



## Dr. Janice Eng: Delivering accessible innovations that change lives



When Janice Eng first worked as a physical therapist with stroke patients in the early 1990s, we didn't have the life-saving medical treatments we do today. But in some centres patients often got comprehensive rehabilitation care right in the hospital.

“Over time we've seen a major shift in stroke rehabilitation. When I was starting out, the average time in hospital for stroke patients was three months. Now, if you get three or four weeks, you're really lucky,” says Eng, who got interested in the profession when, as a university varsity gymnast, she herself needed rehab for an ankle sprain. “The

Canadian system provides round-the-clock acute care when you're in the hospital for a stroke, but few or no services once you are home.”

Some stroke patients may require readmission in the weeks or months following their stroke and it's this problem that Dr. Eng is working to solve with her research. She is a professor of physical therapy at the University of British Columbia (where she is the Canada Research Chair in Neurological Rehabilitation) and the director of the Rehabilitation Research Program at the [GF Strong Rehab Centre](#) in Vancouver.

Dr. Eng has created a number of affordable, easy-to-deliver programs that help people recovering from stroke get better both physically and neurologically. With wait times for outpatient rehabilitation after stroke soaring across the country right now, her work is more important than ever.

“If we're going to send people home, we really need to do something about it. If you're going home at four weeks, your recovery is not over,” she says. The brain is most able to change and heal in the first 90 days after a stroke; if people wait too long for rehab, or if they don't get enough, their recovery can be limited permanently.”

Dr. Eng created the community-based group exercise program [FAME](#) (Fitness and Mobility Exercise), which can be taught by physical or occupational therapists, but also by fitness instructors, in seniors' clinics and community centres. Her research shows the program improves balance, reflexes and bone density, but also cognition and memory, in addition to reducing falls. FAME is now being used in over 20 countries.

She and her team also developed the home exercise program GRASP (Graded Repetitive Arm Supplementary Program). “What we know is that if you are to help the brain, you need thousands of repetitions,” says Eng. This simple program encourages people to get those reps in, which impacts hand function and the ability to do everyday tasks.

GRASP has been so successful it’s also spread around the world and is recommended in the Heart & Stroke [Canadian Stroke Best Practices](#). “It’s evidence-based but you don’t need a lot of fancy technology to do it,” Dr. Eng says.

Of late, Dr. Eng and colleagues have been [publishing](#) results from a six-centre trial called [DOSE](#) (Determining Optimal post-Stroke Exercise) that discovered patients who do walking therapy, putting in 2,000 daily steps of increasing intensity over their first month of stroke rehabilitation, walk better a year after stroke. This amount of walking is about 4 times what patients typically receive. She’s translating those finding into the Watch and Walk protocol to help therapists achieve these benefits with their patients.

“I do some high-tech work as well. I just did a study with a robotic exoskeleton. You strap it on and it helps you walk,” says Dr. Eng, who finds her work with graduate students and helping them build their own careers just as rewarding as research. “But it’s the lower tech work I do that’s really moved out into practice.”

Indeed, while Dr. Eng is a noted innovator in the lab and a life-changing mentor, her biggest impact has been with her simple, affordable and accessible community programs. And if people remember their names, that’s no accident — that’s Dr. Eng. “It seems a bit trivial, but coming up with a good name is an incredible free marketing tool that helps move our research into practice. I have been so impressed with the numbers of health care providers, as well as patients who ask to learn more about our GRASP and FAME Programs for stroke.”