Exercise and Knee OA: What You Can Tell Your Patients

By Lois Wingerson [2]

(OARSI2015) What advice about exercise is prudent for your patients with knee osteoarthritis?
Speakers in Seattle offered a few simple suggestions, based on the latest research.

Source: Rheumatology Network

What advice about exercise is prudent for your patients with knee osteoarthritis (OA)?
Speakers at an opening-day session of the Osteoarthritis Research Society International (OARSI) annual meeting in Seattle offered some simple suggestions, based on the latest research.

As guidelines concur, there's no question physical activity is the best way to reduce knee pain and preserve physical function in knee OA, said Daniel White PhD, assistant professor of physical therapy at the University of Delaware. Balancing the minimal risk of exacerbating early OA against the benefits (pain relief, fitness and weight control, and general health benefits), he also feels there's no question that regular moderate to strenuous exercise wins the contest.

The bottom line, based on recent research:

1. Urge patients to walk, walk, and walk, aiming for 150 minutes a week at moderate intensity (3 miles/hour or 150 steps/minute), White said.
2. Recommend using a pedometer (But be sure to say why you’re recommending it and what to aim for, he added. Otherwise patients won’t bother.)
3. Aim for 6,000 steps a day, the breakpoint that divides those who lose physical function from those who don’t. This may entail walking only an extra 10 minutes every day, said White. (Most adults over age 60, even those with OA, ordinarily walk 4,000 to 5,000 steps per day, White remarked. At 150 steps a minute a mere 10 minutes could easily make up the difference.)
4. To reduce the risk of joint damage, you might suggest that patients take breaks in between walking periods. In a later session, Prakash Jayabalan MD PhD of the University of Pittsburgh Medical Center described a study comparing 45 continuous minutes of treadmill walking with 3 15-minute periods divided by two hour-long rest periods, measuring biomechanical factors and serum biomarkers in 27 knee OA patients in their mid-60s. Patients reported significantly less knee pain after 2 bouts of walking with an hour's rest than after 30 minutes of continuous walking, and levels of the OA biomarker COMP (cartilage oligomeric matrix protein) were significantly lower.
5. For patients who are dedicated couch potatoes, suggest taking frequent “breaks” in sedentary behavior. Jungwha (Julia) Lee PhD described assessing activity in a cohort from the Osteoarthritis Initiative (OAI) using accelerometers for 7 consecutive days. Those who took more “sedentary breaks” per hour had better physical function after 2 years, as measured by their ability to stand from a seated position and their gait speed.

Lee is assistant professor of preventive medicine at Northwestern University’s Fineberg School of Medicine.

5. Patients with knee OA who have been regular runners probably don’t harm themselves by continuing to run, judging from analysis of another cohort from the OAI. Four years after baseline, 137 regular runners over the age of 50 who began the study with radiographic evidence of OA in one knee showed similar levels of disease severity, knee replacement surgery, and outcomes such as synovial narrowing and Kellgren-Lawrence scores as the 1,203 other members of their OAI cohort who were not runners, said Grace Lo, MD

Running may not be advisable for patients with severe OA, however. The cohort did not include any patients with end-stage (level 4) knee OA at the outset, observed Lo, who is assistant professor of allergy and rheumatology at Baylor College of Medicine.

At the American College of Rheumatology annual meeting last November, Lo reported on a similar study by the same team that found that regular running does not appear to increase the risk for incident knee OA in healthy people, either.

A word of caution: Recommendations need to be individualized, based on the severity of the OA and the degree of pain, so that it doesn't lead to worse pain. Jayabalan said he was "very excited" about
remarks at OARSi2015 moving in the direction of **personalized medicine for exercise recommendations.**

Some studies have suggested a goal of 10,000 steps per day for healthy people, commented rheumatologist Nancy Lane MD, director of rheumatology at the University of California at Davis Medical Center. "But for someone with a painful knee you might want to recommend 5,000 to prevent loss of physical disability. At 10,000, they may be walking themselves to the orthopedist." "We should be recommending walking to people with painful knee OA," White concluded. But recent evidence suggests the exercise program should be “multi-level,” he added later. “You can't just recommend the step goal. The more levels you attack, the more likely it is to be successful.”

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