

# Home-Based Lymphedema Treatment in Patients With Cancer-Related Lymphedema or Noncancer-Related Lymphedema

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**Purpose/Objectives:** To compare treatment protocol adherence, satisfaction, and perceived changes in emotional and functional status between patients with lymphedema with and without cancer using the home-based Flexitouch® (Tactile Systems Technology, Inc.) system for lymphedema self-care.

**Design:** Quasi-experimental, pre- and post-test design.

**Setting:** Private homes in the continental United States and Alaska.

**Sample:** 155 community-dwelling individuals with lymphedema: 93 with cancer-related lymphedema and 62 with noncancer-related lymphedema.

**Methods:** A survey was completed before use of the Flexitouch system. Participants received in-home education about device use, safety precautions, and the two-phase therapy protocol. A post-therapy survey was completed during the maintenance phase of the protocol.

**Main Research Variables:** Use of the Flexitouch system, treatment protocol adherence, participant satisfaction, and emotional and functional status.

**Findings:** Participants without cancer were more adherent to the prescribed protocol. Both groups were satisfied with the system, perceived it to be effective, and reported improvement in physical and emotional status. Participants' use of professional manual lymphatic drainage (MLD) therapy, self-MLD, and bandaging declined after they initiated use of the Flexitouch system.

**Conclusions:** Patients using the Flexitouch system were satisfied with the device and perceived it to be beneficial in management of their lymphedema.

**Implications for Nursing:** Patients using the Flexitouch system should be assessed for adherence to the prescribed treatment protocol and use of other self-care treatments. Healthcare professionals should facilitate communication among members of the lymphedema treatment team and the patient when problems are noted.

Lymphedema is a condition in which excessive fluid and protein accumulate in the interstitial spaces (Rockson, 2001). It occurs when the lymphatic system cannot accept fluid from the interstitium, cannot transport lymph into the circulatory system, or both (Browse, Burnand, & Mortimer, 2003). Lymphedema can arise from primary (idiopathic) or secondary (acquired) conditions. Primary lymphedema occurs in about 1 of every 10,000 individuals (Townsend, Beauchamp, Evers, & Mattox, 2001). Secondary lymphedema occurs as a result of trauma to the lymphatic system. The leading cause of secondary lymphedema in the United States

## Key Points . . .

- Despite advances in laboratory science to identify and understand the origins of primary lymphedema and modifications of cancer treatment to decrease secondary lymphedema, new lymphedema cases continue to be identified.
- Lymphedema requires burdensome, lifelong self-care to stimulate lymphatic drainage.
- Improved at-home treatment methods are needed.
- Participants reported satisfaction and perceived benefit from using a new home-based lymphedema treatment system that promotes lymphatic drainage.

is cancer treatment. Lymphedema rates in patients treated for cancer vary based on cancer type, site, severity, and treatment, as well as length of time post-treatment and criteria used for lymphedema diagnosis (Cormier, Davidson, Xing, Evans, & Armer, 2006; Starritt et al., 2004). Incidence of

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