

Treatment of lymphedema and wrist fractures

An integrated approach

By Jan Stewart

With contributions by Niki Travers, Alla Hardoon and Tiffany Shi



For as long as I can remember, I had a small lump on my left breast. It had been regularly tested and was benign and so it caused no concern. In 2009, however, at the age of 56, my gynecologist noted that the lump was protruding more and referred me to a surgical oncologist at Princess Margaret Hospital in Toronto. Medical examinations and tests revealed a malignant mass hiding behind my benign lump. Over the next year, I successfully underwent four operations, including a double mastectomy, plus chemotherapy and radiation. Shortly after my left breast and a number of lymph nodes were removed, I developed lymphedema in my left arm. It didn't hurt but reminded me of pranks that my friends and I used to inflict on one other by placing our hands on each other's forearms and twisting to produce a burning sensation.

I met with certified lymphedema therapists at the Cancer Rehabilitation and Survivorship Centre at Princess Margaret to become educated. I started seeing Pamela Hammond, a certified lymphedema therapist, for manual lymphatic drainage weekly. She taught me how to self-bandage my arm, hand and fingers. Her expertise, calm demeanor and empathy were inspirational to me. I was also referred to a compression garment fitter, and started

wearing a sleeve and gauntlet. My lymphedema was moderate rather than extreme and didn't interfere with my daily life.

In 2016, I switched garment fitters after the swelling in my arm ballooned. I had previously been an adept pianist, but the lymphedema was unhappy with my continual arm movements on the keyboard and let me know! I started seeing Alla Hardoon, a former registered nurse and certified fitter. She is compassionate, caring and, above all, extremely knowledgeable. She refitted me with a heavier gauge sleeve and gauntlet and measured me for a night garment so that I no longer had to self-bandage. To my delight, I was also offered a wider choice of colours and I started sporting bright blue, purple and fuchsia garments. I have never hidden them and try to have fun with them.

By this time, I no longer needed regular lymphatic manual drainage visits and was happy with my progress. The one issue I faced was repeated cellulitis, which I have contracted four times. My cellulitis has generally been treated with portable intravenous infusions. After the last occurrence, I went straight from the hospital with my portable IV machine and gave a lecture to about 40 MBA students; I wasn't going to let cellulitis get in my way!

Much of how a patient handles illness depends on mental factors. During my cancer treatments, I was rarely emotional or depressed, realizing that my journey would be over in a year. My doctors asked me to speak with several patients and their families and give them my perspective. This was repeated with lymphedema: I worked with knowledgeable clinicians, educated myself about what to do and moved on with my life.

Wrist fracture

Last May, my daughter and I drove to Rouge Valley Park to go hiking. It was a beautiful sunny Sunday, and I was wearing a blue denim compression sleeve and gauntlet, complete with Swarovski crystals on the forearm. After an hour of walking on the trails I went flying over a tree stump like a gazelle and fell hard on my left arm. I knew immediately that I had broken my wrist and was furious with myself.

I was in significant pain as we drove to the hospital emergency room where the nurse had to cut off my compression sleeve. X-rays confirmed that I had fractured my left wrist in multiple places, largely the distal radius and ulna, with several additional small fractures. The emergency room doctors set my wrist



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Tiffany Shi is a physiotherapist at the Orthopaedic Therapy Clinic

and made an appointment for me at the Fracture Clinic the next day.

I was very concerned about the potential effect of the fractures and the tightness of the cast on my lymphedema. Before going to the Fracture Clinic, I called Pam, Alla and Maureen Dwight, my long-term physiotherapist at the Orthopaedic Therapy Clinic, for their advice and insights. Although there was nothing they could do for me until the cast was removed, I was advised to have the cast bivalved to allow for expansion and soft tissue swelling. My orthopaedic physician agreed and reset it.

The following week, this same physician informed me that he would like to tighten the cast after examining my arm. We both agreed to try it, and the cast was again reset, this time without any valving. He brought me in weekly and monitored my progress, keeping the cast on for seven weeks.

Wrist and lymphedema treatment

The day after the cast was removed, I met with Tiffany Shi, a physiotherapist who treats hand and wrist injuries. This was followed by an appointment with Niki Travers, a wonderful and warm physiotherapist at Princess Margaret. Initially, the swelling was isolated in my arm above where the cast stopped. My shoulder girdle muscles were extremely tight from wearing a cast and protecting my arm. The wrist was understandably extremely stiff and I couldn't straighten it.

The swelling increased around the wrist and elbow. I began to bandage my arm until I could get a Velcro garment. The following week, Alla fitted me with a temporary Velcro compression garment as I obviously could not pull a compression sleeve over my wrist at that point. To my alarm, when I took it off to shower that evening, my arm and hand had blown up. The swelling had especially travelled down to my hand, and I looked like a blowfish, with fluid even filling each knuckle. I was terrified and called Niki and Alla in tears.

Niki and Alla spoke together, problem solving about the best compression options at this stage. Niki reviewed and coached me to

improve my self-bandaging techniques. She sent me videos on self-massage and self-bandaging, as well as additional reading on lymphedema. I was clearly not yet ready for any other type of compression garment. Self-bandaging gave me a custom fit each time that I wrapped my arm and hand, and it felt comfortable. An added benefit was that passengers on the subway would always give me a seat when they saw my arm bandaged!

Within a few weeks, my wrist range of motion slowly started to improve and the swelling began to come down. I introduced Tiffany to Niki so that they could coordinate my treatment. Niki also spoke with Alla, who fit me with a different temporary Velcro garment made by Mobiderm. While I was months away from being able to wear regular compression garments, I was able to successfully wear the new Velcro sleeve and hand wrap that she gave me paired with self-bandaging at night, and I continued to gradually improve. The night bandaging helped to manage my flare-ups and daily fluctuations. Niki made a foam chip pad, which I placed, over the denser areas of swelling and bandaged over to help soften these areas. Tiffany also gave Niki suggestions on where to focus

soft tissue techniques around the fractures to improve mobility.

All three clinicians identified that while I was making progress, my lymphedema tissues were thick and hard, particularly around the wrist and elbow. I had had a tendency for the swelling in my arm to be dense or fibrotic for years but it had worsened post-fracture.

Again, Alla and Niki discussed night garment compression options, and after trialing a few, Alla found a quilted night garment made by Thusane that has helped soften my tissues and gives me great comfort.

I was filled with joy five months later when I was finally able to be fitted for compression garments. Being able to wear them meant that I could return to a more "normal" life, as they were significantly less cumbersome than the Velcro garments and took far less time and effort than self-bandaging. Alla selected Medi custom, flat knit honeycomb garments



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that have more compression at 30-40 mmHg than those that I had previously worn, together with a glove that covers each finger and extends well past my wrist, close to my elbow. I chose bright avocado green and mango-orange coloured garments with nature patterns and am delighted with them.

Tiffany and Niki have continued to treat me. The frequency of my treatments has decreased as I move more into maintenance mode. My left wrist range of motion has improved from only a few degrees of movement in each direction in the initial stage of my injury to almost baseline range. Tiffany is beginning to focus more on strengthening my wrist and has started me working with light weights, while Niki continues to do manual lymphatic drainage as well as measurements to monitor my swelling. At home, I exercise my wrist five times a day with a focus on range of motion stretching and strengthening and I do lymphatic self-massage twice a day.

My children add levity by delighting in calling me "sausage arm" during the day and "giraffe arm" at night, due to the pattern that the night garment temporarily leaves on my arm!

I have been told that most patients require physiotherapy for wrist fractures for six to 12 weeks. My progress has been much more gradual due to the complexities of my lymphedema. The key to my successful treatment has been the coordinated, integrated approach that all of my clinicians have embraced. Without each talking with and brainstorming with the other, they might have introduced conflicting or overly aggressive treatments; I might have become further injured and not made the same progress that I have. While my journey is not over, I am living a full life again and am grateful to them. **LP**