



SPORTS / EXERCISE / FITNESS

## Lymphedema and Exercise (Pt. 2)

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I use the POLITE acronym to help remind me of treatment options and guide my lymphedema patient recommendations. “P” reminds me to discuss *posture* and *participation*.

“OL” is *optimal loading*; it reminds me to discuss compression garments and muscle contraction activation, which helps stimulate the lymphatic flow.

The best remedies for lymphedema are those that promote lymph fluid circulation without causing discomfort or exacerbating the condition. The lymphatic vessels do not have a natural internal pump, so we need the muscles around the lymph vessels to help activate them to push the fluid through the lymph vessel system.

“I” reminds me to discuss *instruments* such as intermittent compression, laser, IASTM for fibrosis, and other instruments that help movement contraction activation; e.g., TECAR with EMS, whole-body vibration.

“T” is for *taping*. The most useful taping technique I have encountered is designed to activate the tissue in six directions: x-, y-, and z- axis, and rotation around each axis. Patients can be taught to apply this at home.

“E” is *energy, ergonomics, and exercise*. By energy, I mean food, diet, and supplements. These are supplements that can help veins and lymph: vitamin D<sub>3</sub>, selenium, flavonoid fractions from citrus aurantium and hesperidin.

We know that obesity has shown to increase lymphedema risk with or without lymph node removal. A higher-than-normal BMI, especially one greater than 50 to 60, can cause lymphatic dysfunction by itself.

Being overweight or obese causes inflammation, which increases pressure around the lymphatics that further damages vessels. I put patients on a ketogenic diet and guide them to lose weight, but unfortunately, even successfully losing weight may not resolve lymphedema. In some overweight

people, lymphedema may be irreversible.

Remember, “E” also stands for exercise. The importance is burning calories for weight management, and fluid/lymphatic flow for a healthy lymphatic system.

When a patient with lymphedema has a flare-up, they often take a break, stop doing what once worked and don’t go back to it. When this happens, I encourage alternative moves like body weight swings, rope or band exercise, lighter resistance training, and jumping up and down.

I recently had a middle-age female new patient who enjoyed pool sessions and had a flare-up of right arm lymphedema related to cancer therapy. She stopped exercising altogether. I emphasized that it’s important she still have some sort of movement because the lymphatic vessels don’t have a natural pump.

If someone overdoes it (swimming, gardening, hiking, etc.), and gets sore the next day, I explain that there is inflammation going on in the muscles. It doesn’t always mean it’s harmful; that’s just how the body adapts to that much strain when it’s not used to it. There is more blood flow to the area that includes inflammatory molecules, but with lymphedema we want to try to avoid that. We don’t want to try to put more fluid into these tiny, slow-moving vessels. Above all, avoid an inflammatory flare-up.

### Recommended Exercises

Here is a summary of recommended exercises based on research<sup>14-18</sup> and my experiences:

*Low-Impact Aerobic Exercises:* These include walking, swimming, yoga, Pilates, body-weight exercises, band moves, and *tai chi*. They encourage fluid to drain into the lymphatic system in the abdomen and help move lymph through the lymph vessels as the muscles contract.

*Resistance Training:* Resistance exercises can improve muscle tone and strength, and muscle contraction during these exercises can help stimulate both venous and lymph flow. It is suggested that resistance training may show the greatest lymphedema-specific benefit.

*Stretching and Flexibility Exercises:* Adding stretching exercises to your patients’ routine can help preserve their range of motion and minimize skin scarring, which is particularly important during post-operative care and after radiation therapy. I’ve seen foam rolling help and do harm.

*Specific Arm and Leg Exercises:* For arm lymphedema, exercises such as scapular ranges of motion, cervical-thoracic motion, and ball squeezes can be beneficial. For leg lymphedema, marching on the spot, seated leg swings or hip flexion, knee extension, resisted plantarflexion, toe extensions, and ankle circumduction are recommended. I recommend body-weight swings for most of my patients.

*Breathing Exercises:* Diaphragmatic breathing can improve circulation and aid in lymph fluid movement. Inhaling for four seconds and exhaling for a full 10 seconds will activate the oblique abdominals. Practice this for 3-5 minutes per day.

### Additional Thoughts

- Whole-body vibration therapy with sound frequency is also helping patients with lymph system issues.
- It is important to wear compression garments during exercise if your patient has any, as they can help manage the condition during physical activity.

- I start these patients with very gentle exercise and build up slowly. I tell patients to stop if there is any discomfort, pain, or increased swelling, and then we figure out how they can peel back or regress and reboot the previous exercises.
- The PAL study shows that if we go gradual, adding light weight resistance, it is safe and doesn't add to the risk of lymphedema. If anything, it lowers the risk.
- I recommend getting moderate to vigorous exercise 150 minutes per week (about 30 minutes five days a week). Each person needs to find the best exercise for themselves.

Doctors, be alert in detecting lymphedema by doing measurements. Provide day-to-day check-ins when you give a patient a new routine. Provide week-by-week check-ins, add regressions or progressions of exercises, and take out movements that might be making someone feel even a little achy, heavy, or pressure sensitive.

Go slow and gradual with progressions because that will help lower the incidence of lymphedema flare-ups. In non-lymphedema patients, I want a little post-workout soreness, but in lymphedema patients I avoid getting them sore or creating inflammation to involved areas. We don't want to overdo it even once because that can cause a flare-up.

*Editor's Note:* Part 1 of this article appeared in the [June issue](#). References below cover the citations in both article parts.

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