

Level of frailty predicts surgical outcomes in older patients, researchers find

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A simple, 10-minute "frailty" test administered to older patients before they undergo surgery can predict with great certainty their risk for complications, how long they will stay in the hospital and — most strikingly — whether they are likely to end up in a nursing home afterward, new research from Johns Hopkins suggests.

"There's been this hunger to have some sort of scientific way to predict surgical outcomes in older people," says Martin A. Makary, M.D., M.P.H., an associate professor of surgery at the Johns Hopkins University School of Medicine and the study's leader. "We think we have a way now to accurately measure risk instead of eyeballing somebody or guessing."

The key is a means of measuring frailty using a five-point scale, developed at Johns Hopkins, Makary says. It includes loss of 10 pounds or more within the previous year, weakness as measured by a handheld dynamometer, exhaustion, low [physical activity](#) and slowed walking.

On the scale, one point is given for each problem. Scores of 4 or 5 mean that patients are considered frail; 2 or 3 mean they are considered intermediately frail. The test for frailty is simple to perform, taking just 10 minutes to complete.

In a study reported online and in the June issue of the [Journal of the American College of Surgeons](#), Makary and his team applied the frailty test to 594 patients over age 65 who had elective surgery between July

2005 and July 2006. Results showed that patients who were frail were 2.5 times as likely as those who were not to suffer a postoperative complication, 1.5 times as likely to spend more time in the hospital and 20 times as likely to be discharged to a nursing home or assisted living facility after previously living at home.

Previous research has also linked frailty to poor outcomes even in patients not undergoing surgery and has associated frailty with mortality, morbidity, falls and increased hospitalization.

Surgeons have long known that some patients over age 65 do quite well after major surgery even though they appear feeble at the outset, while others who seem to be healthier before an operation emerge diminished. Predictive formulas based on cardiac health and medical history failed to stack up well against the new frailty score, the researchers found.

Makary says frailty is a relatively new clinical concept and is best defined as someone's physical reserve and ability to withstand stress to the body. Many patients considered medically healthy can be frail.

Approximately half of all operations in the United States are performed in patients over 65.

"Some surgeries are absolutely required no matter the risks and other surgeries are elective," Makary says. "A good frailty test can help patients and surgeons make more informed decisions."

At a minimum, providers who use the frailty score will be alerted to special needs and risks of [older patients](#), he says. But having the information up front, he says, may enable providers to decrease the risk of complications in frail patients through closer monitoring and attention to hydration, nutrition and mobilization.

The research also found that using the frailty score strengthened the predictive ability of other commonly used risk assessment models for surgical patients.

Provided by Johns Hopkins Medical Institutions

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