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Thermographic profiling of post bariatric female patient's abdominal pannus region

Deborah A Christel, Linda Arthur Bradley and Megan Vulcan
Washington State University, USA

This manuscript addresses the added value of thermography in the practice of product development of garments for post-bariatric patients and the obese. The development of new thermal technologies applied in medical settings has allowed better understanding of wound healing post-surgery. Infrared thermography is a technique that allows visualization of heat radiated from a body using infrared emission, a spectrum that is not visible to human. Used in the medical field, it can provide doctors with information about the physiological responses associated with skin temperature (T_{sk}) to identify possible pain symptoms. Recently, thermography has been used in product development in sport settings and is an increasingly important tool for diagnosing medical issues. The objective of this study was to establish the thermographic profile of the abdominal pannus in post-bariatric female patients. Ten post-bariatric female patients from the Pacific Northwest of the USA (53.8±9.15 years) participated in the study. Four thermal images of each patient allowed us to record minimum, maximum and average skin temperature in 3 regions of interest (Anterior, Anterior while lifting the pannus, Sagittal and Posterior). Small bilateral differences were found. Significant differences occurred under skin folds of the pannus and pubic region compared to other T_{sk}. Heat and sweat form excess skin and the pannus skin folds should be seriously considered in apparel product development for post-bariatric and obese populations.

Biography

Deborah A Christel completed her PhD in 2010 from Oregon State University and focuses her research on plus-size apparel, functional and comfort design for obese bodies, and weight bias. She is an Assistant Professor at Washington State University in the Department of Apparel Merchandising, Design and Textiles.

deborah_christel@wsu.edu

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