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Title:

**Longitudinal Yarn Compression Stockinet Improves Senile Skin
Tensile Strength**

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Problem:

Skin injury prevention is a considerable challenge for institutions caring for elderly patients. Kozeny and Stott reported the use of Longitudinal Yarn Compression (LYC) *, to control edema.(1) Landon demonstrated that Yarn Focused Compression (YFC) ** was effective in the treatment of ulcers in profoundly ischemic limbs.(2) Senile atrophy worsens each decade and shear injuries are an expensive medical problem for institutions.

YFC textile is protective for skin shear injury, and appears to make skin more robust after, on average, 60 days of use. Kozeny, in 2006, described the powerful physiologic effect that LYC textile has on limb edema. YFC changes the topology of the skin surface. Elastic tension creates “cornrow furrows” with islands of uncompressed skin between each yarn. Kozeny physiology may be trophic for senile skin.

This study answers two questions: As a low cost protective garment, does Longitudinal Yarn Compression stockinet prevent shear injuries? Does LYC decrease edema and result in more robust senile skin?

Methods:

Five elderly patients in a long term care setting at high risk for skin shear were treated with LYC stockinet over a 60 day period.

Results:

Photos illustrate elderly skin treated with LYC therapy. Treated skin displayed decreased fragility and improved skin tensile strength. Costs are discussed.

Conclusion:

LYC textile is a comfortable, inexpensive and easily applied protective skin barrier. LYC textile is unique in that elastic compression changes skin surface topology by creating “cornrow furrows.” Yarn Focused Compression textile appears to make senile skin more robust over months of use.

References:

1 Kozeny, D., Stott, K., “Longitudinal yarn compression textile: An innovative treatment for leg swelling.” Journal of Vascular Nursing, Volume 25, Issue 3, Pages 62-62, September 2007

2 Landon, L., et al; “Yarn Focused Compression Safely Enhances Wound Healing in Arterial Ischemia” poster presentation, Abstract in press, Symposium of Advanced Wound Care, Washington, DC, September 2009

*, ** EdemaWear®, Compression Dynamics, LLC, Omaha, Nebraska