

# Study: Dialysis 3 times weekly might not be enough

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In this Dec. 28, 2001 file photo, John Matheny sits during one of his three weekly sessions at the Morgantown Dialysis Center where he receives his kidney dialysis treatments, near Granville, W. Va. A major study to be published on Thursday, Sept. 22, 2011 challenges the way diabetics and others with failing kidneys have been treated for half a century, finding that three-times-a-week dialysis to cleanse the blood of toxins may not be enough. Deaths, heart attacks and hospitalizations were much higher on the day after the two-day interval between treatments each week than at other times, the federally funded study found. (AP Photo/Dale Sparks, File)

A major study challenges the way diabetics and others with failing kidneys have been treated for half a century, finding that three-times-a-week dialysis to cleanse the blood of toxins may not be enough.

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times, the federally funded study found.

The president of the National Kidney Foundation said she was "very troubled" by the results published in Thursday's [New England Journal of Medicine](#).

"We could be doing a better job for our [dialysis patients](#)" and that might mean doing it more often, said Dr. Lynda Szczech, a Duke University kidney specialist who had no role in the study.

Kidneys rid the body of waste and fluids. Most of the 400,000 Americans with failing kidneys stay alive by getting their blood purified by a machine three days a week at dialysis clinics - usually on Mondays, Wednesdays and Fridays or on Tuesdays, Thursdays and Saturdays. In both cases, there's a two-day break between the last session of the week and the next one.

The three-day dialysis schedule has been around since the mid-1960s and gives patients a weekend break from the grueling hours of being hooked up to a machine.

However, doctors have suspected that the two-day hiatus between treatments was risky, and smaller studies have found more heart-related deaths on the day after the gap.

"All the fluids and toxins are built up to the highest extent on Monday morning right before dialysis," said Dr. Anthony Bleyer of Wake Forest Baptist Medical Center in North Carolina, who has done similar studies.

The latest research, funded by the National Institutes of Health, is the largest yet. It was done by Dr. Robert Foley of the University of Minnesota and colleagues. All reported receiving fees from dialysis clinics and suppliers.

The team analyzed medical records of 32,000 people who had in-center dialysis three times a week from 2005 through 2008. The average age was 62 and a quarter had been on dialysis for a year or less. After about two years of follow-up, 41 percent had died, including 17 percent from heart-related causes.

Monday was the riskiest day for people on a Monday-Wednesday-Friday schedule. For those on a Tuesday-Thursday-Saturday schedule, the riskiest day was Tuesday.

Researchers found a 22 percent higher risk of death on the day after a long break compared with other days of the week. Put another way: For every 100 people on dialysis for a year, 22 would die on the day after the long interval versus 18 on other days.

Hospital admissions for stroke and heart-related problems more than doubled on the day after a long break than on other days - 44 versus 20 for every 100 people treated.

Fixing this problem, however, could be daunting for patients, busy dialysis centers and insurers and it would require a rethinking of how dialysis is currently delivered.

Medicare covers the cost of dialysis, regardless of age, spending about \$77,000 annually per person. It covers thrice-weekly treatment, but people can get a fourth session if needed.

Dr. Paul Eggers of the National Institute of Diabetes and Digestive and Kidney Diseases said adjusting how dialysis is done "would require some fairly convincing evidence. I'm not sure this one study would be sufficient to change" standard practice.

Kidney expert Dr. Eli Friedman of SUNY Downstate Medical Center in

New York, said he's in favor of every-other-day dialysis or even daily dialysis. But it would mean "a multibillion dollar change," said Friedman, who launched the country's first federally funded dialysis center.

A clinic operator said increasing treatments would require additional staff. And patients also would have to be willing to come in more often.

"They don't even like coming in three times a week. It's completely understandable. It's not fun," said Dr. Allen Nissenson, chief medical officer at DaVita, which runs more than 1,600 clinics around the country.

There has been recent interest in more frequent dialysis after studies hinted that it made people feel healthier.

This year, Medicare started giving clinics a financial incentive to teach patients to do dialysis at home, allowing them to cleanse their blood more often. But this option is not for everyone. It requires intense training and patients need a helper at home.

Unless rules change, Wake Forest's Bleyer said people can take simple steps to reduce their risk by not drinking too much fluid between long dialysis breaks and eating a healthy diet.

"Patients must be a little more careful on the weekend than on other days of the week," he said.

Carol Thomas, who has been on dialysis since 2007, watches her water intake especially on weekends and avoids dairy, beans and nuts, which are high in certain nutrients that can cause complications.

Thomas, of Sacramento, Calif., said home dialysis is not an option

because she doesn't have someone to help her. Would she make the trip for [dialysis](#) more often if given the choice?

"It's an inconvenience, but probably if it meant lengthening my life," the 69-year-old said.

**More information:**

New England Journal: <http://www.nejm.org>

Kidney disease information: <http://kidney.niddk.nih.gov>

National Kidney Foundation: <http://www.kidney.org>

American Association of Kidney Patients: <http://www.aakp.org>

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