

# Evidence for Scoring Higher on the LEFS

►► The functional tool we examined in our last column was the LEFS (Lower-Extremity Functional Scale). We will take a closer look at the lower extremities of older people and discuss ways to help them improve and score higher on this test.

If comparing strength measures, therapists would find the upper extremities have significantly less decrease in strength as compared to the lower extremities. Many believe this is because we use the upper extremities more than the lower extremities and to a similar level as when we were young.

Another reason may be the more prevalent occurrence of osteoarthritis (OA) in lower extremities. There is more OA in the knees and hips than in the upper extremities (shoulders and elbows in particular). This article will look at literature that demonstrates successful intervention for osteoarthritis as a cause for decreased lower-extremity function.

## Focus on OA

Two excellent articles advocate that physicians refer patients with knee OA to physical therapy. Felson did an outstanding review of the medical literature

for treating OA of the knee. After thorough review, he suggested that PT referral be one of the first interventions for patients.<sup>1</sup>

In 2008, the OARSI group developed a consensus statement based on a meta analysis of the literature and stated that patients with knee OA should receive physical therapy.<sup>2</sup> This is not only nice to hear, but also a great marketing tool for physical therapists to show doctors the importance of our efforts in gaining successful outcomes. In the area of modalities, the latest and most effective modality seems to be short-wave diathermy. Jan wrote on a study that showed shortwave diathermy in patients with knee OA can significantly reduce synovial thickening and pain.<sup>3</sup>

On exercise, two studies that have received positive support in the literature are those of Deyle.<sup>4</sup> Deyle's latest randomized controlled study used an approach of mobilization, stretching and strengthening. His intervention showed that a home exercise program and a supervised program both helped patients to improve in pain and function. He also found that an eight-week, PT-supervised program was twice as effective when compared to a home exercise program. The supervised program was twice a week for four weeks, and the home program was one visit for instruction and a follow up. Below is a quick overview of the components of his intervention:

- Strengthening: quad sets, terminal knee extension, seated leg press, partial squats, step-ups;
- Manual therapy: patellar glides, a/p mobs, varus/valgus mobs, soft-tissue mobs;
- Stretches: calf, hamstring and quadriceps;
- Range-of-motion exercises: bike and end range flexion and extension.

Another interesting case study was conducted twice a week for six

weeks. In this study, a rehabilitation program supplemented with agility and balance training was found to help participants return to higher levels of activity.<sup>5</sup> The program consisted of crossover steps (front and back), side-steps, one-legged stands, shuttle walking, obstacle courses, tilt-board, different surfaces and multi-directional walking.

A final study by Fransen compared tai chi to hydrotherapy. In the article, the authors showed that access to either hydrotherapy or tai chi classes can provide large and sustained improvements in physical function for many older, sedentary individuals with chronic hip or knee OA. The program that they described took one hour, two times a week for 12 weeks.<sup>6</sup>

The elements of the hydrotherapy program are walking all directions, bar work with one hand and both hands, running, taking the stairs, free standing and deep-water floating.

Use it or lose it does seem to be a fact in the potential development of osteoarthritis in the lower extremity and subsequent loss of function. So many wonderful studies are available for physical therapists to use in fighting these problems, so our

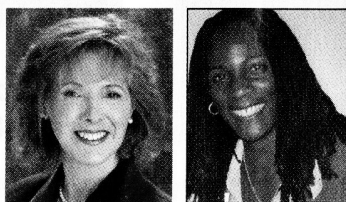
patients score higher in the lower extremities on the LEFS and have a better quality of life. ■

**Use it or lose it does seem to be a fact in the potential development of osteoarthritis in the lower extremity and subsequent loss of function.**

## References

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