

Lumbopelvic Rehabilitative Ultrasound Imaging: A Clinical Training Course

Description

Ultrasound imaging allows for valid, reliable, efficient, and non-invasive measurement of motor control deficits of the deep stabilizing muscles that are associated with neuromusculoskeletal disorders. The ability to qualitatively assess motor control in real-time followed by visual feedback training has been shown to improve clinical decision-making and patient performance.

This two-day course provides lecture as well as hands-on instruction for the utilization of rehabilitative ultrasound imaging (RUSI) for addressing lumbopelvic dysfunction. The material will explore the basic science, clinical evidence, relevant anatomy, image generation, and ultrasound probe techniques for evaluation of tissue morphology and motor pattern training. Clinical applications include a variety of lumbopelvic dysfunctions to include lumbosacral pain, urinary incontinence, diastasis rectus, pelvic organ prolapse, outlet dysfunction constipation and chronic pelvic pain.

A prerequisite list of terminology and two hours of recorded lectures followed by a quiz that must be completed prior to course onset. Saturday morning will begin with a review of recorded material. Each lecture will be followed by technique demonstrations and hands-on lab training sessions with ultrasound equipment and skills assessment. Faculty will be present during all lab sessions for assistance in learning. The afternoon of day two is specific to pelvic health diagnoses.

Topics to be covered

- Ultrasound 101: US physics, knobology, image generation, anatomic image interpretation
- Systematic techniques for performing an ultrasound scan on any region of the body
- Anterior abdominal wall
- Lateral abdominal wall
- Pelvic floor: Transabdominal approach
- Pelvic floor: Transperineal approach for males and females
- Lumbar multifidus
- Midline contents of the pelvis for prolapse, post void residual and megarectum
- Using RUSI to market and grow your practice

Prerequisites

Licensed health care provider with a solid grasp of lumbopelvic anatomy, and rehabilitation of the muscles of local control. Instructional level is intermediate clinical experience but beginning level for ultrasound imaging. Prior ultrasound experience is not required. Pelvic floor training is required for participation in the transperineal labs.

Target Audience

Physical Therapists, PT Assistants, Occupational Therapists, and OT Assistants wishing to advance their skills in evaluation and treatment of lumbopelvic dysfunction utilizing imaging technology. Content is not intended for use outside the scope of the learner's state license or regulatory agency. For scope of practice guidelines participants should consult their professional practice act for limitations or training requirements

Goals and Objectives

Upon course completion, participant will be able to:

1. Understand current clinical applications of rehabilitative ultrasound imaging (RUSI) in the scope of physical therapy
2. Understand basic imaging principles and ultrasound terminology
3. Understand the science and equipment requirements to perform rehabilitative ultrasound imaging
4. Understand the pre-scan sequence and standard US protocols
5. Develop hands-on skills for image acquisition and image optimization
6. Identify relevant sonographic landmarks, for the abdominal wall, pelvic floor, bladder, and lumbar multifidus on an ultrasound image
7. Make basic morphologic and morphometric measurements of anatomy and motor function including muscle thickness and post void residual utilizing RUSI
8. Identify correct and incorrect motor control strategies utilizing RUSI for the abdominal wall, lumbar multifidus and pelvic floor muscles
9. Understand how RUSI can contribute to clinical decision making to improve the management of patients with a variety of lumbopelvic dysfunctions
10. Identify pelvic organ prolapse, elevated PFM tension, poor pressure management and behaviors contributing to incontinence
11. Be able to identify normal behavior of the pelvic floor during changes in pressure to include valsalva, bearing down and cough
12. Incorporate RUSI into a comprehensive program for the treatment of lumbar and pelvic health for male and female patients