Bunion

Strengthening Foot Muscles to Reduce Pain and Improve Mobility

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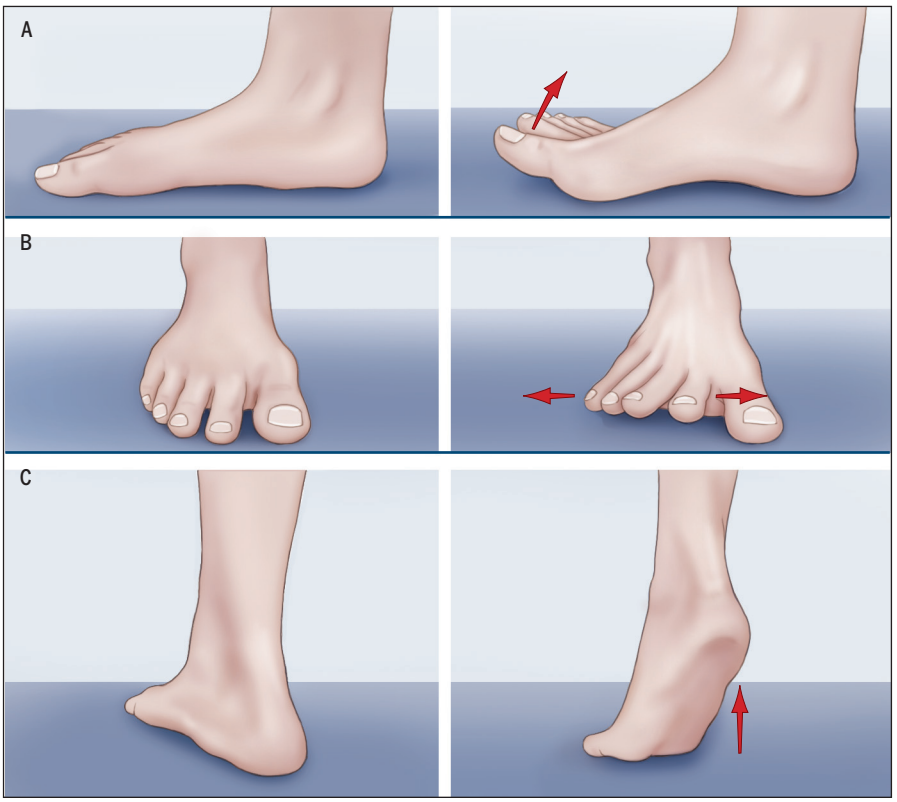
Foot pain discourages physical activity, and less activity harms overall health. Bunion, extra bone and tissue at the base of the big toe, is a frequent cause of foot pain. More than 64 million Americans have bunions that can lead to painful walking. Bunions affect some 35% of women over the age of 65. Bunions can be removed by surgery, which can reduce pain and improve your ability to walk and exercise, but up to 15% of bunions return. Weak muscles may play a role in bunion-related pain and movement problems. In a review of prior research and commentary on this topic published in the July 2016 issue of *JOSPT*, the author identifies muscle-strengthening exercises that may help people with bunions.



EXERCISES TO STRENGTHEN FOOT MUSCLES. (A) Short-foot exercise: shorten your foot while keeping your heel and the front of your foot on the ground. Do not curl your toes. (B) Toe-spread-out exercise: lift and spread your toes while keeping your heel and the front of your foot on the ground. While your toes are spread out, push your little toe down and out to the floor. Then, push your big toe down toward the inside of the foot. (C) Heel-raise exercise: stand with your knees bent. Elevate your arch while keeping your heel turned in. Then, raise your heel off the floor while keeping pressure on your big toe. Perform all exercises barefoot. Hold each repetition for 5 seconds. Repeat each exercise until you feel the muscles becoming tired. Exercises are progressed from sitting, to standing on both feet, to performing the exercises standing on just 1 leg. Perform exercises daily.

This Perspectives article was written by a team of *JOSPT*'s editorial board and staff. Deydre S. Teyhen, PT, PhD, Editor, and Jeanne Robertson, Illustrator.

NEW INSIGHTS

The author of the review and commentary identified 3 key muscles in the foot and 2 muscles in the calf that, when strengthened, have the potential to lessen the pain and improve the movement of patients with bunions. These 5 muscles help support body weight and forward motion. They also stiffen the arch of the foot and help keep it from rolling inward, better supporting the big toe. The author found that people can effectively reinforce these muscles using 3 simple exercises. The exercises—short foot, toe spread out, and heel raise—are easy to do at home and can strengthen these key foot muscles. Stronger feet may help decrease bunion-related pain and its impact on movement.

PRACTICAL ADVICE

After your physical therapist evaluates your feet and how you walk, the therapist may prescribe these 3 exercises, additional hip- and leg-strengthening exercises, and possibly arch supports. The exercises to strengthen your feet are easy to perform. If you have trouble with them, though, your physical therapist may add electrical stimulation to help you learn which muscles to contract. Your physical therapist can also guide you on proper shoe selection to improve your ability to walk and exercise without discomfort. While they may decrease pain and improve movement, these exercises likely won't change the look of your bunion. More research is needed to determine whether these exercises can help you avoid surgery. For more information on nonsurgical options for treating bunions, contact your physical therapist specializing in orthopaedic and sports-related injuries.

This *JOSPT* Perspectives for Patients is based on an article by Glasoe, titled "Treatment of Progressive First Metatarsophalangeal Hallux Valgus Deformity: A Biomechanically Based Muscle-Strengthening Approach" (*J Orthop Sports Phys Ther 2016;46(7):596-605. doi:10.2519/jospt.2016.6704*).