

7,500 daily steps before surgery and complication risks plummet

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Getting a certain number of steps each day can help people improve their fitness, but new research shows it also can pay off in the operating room.

The odds of complications within 90 days after hospital discharge were reduced by half if a patient was getting more than 7,500 steps a day

before their procedure, the study found.

These [postoperative complications](#) typically occur after a patient returns home. About 30% of patients suffer these problems, which can include infection, blood clots and wound complications.

"I think it's probably more an assessment of an individual's overall fitness and their [health](#) generally," said study co-author Dr. Anai Kothari, an assistant professor with a specialty in [surgical oncology](#) at the Medical College of Wisconsin. "We use a lot of information to try to decide and think through surgical risk. My hope is that this is an additional point of reference that practitioners can use."

Surgeons can already better understand a person's risk by knowing they have certain [health conditions](#), such as diabetes, Kothari said. Knowing how active that patient is could add information about their risks.

What do the results tell doctors?

"[The] first is we can actually use [wearable devices](#) to give us insight into a domain of their health and fitness that we may previously not have had an opportunity to do. This can be a useful adjunct to thinking about [surgical risk](#)," Kothari said. "The second is there's likely something about the level of activity itself that plays into this. That still remains understudied."

In the study, his team analyzed health data for 475 people who were participating in the All of Us Research program sponsored by the U.S. National Institutes of Health.

The program is focused on the relationship between lifestyle, biology and environment in diverse populations.

Participants in the study used a Fitbit wristwatch device that measured their daily steps.

The number of daily steps recorded served as a proxy for physical activity.

The steps were recorded dating back as far as months or years before [surgery](#). The surgeries these patients had ranged from general to orthopedic and neurosurgery.

The authors found that about 12.6% of study participants had a surgery complication. The odds of having a [complication](#) within the first 30 days were 45% less for those regular walkers than those who had fewer than 7,500 daily steps.

"Increased fitness is part of an overall healthy lifestyle and can improve postoperative risk and some of the things that we think about from a surgical standpoint, but longer term it's a positive health activity so increasing physical activity is beneficial for multiple reasons," Kothari said.

Patients may also learn more about their overall health through wearable devices, Kothari suggested, noting that some track a person's sleep.

"I do think that having some objective information about overall fitness is helpful," he said.

The findings were presented this week at the American College of Surgeons annual meeting, in Boston. Findings presented at medical meetings are considered preliminary until published in a peer-reviewed journal.

It's well-established that people who are in better physical shape before

surgery have fewer complications, said Dr. Paul Toste, a thoracic surgeon for UCLA Health in Santa Monica, Calif.

That the researchers were able to use a simple, common marker of [physical activity](#) and correlate that with postoperative complications was interesting, Toste said.

"I think from this study, the main takeaway is that people who are in better shape before surgery have a lower risk for complications, so anything that you can do to improve your physical fitness before an upcoming planned surgery is beneficial," Toste said.

And there are many reasons that fitter patients may fare better.

They may be able to get up and move around more quickly post-surgery, reducing the risk for blood clots. They may take deeper breaths when they're up and moving, reducing the risk for pneumonia, Toste said. They may also start out with a better nutritional status, which is good for healing.

"Pre-habilitation" is a term that's getting more notice, Toste said. The idea is to help patients get into better shape before an elective surgery, so they can have better outcomes.

It includes getting more steps, doing breathing exercises and optimizing nutrition.

"It's really basic stuff, but it can make a difference," Toste said.

More information: The Association of American Medical Colleges has more on [improving surgical outcomes](#).

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