

Keys to Success for Core Strengthening

Focus on one muscle at a time. Break up the complex movements and coordination into the individual parts and practice until you have an "ideal response." Initially it is best to focus on one deep stabilizing muscle at a time during formal motor skill training.

Use instructions. This may include pictures, written materials, audio tapes and verbal instructions. An explanation of the specific exercise, function of the muscle, and anatomy is critical.

Body position. A secret to relaxing the superficial (outer unit) muscular system while performing an isolated contraction of the transversus abdominis or deep multifidus is identifying an appropriate position. Body position may also be used to promote a facilitation strategy, like "gravity stretch" on the abdominal wall in 4-point kneeling or side-lying. Of course, the most symptom-free position is preferable.

Neutral orientation of spinal column. Spinal curves with normal lumbar lordosis and thoracic kyphosis tend to promote relaxation of excessively activated outer unit muscles. Obviously, this will help to activate the inner unit muscles, independently.

Cognitive strategies. Mental imagery is used to focus your attention on the specific motor learning task. Most patients have poor body awareness, especially in the lower back.

Tactile feedback. Palpation (touching with fingers or thumbs) is used for tactile feedback while attempting to contract one of the deep stabilizing muscles. There are also spots to palpate to check for unwanted outer unit substitution. Muscles are palpated through different rehab strategies to ensure proper firing patterns without substitution of the phasic system.

Facilitation strategies. Strategies for the facilitation of inner unit muscle contraction. Facilitation strategies have been described by various authors. Co-activation of the pelvic floor is combined with psoas and coordination of the transversus abdominis or multifidus are examples.

Relaxation strategies. Strategies for the relaxation of unwanted outer unit muscle activity are necessary. For example, it is imperative (at least initially) to be in a quiet room that is conducive to relaxation with no distractions or disturbances. Verbal instructions should be given in a slow, relaxed manner.

