

Fashion and medical researchers collaborate on sleepwear tailored for post-mastectomy and lumpectomy patients

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Master's student Kirsten Schaefer, Dr. Joyce Nyhof-Young and professor Sandra Tullio-Pow researched the needs of post-surgery breast cancer patients to inform the design of their new line of sleepwear.

For breast cancer patients, surgery is often the first line of treatment. Following surgery, patients must deal not only with the healing process, but also with lasting after-effects such as scarring, skin sensitivity and body asymmetry. A new line of sleepwear now available to breast cancer survivors is the result of an ongoing research partnership between Ryerson University and Princess Margaret Hospital that examines how the side-effects of surgery and treatment affect women's physical comfort, confidence and sexuality.

Issues faced by post-surgery breast cancer survivors were identified during a 2006 research study on lymphedema, a chronic condition that may occur after breast treatment. The needs-analysis carried out during this research made it clear that the need for accessible, affordable, attractive and comfortable sleepwear is a key issue for breast cancer survivors.

"A mastectomy or lumpectomy definitely changes the style of clothing that you wear or are able to wear," said Professor Sandra Tullio-Pow. "Women wanted designs that were "with it"- things that were pretty and comfortable, not something your grandmother would wear."

Tullio-Pow and master's student Kirsten Schaefer, both of Ryerson's [School of Fashion](#), have partnered with Dr. Joyce Nyhof-Young, a researcher affiliated with the Breast Cancer Survivorship Program at Princess Margaret Hospital and a professor in the Department of Family and Community Medicine at the University of Toronto, to design Sweet Dreams Studio sleepwear for post-surgery breast cancer patients.

The line includes a knee-length, short-sleeved nightgown and a cropped jacket. The draped collar camouflages a missing breast and the lace insert conceals cleavage asymmetries, the jacket includes a discreet pocket for the accommodation of a prosthetic. The sleepwear is made with fabrics that are not only luxurious and attractive, but also have wicking abilities to soothe sensitive skin and reduce the detrimental effects of hot flashes. A limited run of the sleepwear is available now at

[Sleep Dreams Studio](#) website. A donation will be made to the [Princess Margaret Hospital Survivorship Program](#) on behalf of each purchaser who participates in a feedback survey as part of a larger field trial. Following this field trial, the team hopes to secure a retailer to license the product for larger scale production and distribution.

The project has been funded by an Ontario Partnership in Innovation Commercialization (OPIC) grant, a Ryerson University FCAD SRC Committee project grant, Ryerson University's Office of Research Services Winter Research Assistant Program and through in-kind support and funding by The Princess Margaret Hospital Foundation. The earlier lymphedema study also received support from Princess Margaret Hospital's Weekend to End Breast Cancer.

Research on the new sleepwear line began in 2010; under the direction of Dr. Nyhof-Young, a team of second-year medical students and Schaefer met with 18 post-surgery breast cancer patients in focus groups. Participants were asked to discuss the elements of their favourite sleepwear, clothing concerns, as well any physical side-effects or emotional anxieties they suffered as a result of their surgeries. These sessions garnered a number of insights, some of them unexpected.

"From a design perspective, we went into the focus groups expecting issues of sexuality, how women felt about their appearance following surgery and other psycho-social discussions", said Tullio-Pow.

"Something we didn't expect was the importance of hot flashes - from these discussions we learned that regardless of whether you are pre- or post-menopausal, treatments can often throw you into hot flashes, and of course this has a huge effect on your level of physical comfort, especially sleep quality."

In addition to the need for a moisture-wicking fabric to alleviate hot flashes, the focus groups also raised a number of other issues, both physical and emotional. For example, post-surgery patients often experience extreme skin sensitivity, making seam type, size and location important, as well as restricted arm mobility, requiring garments to be easy to put on and take off. Beyond physical requirements, the respondents also wanted to feel attractive in their sleepwear and be able to buy the clothing at regular retail outlets, rather than specialty stores. On an emotional level, feeling and appearing normal again was also highly valued.

Tullio-Pow and Schaefer developed sleepwear taking all these considerations into account, but also prioritizing universal styling that would appeal to all women. Designs included a nightgown and pajama set with a matching jacket. Each style was made in a different fabric and field tested by a group of seven participants, who were asked to wear each style for two weeks and then report back.

The next step is a larger field test, implemented through the newly launched website, Sweet Dreams Studio. One hundred sleepwear sets, available in four different fabrics, have been locally manufactured and these pieces are available now.

A report on the research to date will be presented by the team next month at the International Textile and Apparel Association's annual conference in Philadelphia and will include an exhibit of the current line.