PROJECT INFORMATION

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Comparing Bladder Management Strategies for People with Spinal Cord Injuries

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Organization

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What was the research about?

People with a spinal cord injury, or SCI, can have different types of paralysis. With paraplegia, people can't move their legs. With tetraplegia, people can't move their arms and legs. Both types damage the nerves that control the bladder and usually cause problems with urination. People with SCI can manage bladder control in different ways.

In this study, the research team looked at four ways people with SCI use to control their bladder:

- **Intermittent catheter:** Placing a catheter, a tube to drain urine, in the bladder several times a day and then removing it
- **Indwelling catheter:** Leaving a catheter in the bladder
- **Voiding:** Planning times to urinate or using a diaper to catch urine
- **Surgery:** Having surgery to improve bladder function

The research team compared how these four ways affected people's well-being and bladder function.

What were the results?

Of people in the study, 51 percent used intermittent catheters, 18 percent used indwelling catheters, 18 percent used voiding, and 13 percent had had surgery.

People with paraplegia had different results than people with tetraplegia.

People with paraplegia. Compared with people who used intermittent catheters, people who

- Used indwelling catheters reported better bladder function and fewer problems with urine leaking and storage
- Used voiding reported worse bladder function and more urine storage problems
- Had previous surgery reported better bladder function, less incontinence, fewer problems with urine storage and bladder management such as worrying about having accidents, and more satisfaction with bladder function

Regardless of their treatment, people with paraplegia had similar reports of infections, kidney problems, bladder medicine use, or how bladder problems affected their lives.

People with tetraplegia. Compared with people who used intermittent catheters, people who

- Used indwelling catheters reported better bladder function and fewer problems with bladder management, urine leaking, and storage
- Used voiding reported worse bladder function and more problems with bladder management, urine

leaking, and storage but reported fewer infections and kidney problems and less medicine use

- Had previous surgery reported better bladder function, fewer problems with bladder management and urine storage, and higher satisfaction with bladder function

Regardless of their treatment, people with tetraplegia gave similar reports of how bladder problems affected their lives.

Who was in the study?

The study included 1,479 people with SCI from across the United States and Canada. Of these, 86 percent were white, 7 percent were African American, 1 percent were Asian, and 6 percent were other races; 6 percent were Hispanic. The average age was 45, and 60 percent were men. In addition, 54 percent had paraplegia, 43 percent had tetraplegia, and 3 percent had a different SCI.

What did the research team do?

The research team interviewed people at the start of the study and a year later. People also filled out surveys every three months for one year.

People with SCI, caregivers, doctors, and statisticians gave input on the study.

What were the limits of the study?

People with worse bladder problems may have been more likely to join the study in order to learn more about managing bladder problems. Results may differ for people with less severe bladder problems. The research team had planned to compare bladder function for people who did and didn't have surgery during the study. These two groups had similar results, but because too few people had surgery, the team couldn't say with confidence that surgery affected bladder function.

Future research could enroll people in a study when they start using a new way to control their bladder and could include more people having surgery. Also, future research could explore using the study findings to support patients in making decisions that work best for them.

How can people use the results?

People with SCI and their doctors can use these results when considering how to manage bladder control after SCI.

To learn more about this project, visit www.pcori.org/Myers253.