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# **Pneumatic Compression Pumps: Styles and Uses for Self-Management of Lymphedema**

## **Introduction**

Lymphedema, a chronic condition caused by lymphatic system dysfunction, requires a comprehensive approach to managing swelling and maintaining lymphatic health. In the Complete Decongestive Therapy (CDT) self-management phase, pneumatic compression pumps complement other treatments like Manual Lymph Drainage (MLD). This article explores the types of pneumatic compression pumps, their benefits, and how they enhance self-management routines without replacing traditional therapies.

# What Are Pneumatic Compression Pumps?

Pneumatic compression pumps are mechanical devices that apply controlled pressure to the limbs using inflatable garments. This pressure stimulates lymphatic flow, helping to reduce swelling and maintain the results achieved during the intensive phase of CDT. However, it is crucial to understand that these pumps are not a substitute for MLD. Instead, they serve as a valuable adjunct to MLD and other components of CDT, supporting ongoing care.

## Styles of Pneumatic Compression Pumps

### Basic Compression Pumps

- **Description:** Provide uniform, non-sequential pressure across the limb.
- **Best For:** Mild lymphedema or as an entry-level option for maintaining fluid reduction.
- **Considerations:** Less effective for complex or advanced cases.

### Sequential Compression Pumps

- **Description:** Deliver pressure wave-like, sequentially, mimicking natural lymphatic flow.
- **Best For:** Moderate to severe lymphedema, including fibrotic tissue.
- **Considerations:** Offer more targeted therapy and better outcomes for long-term use.

### Advanced Multi-Chamber Pumps

- **Description:** Feature multiple chambers with customizable settings to target specific areas.
- **Best For:** Complex lymphedema cases and individuals needing tailored therapy for localized swelling.
- **Considerations:** Professional guidance is required for setup and use.

### Portable Pumps

- **Description:** Compact, battery-operated models designed for mobility and convenience.
- **Best For:** Individuals with active lifestyles who need treatment on the go.
- **Considerations:** May need more advanced features of larger systems.

## The Role of Pneumatic Compression Pumps in Self-Management

During the self-management phase of CDT, pneumatic compression pumps are a supportive therapy to maintain lymphatic health and prevent regression of symptoms. Their benefits include:

- **Enhanced Lymphatic Stimulation:** Pumps can help sustain the results of MLD by promoting fluid movement.
- **Convenience:** They offer a practical way to supplement manual techniques at home.
- **Consistency:** Regular use ensures ongoing lymphatic support.

- **Improved Compliance:** Easy-to-use devices encourage patients to stick to their care plan.

However, pneumatic compression pumps are **not a replacement for MLD**. MLD remains the cornerstone of lymphedema care, as it involves specialized techniques to manually stimulate the lymphatic system and address areas not easily reached by pumps.

## Recommended Use During Self-Management

### Integrate with CDT Components

- Use pumps as part of a comprehensive care plan, including MLD, compression garments, exercise, and skincare.

### Follow Professional Guidance

- Always consult with a certified lymphedema therapist to ensure appropriate use and settings.

### Establish a Routine

- Use the pump at consistent times each day to maintain lymphatic flow.

### Start Gradually

- Begin with shorter sessions and increase duration as recommended by your healthcare provider.

## Key Considerations When Selecting a Pump

- **Condition Severity:** Choose a device suited to your level of lymphedema.
- **Lifestyle Needs:** Consider portability and ease of use.
- **Insurance and Budget:** Check coverage options and out-of-pocket costs.
- **Professional Input:** Seek advice from a lymphedema specialist to ensure the pump complements your treatment goals.

## Conclusion

Pneumatic compression pumps are a valuable tool in the self-management phase of lymphedema, helping to maintain results achieved during intensive therapy. While they enhance lymphatic flow and reduce swelling, they are not a substitute for Manual Lymph Drainage but rather a complement. By integrating these devices into a holistic care plan, individuals can manage their condition more effectively and improve their quality of life. Always consult a certified lymphedema therapist to ensure safe and appropriate use.



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