis, Gluteus medius, Gluteus minimus, Adductor longus, Biceps femoris, Vastus medialis, Gastrocnemius, Anterior tibialis, Long toe extensors, Soleus, Peroneus longus, Short toe extensors, and Abductor hallucis.