

## **Environmental exposure for people living with lipedema, lymphedema and Dercum's disease**

**Lymphedema and Lipedema:** It is thought that extreme cold or heat can flare up lymphedema due to changes in blood flow. While this makes common sense, there is very little data to support these statements.

Those at risk of, or with secondary lymphedema are advised to avoid prolonged (greater than 15 minutes) exposure to extreme cold or heat<sup>1,2</sup> or hot environments, such as hot showers, saunas and sun exposure, and to avoid placing limbs in water temperatures above 102° Fahrenheit (38.9° Celsius) which can be associated with rebound swelling.<sup>3</sup>

Heat or a rebound increase in circulation from cold exposure may increase blood flow and as a consequence increase the amount of fluid bound to interstitial proteoglycans as well as increasing lymphatic load.<sup>4</sup>

In one study, higher temperatures slightly increased extracellular fluid and swelling in the arms of women with breast-cancer associated lymphedema.<sup>5</sup> In a seasonal study in Australia, they found that a significant increase in size of both the dominant and non-dominant upper limb using volume measurements in Spring when compared to other seasonal data points,<sup>6</sup> so not the hotter or colder times of the year. There was, however, a perceived increase in heaviness of limbs in summer compared to spring and winter, despite the objective measures not reflecting this.

Interestingly, the few studies that have been done to study the effect of heat on lymphedema appear to show positive rather than negative results from heat exposure. Heat therapy is strongly advocated by traditional Chinese medical literature for the treatment of lower extremity lymphedema.<sup>7</sup> For example, microwave heat therapy has been used to significantly reduce limb edema.<sup>8-10</sup> Another group used microwave and hot water immersion hyperthermia therapies on 12 patients with leg lymphedema and showed that heating was associated with reduced girth and volume of the affected legs, with near resolution of lymph lakes (fluid pockets in tissue).<sup>11</sup> They hypothesized that regional heating resulted in an altered immune response, changes in extracellular matrix protein composition, and greater pliability of tissues leading to decreased edema.

There is also one case study where cryotherapy (local or general use of low temperatures in medical therapy) improved massive vulvar lymphatic leakage in a patient with gynecological cancer.<sup>12</sup>

**Dercum's disease:** Moon cycles were the only consistent cause of flares reported by people with Dercum's disease.<sup>13</sup>

## **In terms of heat and cold exposure, what should a person with lymphedema or lipedema do?**

In terms of heat, if you have lymphedema, fibrosis (thickening) of the skin, or open wounds in the skin and underlying tissue, it is a good idea to avoid public hot tubs due to the risk of infection. If you want to try heat or cold modalities, start with warm and cool temperatures first. Always check with your healthcare provider on a regular basis to avoid risks that can be associated with the use of more extreme temperatures including pain, burns, nerve damage and swelling. Remember, everyone is different and what works for one person may not work for others. We often recommend the use of water jets in a home sauna to treat deeply into lipedema tissue. You can regulate the temperature of your home sauna to one that works for you and is safe for you.

## **Because the literature is giving us conflicting information, the risks associated with the use of hot and cold temperatures is up to you!**

### **References**

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12/4/2021