

Exercise Guidelines for Clients with Lymphedema

Information for Personal Trainers

Lymphedema is the swelling of the arm, leg, trunk, abdomen, neck or face due to an abnormal accumulation of fluid in the tissues as a result of damage to or removal of part of the lymph vessel system. People who have had cancer treatment including the removal of lymph nodes and/or radiation are at risk of developing lymphedema any time after their treatment. Other causes are surgery, infections, traumas as well as congenital malformation of the system.

The lymph vessel system is responsible for returning fluid from the tissues to the heart. It brings back 10% of the fluid sent to the tissues by the arterial system. Therefore anything that increases arterial flow such as heat and exercise can put a greater load on the lymph vessel system which may worsen lymphedema. However exercise can also have benefits to improve oxygen delivery to the cells and improved cardiovascular fitness. Therefore, finding the balance between enough exercise and too much exercise is especially important for clients who have lymphedema.

Research on breast cancer survivors who participate in dragon boat racing has shown that an exercise program including flexibility, resistance training and cardio done on a regular basis allows women to participate in such sports with no detrimental effects to their risk of lymphedema or status of lymphedema. Most of these studies recommend that the participants wear compression garments while exercising and rowing. These garments are discussed on page 2.

Resistance Training

With respect to resistance training, starting at very low weights or resistance and increasing very gradually can be helpful. If any signs of onset or worsening of lymphedema (see page 2) are noticed, then the number of reps or the amount of resistance can be reduced to a symptomless level for a week or so. The goal is to slowly increase strength without causing more lymphedema symptoms.

In addition to this, interval training in which arms and legs are alternated can be helpful as well. This gives the lymph vessel system in the upper extremities or the lower extremities time to “catch up” with the increased demand while another area is worked. If the demand for fluid return exceeds the capacity of the system, swelling will result.

Flexibility

Flexibility exercises are important since the lymph vessel system will function less effectively through tight tissues. However these exercises should be done so that the client can feel a gentle tug on the tissues. Pushing or bouncing until tissues tear (even micro-tears) will cause an inflammatory response which increases the fluid in the affected area and may overload the lymph vessel system.

No pain, no gain is not helpful for those with lymphedema or at risk for lymphedema. Clinically we have seen some clients who go to a gym, overdo it, get an increase in swelling and never return to the gym. It is better to help clients be successful in the long term with a slow, gentle program.

Compression Garments

Clients with lymphedema or at risk for lymphedema may be wearing a compression garment while exercising that has been recommended by their health care professional. This may include a sleeve, glove or gauntlet or stocking. The purpose of the garment is to increase the pressure on the interstitial fluid in the affected tissues thus helping the fluid to return to the heart via the lymph vessel system and the veins.

Physiologically, exercise increases the flow of blood to the tissues which decreases blood pressure in the vessels. The tissues may retain this increased fluid for many hours after exercise has stopped. The compression sleeve therefore helps the affected body part to return this extra fluid and not let it get “left behind” in the tissues. Clients should be advised to wear the sleeve (many will have a second one to replace the sweaty exercise garment) even after exercising for a number of hours.

Affects of Heat and Ice

Since heat increases blood flow to the skin, it therefore increases the load on the lymph vessel. For this reason, saunas, hot tubs and other sources of higher heat are not helpful for those with lymphedema. Exercise produces it's own heat which has to be taken into overall consideration as well. Heat shouldn't be used to help sore muscles in the affected areas of the body. Ice if used should only be used for 5 minutes at a time as it also increases blood flow after 7 minutes of application.

Signs of Onset of Lymphedema

- Initially, symptoms can come and go. So if there is more swelling after exercise but it goes away over night, this could be the beginning of lymphedema and the exercise program should be reduced for a week or so.
- An increase in size of the limb as compared to the other side (therefore increase is not due to increased muscle)
- A feeling of heaviness, fullness, tightness or bursting sensation in the limb
- Puffiness, pins and needles sensation
- Aching limb or aching in back of the shoulder which doesn't feel like muscle soreness
- Any swelling or heat in the chest on the same side as the surgery (for breast cancer treatment)
- After abdominal surgery, tenderness in groin or bloating of abdomen
- Jewelry or clothing feeling tighter
- Decreased mobility in wrist or ankle due to swelling

Signs of Worsening Lymphedema

- Any of the previous signs for the onset of lymphedema
- A compression garment gets too tight or feels tighter than usual
- Pins and needles in the fingers and toes which is new
- Lack of feeling in any area of a limb which is new
- Skin thickening or rough areas
- Leaking areas on the skin (clear fluid) start to occur
- Red patches may indicate an infection – client should see a physician immediately

Resources

National Lymphedema Network (San Francisco, CA) website has good free information on lymphedema and resources which can be purchased. www.lymphnet.org

Langfield, S. & McFarland, J. (2005). Exercising with lymphedema is a balancing act. *Lymphovenous News*, 8(3).

Printout available from Toronto Lymphocare Centre website: torontolymphocare.com

For more information contact:

Toronto Lymphocare Centre
244 Dupont St., Toronto, ON M5R 1V7
(416) 531-7612 wellness@bconnex.net
torontolymphocare.com