

Breast Cancer Lymphedema WaterWork 2008

By Mary B. Essert, BA, ATRIC

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My recent observation is that more and more *AKWA* readers serve special populations as clients or class participants. One group, sometimes a mystery to us, is made up of those individuals who have lymphedema, often breast cancer survivors. My intention in this article is to supply information necessary to serve their interests and to provide a safe, useful water exercise experience.

A simple explanation of the lymphatic system is a network of vessels and nodes located through the body, associated with the cardiovascular system. The lymphatic system fights infection and transports fluid and protein from the tissues back into the bloodstream at the rate of three liters per day. When the lymphatic system does not function properly there is a build up of protein-rich fluid. One's body treats this as toxin and sends fluid to that area in an attempt to dilute the concentrated protein. This results in edema and is termed lymphedema.

During surgery for breast cancer, often lymph nodes from the underarm are removed. Some lymph vessels may also be removed because they are intertwined. This changes the way the lymph fluid flows within that side of one's upper body, making circulation of fluid to other parts of the body difficult. The excess fluid may build up and cause swelling. Radiation may have a similar effect and put the patient at increased risk for lymphedema. One recent review reported, "lymphedema of the arm occurs in 26% of patients undergoing breast cancer therapy." (Erickson, V.S., Pearson, M.L., et al (2001) Arm Edema in Breast Cancer Patients J Natl. Cancer Inst. 03 (2), 96. "Women who have many lymph nodes removed and radiation therapy may have a higher risk of developing lymphedema." (*What Every Woman Facing Breast Cancer Should Know About Lymphedema*; The American Cancer Society)

When one exercises, the lymph flow increases and goes to the muscles. Upper extremity and core strengthening work are priorities in assisting movement of the lymph fluid through the muscular system as

the muscles contract. Muscle contraction keeps fluid from accumulating. As the body heats up, an increasing amount of blood is directed to the skin to conduct heat away from the core. More blood flow to muscles means extra water transported to the extracellular spaces. This is transported via the lymphatic system, thus exercise should progress slowly and carefully as lymphedema symptoms are observed.

The general benefits of exercise are real for persons with lymphedema as well - cardiorespiratory, flexibility and range of motion, strength and endurance, plus weight management, sleep enhancement and psychosocial issues such self-esteem and self-efficacy. Independence is always a consideration when chronic illness or conditions are present. Activities of daily living (ADL) and normal lifestyle patterns become more and more important. We must follow the precautions and lymphedema advisories.

Only within the past few years has exercise been promoted for lymphedema patients. There are several studies that show benefit of "gentle exercise." More recently, the Dragon Boat Project, under the leadership of Dr. Don McKenzie of the University of British Columbia, challenged the opinion that avoidance of strenuous activity was necessary to prevent lymphedema after breast cancer. (www.lymphqld.org or www.dragon-sabreast.com.au). Because of the benefits of immersion - buoyancy, reduction of edema and other systemic effects - water is an effective site for exercise.

My suggestion is water 84-88 degrees F (28.9 - 31.1 C), although I have used warmer water for short periods in some instances. Appropriate air temperature and circulation are issues here as well. Comfort is vital for persons who may already be apprehensive.

My typical exercise program emphasizes gentle movements progressing to aerobic work, including a stretch sequence and a period of relaxation. Upper extremity work is priority and breath work adds to the effectiveness of edema reduction by moving fluid toward the thoracic cavity. Individuals who attend a class with other breast cancer survivors or persons with lymphedema often find the support group atmosphere to be of great importance. A water fitness instructor who brings like-

minded individuals together in pleasant surroundings can be a great motivator. Helping people help themselves is not a new adage, but an important consideration.

A team approach to treatment is the very best answer for persons with lymphedema. The water fitness professional or therapist will want to consult with the health care professional and manual lymphatic drainage therapist (MLD). Sometimes other professionals, such as social workers, occupational therapists and others may be involved. Each person will have special needs.

One successful example of this teamwork is in Central Ohio. Catherine Shade, RN, is a breast cancer survivor who also has lymphedema from a modified radical mastectomy and TRAM flap reconstruction with removal of 32 lymph nodes. Shade utilized the water for rehab and had a vision to help others in the same way. In 1998 she began trying to locate pool space; perseverance paid off and her vision came true in 2006. She and Sharon Inzetta, RNMS, a Breast Health Specialist at the Mount Carmel East Women's Health Center, received grant funding from the Susan G. Komen for the Cure® Columbus Affiliate, to expand an aquatic exercise program for breast cancer survivors.

Patient education is important to the survivor for prevention and management of lymphedema. In phase two, the Susan G. Komen Foundation has also approved an education series. Shade, Inzetta and Carla Powell, RN, LMT, LANA, have implemented this program that complements the aquatic segment. Their vision of a community program, now in several sites, is to "Empower women by teaching them to be advocates for themselves - to recognize changes in their own bodies and get help."

Program objectives, with the goal of improvement of quality of life, are:

1. To educate survivors about prevention of lymphedema occurrence.
2. To target early intervention on any acute symptoms of lymphedema and to implement treatment strategies to prevent progression.
3. To serve as a support group for survivors where they can come together in a fun, supportive environment and participate in a healthy dialogue about the issues they face.

Now in their second year, the team continues to see success and increases in participation. Classes meet twice a week for five weeks, four times per year. Also available are year-round non-grant classes that Shade teaches.

Precautions to Prevent Lymphedema and Its Progress:

- Avoid infection: have blood drawn, IVs, blood pressure taken, etc. on non-affected arm.
- Wear medical alert bracelet.
- Cleanliness of hands, cuticles, arm is essential.
- Wear protective gloves when doing housework involving chemical cleansers or steel wool, when gardening or doing yard work and when washing dishes.
- Avoid repetitive yard work such as clipping bushes.
- Wear a thimble when sewing.
- Use electric shaver for underarms.
- Avoid insect bites on affected arm; utilize repellent.
- Avoid burns. Use oven mitts.
- If in the sun, use SPF of 30 or wear a shirt and hydrate well.
- Reduce caffeine as it dehydrates the body; sluggish lymph fluid moves less effectively through lymph channels.
- Reduce sodium intake and increase water intake to 8 glasses daily.
- Avoid excessive heat such as hot tubs and saunas.
- Avoid constriction, such as tight jewelry or clothing.
- Consult your therapist regarding being fitted for a compression sleeve. These are necessary for airplane flights and also useful when performing land exercise.
- Avoid muscle strain; do not lift over 15 pounds. In aquatic work, postpone resistance equipment - 18 months post op is often suggested.
- Avoid weight gain.
- If in doubt regarding symptoms, see your health care professional immediately.
- Be a strong self-advocate to prevent lymphedema.

Sample Exercise Program for Persons with Lymphedema

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Issues to discuss with client or class members:

- Understand safe entry and exit of the pool.
- Master sculling techniques and recovery to a standing position.
- Water is a substitute for a compression garment/sleeve
- Listen to your body and don't push through pain.
- Avoid fatigue; slow down or stop when needed.
- Our intention is to move lymph and reduce edema as we promote range of motion.

Begin with gentle **Water Walking** – forward, backward and laterally for 5+ minutes

Focus on **Posture** – locate neutral and find a comfortable depth so shoulders can be submerged. Stability is desirable.

Breath Work – practice thoracic breathing, abdominal breathing and a combination. Intentional breath work blended with stability and balance skills; add Ai Chi patterns for 5-10 repetitions.

Neutral Stance (Perform 5-10 reps as comfortable, increase when ready)

- Reverse Cat Stretch - hunch shoulders and lean to front, then return to standing
- Head Turns: Look to Side for counts 1 & 2 / Center 3 / Relax 4
- Forward Head Roll: Tilt Head Right on count 1 / Roll Head Down & Toward Left 2, 3 & 4 / Return to Start 5. (Repeat other side.)

Shoulders & Arms

- Shoulder Lifts count 1 & 2 / Relax 3 & 4 / Lift 5 & 6 / Relax 7 & 8
- Shoulder Rolls with slow count
- Shoulders Forward & Backward (retract & protract scapulae)
- Pendulum Arm Swing - use pool edge, balance on a noodle, or stand with neutral spine; swing one arm at a time, then both together with hands clasped
- Reverse Cat Stretch as above
- Palm Press – prayer position; scapular retraction follows

- Shoulder Touch from Side Extension – fingers to shoulder as elbow bends
- Shoulder Touch from Side Extension – fists to shoulder as elbow bends
- Arm Rotation with Pronation & Supination – shoulder emphasis
- Doorknobs – arms extended pronation & supination
- Biceps/Triceps Curls – add jogging to prevent chilling
- Shoulder Abduction & Adduction – out-stretched arms
- Shoulder Abductions & Adduction – arms criss-cross front and back
- Upright Rows
- Wall Press Away – front and side position
- PNF D1 and D2 Patterns
- Elbow Touch – hands behind head, bring elbows together and open with breath

Hand exercises – ‘play the piano’, etc.

Free/Active Stretching – such as hula-hoops

Balance & Agility Work

Stand on one foot to perform ankle flexion & extension, ankle circles, etc.

Combination Aerobic Movements or repeat Walking

Relaxation (use belts or noodles if comfortable)

In supine position, perform curl ups and knees to chest

Stretches

- Runners
- Achilles tendon
- Hamstring
- Quad
- Cross Over Shoulder
- Spider Man Wall Stretch

Ai Chi Relaxation & Breath Work

**Photos of most exercises are in the “Breast Cancer Recovery on Land and In Water CD Rom “ by Naomi Aaronson, MA, OTR/L, CHT & Mary Essert (both ancillary product and FLS original product with 4 CECs are available at www.maryessert.com)* ♦

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My Lymphedema www.mylymphedema.com

National Lymphedema Network www.lymphnet.org

National Cancer Institute www.cancer.gov/cancerinfo/pdg/supportivecare/lymphedema/patient

New Research: S. Clark suzette@BaylorHealth.edu

Y-ME National Breast Cancer Organization www.y-me.org

Mary Essert, BA, ATRIC, is a pioneer aquatic educator, international conference presenter and AEA Certified Instructor who has survived two bouts of cancer and is working toward lymphedema prevention. As a Cancer Wel-Fit instructor, she has experience with teaching individuals with breast cancer and lymphedema. The classes and workshops Mary has presented since her original surgery in 1981 have motivated many individuals. Her words of wisdom are, "Try aquatic exercise with this group of survivors. All of you will be inspired and helped." For further info regarding workshops and products (articles, book and CDs), please visit her web site www.maryessert.com or contact her by email at messert@mindspring.com.

The author thanks Catherine Shade, R.N., for her assistance with this article.



Catherine Shade, R.N., has been a breast cancer survivor since 1998. She is a program developer and instructor of Making Waves – a water class for breast cancer survivors with lymphedema. This class is the first of its kind in the state of Ohio. Shade is a water fitness profes-

sional, breast cancer advocate and a delegate to the Lance Armstrong Summit 2008. She has numerous certifications including Red Cross Lifeguard, WSI, Aquatic Exercise Association (AEA), as well as a certificate in manual lymph drainage. She currently serves as an operating room nurse and teaches aquatics as well. Her passion to serve other women with lymphedema is a driving force and her energy and endurance enviable. For more information, please contact Catherine at CShade59@aol.com