SPORTS • WELLNESS • SPINAL CONDITIONING

Patient Information Sheet

Rehabilitative Ultrasound utilizes an ultrasound machine to assess the function, timing and endurance of what research now shows are your stabilizing muscles also known as the "core" muscles. These core muscles should work automatically to provide stability without you having to consciously engage them. We now know that these muscles very rarely spontaneously recover following an injury and that over time they lose their anticipatory function and endurance.

The ultrasound assessment gives both of us an indication of how much the muscles have retained their automatic function and dictates the level of appropriate exercise that you should be performing.

It is important to note that the retraining of these muscles is not simply a strengthening program similar to going to the gym, doing Pilates, Swiss ball exercises or doing push-ups and sit-ups. The retraining involves what is referred to as motor relearning, which is reprogramming the muscles to contract in the correct sequence at the appropriate times. Invariably, the core muscles are not being engaged early enough in a movement or are only being engaged with more superficial muscles. For this reason, the exercises you are given will be very specific in both their nature and in the repetitions to perform. Performance of exercises in an incorrect manner does more harm in the retraining of this automatic function than almost anything else. The core muscles I am assessing are the pelvic floor, the transverse abdominis and the multifidus muscles.

Preparation

As part of the assessment, I need to assess the function of your pelvic floor via placement of the probe on your lower abdomen. This is not an invasive or internal examination but in order to obtain a clear assessment of your pelvic floor I need you to have a semi-full bladder. **Please drink 1 cup of water 1 hour prior to your appointment and then refrain from using the bathroom.**

What to Expect

You will need to allow at least 1.5 hours for your first visit. This will allow me to complete a full history, full evaluation and the Ultrasound assessment. At the end of the Real-time Ultrasound assessment you will be able to see and understand which aspects of your core stabilizers are performing well and which require attention. Review of previous patients reveals that previous attempts at retraining the core muscles has not achieved isolated contraction of these muscles or has not taken in to account the importance of specifically isolating and retraining the pelvic floor, the transverse abdominis and the multifidus muscles individually and as a unit.

Each of the core muscle groups will be assessed to determine your level of correct control which will be categorized as none, active initiated, or automatic. When your level of control reaches automatic your core muscles will have regained their anticipatory function and the necessary endurance to maintain a low level tonic contraction throughout activity.

Please feel free to contact me prior to your appointment if you have any questions that you would like answered prior to proceeding with the assessment.

REHABILITATIVE ULTRASOUND IMAGING
CONSENT FORM

Why is ultrasound imaging used for muscles?

You may be aware that ultrasound imaging is used to take pictures of the unborn child, as well as other tissues such as kidneys, gall bladders etc for diagnostic purposes. Pictures of muscles are taken in physical therapy to measure their size, observe their behavior and to help a person learn to use a muscle again by watching it move on the screen (biofeedback).

Why do I need to give my consent?

The American Institute of Ultrasound in Medicine (AIUM) safety guidelines recommend that anyone undergoing ultrasound imaging for training or research purposes gives their informed consent.

Are there any risks?

There are no known adverse effects of ultrasound imaging but, since ultrasound is a form of energy with the potential to produce a biological effect on tissue, it should be used with care as if there is a risk (however small). The main concern is the potential hazard to tissues of the unborn child. Anyone who is pregnant should not have scans taken in addition to those performed for their antenatal care.

What do I need to know about the scanning procedure?

You will be asked to remain still while a probe is placed on your skin over the muscle being scanned. A water-based gel is used to improve contact with the skin. If the purpose of scanning is biofeedback, you will be able to see your muscles on the screen.

Should any unforeseen abnormality be found while scanning your muscles, you would be informed of this and advised to visit your family physician. A letter would be written to your family physician explaining the reason for referral. The person performing the scan would not be able to give you a diagnosis, which could only be made by a medically qualified person.

I ……

of……

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give my consent to have pictures taken of my muscles for teaching / research purposes. I confirm that, to my knowledge, I am not pregnant and have been asked whether there is a possibility that I might be pregnant. I have been told of the risks of the scanning technique. I agree to the procedure for reporting any unforeseen abnormality.

Signed …….. Name in capitals: ……..……..

Witness …….. Name in capitals: ……...

Date ……..

Adapted from Stokes, M. Ultrasound imaging of skeletal muscle: biofeedback and clinical assessment an introductory manual for physiotherapists. 1st ed. Southampton UK