Fit or Frail?

EXPLORING THE MECHANICS OF AGING

JENNIFER JAKOBI, ASSISTANT PROFESSOR, HUMAN KINETICS

Women live longer at a greater state of frailty than men.

Visit any retail outlet on Seniors' Day and you're bound to notice that women outnumber the men. You will also notice a scope in functional ability that ranges between frail women pushing walkers or clutching canes to women of similar age seemingly sprinting down the aisles.

Jennifer Jakobi, Assistant Professor, Human Kinetics, says this scenario is becoming increasingly common, and her research is defining the underlying neuromuscular changes that regulate and determine the expanse of functional ability in women.

As she is trained in human kinetics and specializing in nerve and muscle physiology, the majority of Jakobi's work focuses on age-related change in muscle and nerves, and the physiological differences in aging between the sexes.

"In a community representation I saw differences very early on—which is now substantiated with research—that women live longer at a greater state of frailty than men," says Jakobi. "I want to know why from a neuromuscular perspective."

Jakobi is committed to taking her research into the community, something atypical in her field. "I firmly believe that research does not just belong in the lab, that there has to be transferability and applicability of findings. I am marrying the real world with the lab and actually measuring muscle as it executes daily activities—how it works and lives."

The next major project for Jakobi will be to look at how community and household environments influence mobility patterns and muscle activity patterns. Jakobi's work will be complemented by that of Dr. Gareth Jones, a rehabilitation and aging researcher specializing in the environmental factors around mobility, and Dr. Gordon Binsted, who studies finite motor control associated with visual adaptations and deficits.

Jakobi and her colleagues' research interests are well-suited to the Okanagan Valley, where the mild weather is known for attracting seniors.

"The rest of Canada will not attain the percentage of the population of adults over 65 years that we have in the Interior region until 2020," says Jakobi. "A very large proportion of Canadian older adults live here. It's a great place to study them and to understand why they come here."

The number of senior residents in the region is destined to continue rising, as it will in the rest of Canada. Jakobi's work is essential to enhance the functional quality of life and longevity as we age.