

## Physiotherapist Gets More F.I.T.T.

Griffith Mercer didn't realize that a simple question about the care he was providing to his patients would lead to his first practice-based research project.

As a physiotherapist at the Orthopaedic & Arthritic Institute, Griffith works primarily with patients who have just had knee and hip surgery. It was while working with a female patient one day that he began to wonder how to provide the most effective training. Typically, he would gauge how hard a patient is working by taking her heart rate and measuring it against the accepted norms. That got him thinking about the reason why the target heart rates for men and women are the same and whether or not they should be different.

"This simple question started me on my research journey," Griffith said.

While he wasn't expecting to pursue extensive research, Griffith realized early on that finding an answer would not be as "quick and dirty" a process as he had anticipated. After a literature review and conversations with physiotherapist colleagues, he found that the original question began to change. "What I discovered is that there really are no differences between men and women when it comes to measuring their target heart rate, but the original question blossomed."

As a result, Griffith shifted his focus to the exercise prescription used by physiotherapists to develop programs for their patients. When designing an exercise program, physiotherapists look at four elements: frequency, intensity, type and for what amount of time (also known as F.I.T.T.). Griffith thought it would be interesting to look at the best ways to develop these programs for different populations — including children, healthy adults and older adults.

The result was "Exercise Prescription in Special Populations," which proved that some exercise planning was on the mark, while other approaches needed to be adjusted. "For example," Griffith explained, "I was under the impression that when you do weight training, three sets was better than one set. That isn't necessarily true."

In presentations to his colleagues, Griffith was encouraged by the response. They welcomed the sharing of new clinical knowledge, he said. He also presented the findings to UofT physiotherapy students earlier this year. He says that one of the many benefits of his practice-based research experience was the impact on his interaction with patients. "I feel more confident when I ask someone to do an exercise that they are doing it as efficiently as possible. You do a lot of research at school. This takes you to another level of our practice"