

## INTRODUCTION

Barriers to using traditional compression strategies in the home include difficulty with the application/removal, pain with use, and poor insurance coverage without the presence of a wound.

The elastic, longitudinal stockinette (ELS) is an innovative textile, shown *in vitro* and *in vivo* to provide an overall lighter compression dosage (8-12mmHg) with an alternating pressure profile that has been hypothesized to stimulate the dermal lymphatics. (2,3)

This lower compression pressure profile is a viable alternative for use in the home care setting with benefits including easier application/removal, decreased pain, and improved tolerance to wear times, even for those with underlying mixed disease.

This pilot case series aimed to objectively assess the efficacy of the ELS textile for managing mild/moderate lower extremity edema in the home.

## Materials

Elastic Longitudinal Stockinette (ELS)

## Methodology

Three patients receiving home care services for lower extremity swelling were issued one pair of ELS stockinette.

Patients were instructed to wear 23 hr/day, removing 1 hr daily for skin checks/care.

The disc model method of limb volume measurement was utilized routinely to track the percent change in limb volume during treatment.

### Patient 1

79-year-old male with BLE lymphedema who lives in a group home. Ambulatory with fww. Med HX: memory impairments, anxiety, panic attacks, sensory issues, CAD s/p PCI with RCA (1999), sinus bradycardia, carotid artery disease, HTN, HLD, DM2, CKD 3, negative for DVT. Normal ABI  
**Volume loss right lower leg 14.3%, left lower leg 15.3%, duration 18 days**

SOC 7/11/22



7/12/22



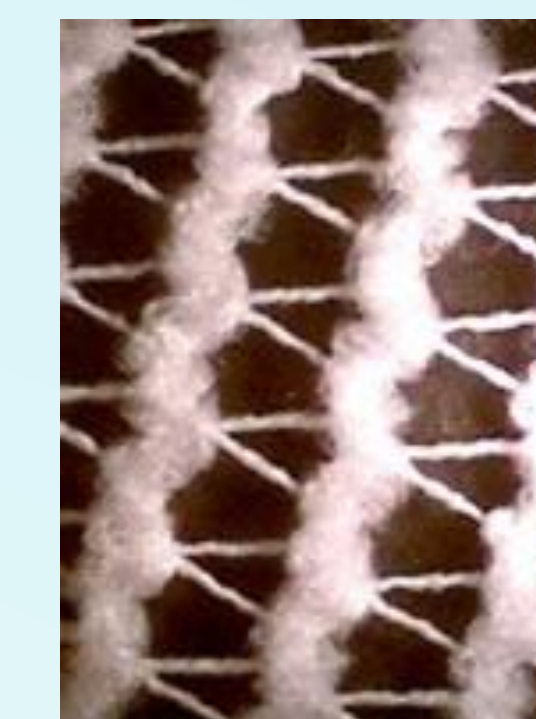
7/18/22



7/28/2022



## Fuzzy Wale Pattern



### Patient 2

86-year-old female who lives at home by herself. Ambulatory with fww. Homebound. Daughter checks in on her 2-3x/week. New diagnosis of BLE lymphedema, chronic edema for over 10 years. Normal ABI, Med Hx: anxiety, depression, frequent falls, glaucoma, Charles Bonet, HTN, venous insufficiency. **Volume loss right lower leg 11.2%, left lower leg 9.2%, duration 8 days**

SOC 2/13/2023



2/15/2023



2/20/2023



## What is ELS?

- Elastic Longitudinal Stockinette
- ELS is composed of fuzzy longitudinal wales
- A wale is the fuzzy part of knitted corduroy cloth, connected by Lycra spandex elastic yarns

### Patient 3

63-year-old female lives with family, schizophrenia, min assist/HHA for household distances, dependent for care d/t mental health. Has 24-hour supervision/assistance of family. Progressive LE swelling over the last 6-8mo. DVT r/o. No change in medication. **Volume Loss right leg was 50%, left leg 40%, duration 16 days**

SOC 12/04/2022



12/20/2022



01/02/2022



## Close-Up Skin View



## RESULTS

- Visualization of fuzzy wale pattern & reduction in limb volume was observed in all three patients.
- **Largest reduction was recorded at 50% (patient 3)**  
**Smallest at 9.2% (patient 2)**
- Subjective feedback was universally positive. Affirmative statements included:
  - “They are more comfortable than my other compression stockings”
  - “I was able to get them on & off by myself”

## CONCLUSION

- Ideal compression application is **NOT** a one-size-fits-all situation.
- Home care clinicians are faced with unique challenges requiring outside-the-box thinking to optimize edema reduction outcomes.
- ELS demonstrated effective, economic, and tolerable edema reduction in the homecare setting.
- Additional research is warranted.

## References

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