

Using Mental Imagery in Lymphedema Management

Mental imagery or visualization is a simple, effective tool that can be used by those with lymphedema to increase body awareness, improve lymphatic flow and to create a feeling of wellness. This mind-body technique has recently gained respect in the areas of athletic performance, dealing with cancer and in guided meditations for relaxation. The mind can be used to visualize an object, scene or sensation as though it was occurring in physical reality. The brain cannot tell the difference if we are actually smelling a lemon or if we are imagining we are smelling a lemon. Our saliva glands most likely will start to produce saliva at just the thought of one. We can create a fight or flight adrenaline response physically by just imagining something bad happening to us.

Scientific Evidence

The lymph vessel system is innervated by the autonomic nervous system (ANS) ¹. This is the system, which is responsible for automatically keeping our hearts, lungs, digestion and lymph vessel systems working without our conscious awareness. However, studies as early as 1968 have shown that the systems controlled by the ANS can be affected by the mind ². More recently, it has been shown that biofeedback techniques can be used to significantly lower heart rate ³, improve gut transit ⁴ and lower blood pressure ^{5,6,7}. Biofeedback can allow individuals to mentally have an effect on physical functions such as brain activity, muscle tension and skin temperature ⁸. Mental imagery has been used successfully with cancer patients to increase longevity as well ^{9,10}. Sports research has shown that during mental imagery sessions parts of the brain on both sides other than the visual processing areas are activated ^{11,12}. While mentally imaging an athletic activity, muscle activity has been measured by EMG in the muscles that would be used if the activity was done physically ¹³.

At this time in history we do not have the technology to easily measure the rate of lymphatic flow in a conscious living human which makes direct research in this area extremely difficult. However, if we extrapolate from research on other autonomically controlled systems in the body, it seems plausible that mental imaging could affect the lymph vessel system in a similar fashion.

Understanding the Map

In applying mental imaging to the management of lymphedema, it is important to have an understanding of how the lymph vessel system is structured. See the information sheet with the lymph vessel system diagram. It is a series of small vessels that run like small streams feeding into larger streams, all heading to “terminus” where the system joins the veins just behind the collar bones and thus

returning the fluid to the heart. When this system has been disrupted by surgery, radiation, malformation before birth or infection, some of this fluid can be re-routed to existing functioning pathways. This system can become sluggish as well through general fatigue, overloading, tight tissues or a host of other causes.

The fluid is moved through these vessels by smooth muscles on the walls which contract in a wave like fashion as your intestines do. The heart is not forcing fluid through these vessels as in the arteries and veins. The muscles in the walls of the lymph vessels are contracting in a wave like fashion to move the fluid back to the heart. Before using mental imaging, it is good to have in mind the pathway your fluid needs to take. This is like studying a road map before a long trip to get an overall idea of where you are going. If you see a Combined Decongestive Therapist, they could help you understand how they are re-routing the lymph fluid and you could use that as a map. The two guided visualizations offered on this resource page follow general pathways for the arm after a mastectomy on one side or a general leg. These could be altered for other situations.

Using a Visual Approach

Although this work is called visualization or mental imagery, many people never “see” what we are describing. A more accurate description might be “Stimulating the Lymph Vessel System with the Mind.” Some people work better with auditory cues and others with kinesthetic or feeling cues. For people who find visualizing easy, closing the eyes and imagining the pathways in various parts of the body can be helpful. These pathways could be seen anatomically or metaphors such as streams and rivers, or highways or anything else that suggests movement along pathways can work. We use the word imagine, because the imagination is the bridge between our rational, scientific mind and our intuitive mind.

As you continue to imagine these pathways, your intuition and awareness will get stronger and will with practice give you clear, accurate information. Once you have a sense of the pathway in a particular part of your body, imagine it flowing in the appropriate direction (this is a one way system back to the heart). Run over the same area in your mind a few times and notice if it seems to move freely. Compare it to the same area on the unaffected side and see if you notice any difference in impressions. Try out various areas of the affected limb and see if you get the same impression throughout or if some areas feel slower than others. Spend some time on the more sluggish areas, running over the area repeatedly with your mind and see if it starts to speed up. This technique could of course be combined with self-massage or gentle stroking in the direction of flow.

Auditory Approach

For people who find trying to picture things in the mind’s eye difficult, try this with a tape that has the sound of trickling water. The lymph vessel system is quite delicate so this is not crashing waves! Or you could imagine how your lymph vessels would sound if they were streams. Do some trickle and gurgle louder

than others. Imagine making the sounds louder, faster paced. Other more auditory people may find it helpful to talk to their lymph vessel system in their minds, directing it like traffic, urging it on like a tired companion or cheering its success.

Kinesthetic Approach

For people who learn by doing, who like to touch things and like to move, a more kinesthetic approach may be more successful. Gently stroking the skin over the area that you are focusing on and moving in the direction of intended lymph flow may help to imagine the pathways better. They can even imagine the feel of movement or a trickling sensation as the pathways speed up. Imagining the pathways flowing while doing self-massage may be especially helpful.

Conclusion

Whichever method or combination of methods you use, sometimes you will get to an area, which is difficult to imagine flowing. This is not necessarily because your imagination is not working. Often it is in fact an area where the lymph vessel system is struggling. Stay in that area and gently encourage it to flow. This is like getting a toddler to walk in a certain direction – if you push too hard they will fall over. A gentle guiding is more successful.

Mental imagery is a way of using the mind-body connection to improve lymphatic flow. It can be used alone or even better in combination with self-massage. Mental imagery could be used in bed before going to sleep to help the lymph vessel system to catch up from the day and to wind down the day on a positive note. It could be used on airplane flights or while waiting for appointments. Mental imagery is another tool in the lymphedema management tool kit. It can improve a person's awareness about their body and to set up a positive dialogue with the affected area.

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