

Four weeks to prepare cancer patients for surgery

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Just four weeks of prehabilitation may be enough to help some cancer patients get in shape for surgery. That's according to a recent study of close to 120 colorectal cancer patients in Montreal. This potentially means that, barring unforeseen circumstances that stem from the surgery itself, their recovery is likely to be speedier too, according to earlier research from the same McGill-led team.

"We don't have a one size-fits-all prescription for how much exercise people need leading up to cancer [surgery](#)," says Celena Scheede-Bergdahl, a kinesiologist who teaches at McGill University and is one of the authors of the study on the 4-week prehabilitation program. "But we hope that by including a kinesiologist on the team along with oncologists and other specialized medical personnel, and by moving towards prehabilitation rather than rehabilitation, we can help patients recover more quickly so that they can get back to the daily activities they enjoy."

The success of prehabilitation is important news for those over sixty years of age who make up the majority of colorectal cancer patients. According to the latest figures from the World Health Organization, colorectal cancer is now the third most common cancer in women around the globe and the second most common cancer in men.

Although mortality from the disease is decreasing around the world, the recovery process from this kind of major abdominal surgery is often slow and difficult, partly because of the poor state of physical fitness that many patients have going into the operation. Typically, six months

after surgery only one in five patients have regained their previous level of physical activity.

That's where the growing trend towards prehabilitation - preparing patients for an operation rather than simply helping them to recover afterwards - comes in.

Pre-surgery patients - like athletes in training

Scheede-Bergdahl started working with elderly cancer patients 4 years ago and understands the challenges facing patients when they are asked to change their exercise behaviours immediately after receiving a [cancer diagnosis](#).

"When you get a cancer diagnosis, you're likely to feel stressed out and not be thinking about exercise much. But becoming more physically active could make all the difference. Surgery places tremendous physical stress on the body in a very short period of time. So, over the past ten years, some doctors and kinesiologists have started getting their patients ready for surgery in the same way that you would prepare an athlete for an event - through individually tailored exercise programs that challenge the body and allow adaptations to occur before their operations. And we're seeing that people have a better recovery as a result."

A changing prescription for post-operative health

To test the four-week prehabilitation program that they had developed, which combines exercise, relaxation techniques and whey protein supplements, the researchers randomly assigned 116 colorectal cancer patients to either a control group or a prehabilitation group. After four weeks of prehabilitation, 70 percent of the patients in the prehabilitation group had doubled the number of hours they spent exercising and as a

result had increased the distance they were able to walk in 6 minutes by close to 24 metres on average (a change of 20 metres is considered clinically significant). This was in marked contrast to the patients in the control group who tended to exercise less over the 4 week period between diagnosis and surgery. As a result the distance that they were able to walk in 6 minutes diminished significantly. (Those in the [control group](#) were offered a similar rehabilitation program once the surgery had taken place.)

"In the past, physicians would often advise their patients to rest in bed prior to surgery in order to build up their strength. This is actually likely to cause more complications, since it means that patients lose muscle mass and are more tired and slower to recover after an operation. This means that it takes them longer to be ready for chemotherapy or radiation," says Scheede-Bergdahl.

Growing global interest in prehabilitation for cancer patients

The concept of preparing the patients for surgery through prehabilitation programs has been gaining interest from those who work with cancer patients. Franco Carli, the McGill anesthesiologist who initiated prehabilitation at the MUHC, has been meeting with [health care professionals](#) from across the globe. "It is an exciting time for prehabilitation. Bringing together specialists from various backgrounds gives us the opportunity to best prepare [cancer patients](#) to meet the challenges of their upcoming surgery, recovery period and subsequent treatment."

More information: Brian P. Chen et al, Four-week prehabilitation program is sufficient to modify exercise behaviors and improve preoperative functional walking capacity in patients with colorectal

cancer, *Supportive Care in Cancer* (2016). DOI: [10.1007/s00520-016-3379-8](https://doi.org/10.1007/s00520-016-3379-8)

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