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**Pilates in Rehabilitation**

Joseph Pilates wrote *Return to Life* in 1945 describing what he termed Contrology, the art of body control. I am not a Pilates instructor, but as a physical therapist, this is what we strive to teach our patients everyday—how to control and improve movement in order to heal and prevent injury. I have been privileged to learn Pilates through personal instruction over the years and most recently, through a *MedBridge* continuing education course taught by Sherri Betz PT, GCS, CEEAA, PMA-CPT.

 Pilates incorporates so much of what we work to achieve in physical therapy for a variety of impairments and diagnoses. It is not only beneficial for the spine but for the body as a whole, as practice begins with stability and then progresses to supported mobility, emphasizing thoracic extension. With its focus on hip extension, thoracic extension, leg strength, and balance, Pilates can be described as a “fountain of youth” approach to exercise and rehabilitation, helping to prevent the declines that can occur with aging (Betz).

Like most exercise practices, Pilates movements range from beginner to advanced levels, and it is important to remember that “70% of the movements are contraindicated for osteoporosis, disc pathologies, and sciatica” (Betz). However, exercises can be modified, especially for older adults. Betz teaches Pilates for bone building, aimed at patients with osteoporosis. “Older adults need low cost, long term group exercise programs targeted to their level of fitness and function,” Betz explains, and Pilates is a great way to bridge the gap from physical therapy to independent ongoing exercise. Betz states that the priorities for these patients are to protect from fracture, teach neutral spine alignment, teach hip hinge movement, avoid spinal flexion and end range side bending and rotation, practice single leg balance, and learn to breathe with good rib movement and deep abdominal contraction. Once these areas are mastered by the patient or client, then he or she can begin bone building, as these foundational movements protect the spine from injury.

One of the most significant lessons taught in Pilates is how to attain your neutral or optimal spine alignment, which is a position that is slightly different for everyone. Facilitating core control is essential, and Betz describes one of the best cues to teach patients to recruit their deep abdominal musculature. The instruction is to lift your ribs up and off of the pelvis. In doing so, the patient can then find their neutral or optimal spine alignment, the position in which “all spinal segments, disc spaces, facet joints, foraminal openings, sacroiliac joints, and pubic symphysis bear an equal distribution of forces.” In this way, “the neutral spine position lifts pressure up and off of the nerve roots” (Betz). So although many of the more traditional Pilates movements are contraindicated for disc pathology, modified mat exercises can be very beneficial for this patient population. And in the long term, these patients can benefit from developing spinal awareness skills with more advanced exercises, including squats (using dowel on head, mid back, and sacrum initially to train neutral spine maintenance throughout the range of motion), lunge progressions, hip hinges or chair pose, quadruped activities, and floor transfers.

In this age of constant cell phone use, “text neck” and thoracic kyphosis have become growing problems, even in our younger population. As an aid in neck pathology, Pilates emphasizes proper breathing with good rib movement and deep lower abdominal contraction as well as thoracic extension activities, targeting the upper thoracic spine. Betz also describes helpful cueing for teaching patients to activate the deep neck flexors with instruction to pull the throat up and back, as opposed to just tuck the chin back.

I certainly have more to learn, but I have utilized Pilates in developing effective therapeutic exercise programs for my patients, especially those with spinal impairments. There are exercises that are very gentle for the acute patient and then also, quite advanced exercises for the work hardening patient trying to get back to work. Because of its emphasis on spinal awareness and proximal stability, Pilates helps individuals to become more conscious of every movement they do. And as we physical therapists know, when you move better, you feel better!

*MedBridge Education: Andrew Mickus, Director of Course Development. 1633 Westlake Avenue North, Suite 200, Seattle, WA 98109. Course: Introduction to Pilates for Rehabilitation. Instructor: Sherri Betz, PT, GCS, CEEAA, PMA-CPT. Completed 3/10/2019.*