

Helping patients with lower-extremity disease benefit from exercise

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Research has shown that exercise can help ease symptoms in patients with arterial insufficiency, venous insufficiency, neuropathic disease, or a combination of these conditions. Here's what you need to know to ensure your patients reap the most benefits from exercise.

Start on the right foot

It's imperative that the correct disease state is diagnosed before an exercise program is started and that the patient's pri-

mary care provider clears the patient.

Teach the patient to wear well-fitting shoes and socks while exercising, and provide instructions. Guidelines from the Wound, Ostomy and Continence Nurses Society include exercise recommendations for each disease state, as noted in the next sections.

Arterial insufficiency

Supervised exercise for 30 to 45 minutes three times per week for a minimum of 12 weeks improves signs and symptoms of claudication and significantly improves maximal walking time, overall walking ability, and pain-free walking distances.

Other types of exercises to consider include:

- strength training
- polestriding (a form of walking similar to cross-country skiing)
- upper- or lower-limb exercises.

Venous insufficiency

In addition to compression therapy and leg elevation, exercise and physical activity help patients with venous insufficiency reduce edema. Types of exercises to consider include the following:

- Elevate legs above the heart several times a day when possible.
- Perform ankle flexion 5 to 10 times every few minutes for 1 to 2 minutes every 30 minutes throughout the day to avoid venous congestion and to decrease venous reflux.
- Walk briskly at frequent intervals during the day to help the calf muscle pump the blood up and out of the legs.
- Perform resistance calf muscle exercises (plantar flexion), tip-toe exercises, and walk on an incline treadmill. You can [access a video](#) describing calf muscle exer-



cises that might be helpful for patients (have them omit the jumping section).

- Sit and rock in a rocking chair, using the feet to push down, to plantar flex the ankles.

Neuropathic disease

Exercise must be conducted with caution because of the patient's insensate extremities. It's best to avoid weight-bearing exercises.

Types of non-weight-bearing exercises to consider are swimming, water aerobics, bicycling, rowing, and chair and upper-body exercises.

Be aware that resting tachycardia and lack of heart-rate variability during deep breathing or exercise are signs of autonomic neuropathy and are associated with a high risk of coronary heart disease.

Promoting benefits

The benefits of exercise for patients suffering from lower-extremity disease are often overlooked. Encouraging appropriate exercise for these patients may improve the disease state and reduce the risk of ulcer development. ■

Selected references

Wound, Ostomy and Continence Nurses Society. *Guideline for Management of Wounds in Patients with Lower-Extremity Arterial Disease*. Mt. Laurel, NJ: Wound, Ostomy and Continence Nurses Society; 2014.

Wound, Ostomy and Continence Nurses Society. *Guideline for Management of Wounds in Patients with Lower-Extremity Neuropathic Disease*. Mount Laurel, NJ: Wound, Ostomy and Continence Nurses Society; 2012.

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Get the 'SKINNI' on reducing pressure ulcers

By Cindy Barefield, BSN, RN-BC, CWOCN

Like many hospitals, Houston Methodist San Jacinto Hospital uses national benchmarks such as the National Database of Nursing Quality Indicators (NDNQI®) to measure quality outcomes. Based on benchmark reports that showed an increased trend of pressure ulcers in critically ill patients in our hospital, the clinical nurses in our Critical Care Shared Governance Unit-Based Council (CCSGUBC)