

Development of Prediction Models for Severe Pain and Urinary Symptoms After Ureteroscopy With Ureteral Stent Placement: Results from the STENTS Study and Initial Validation of Pain Interference

What was this study about?

After a kidney stone surgery called ureteroscopy (“yer-ee-ter-AHH-skuh-pee”), doctors often insert a small tube called a stent in the body for a short time to help with healing. These types of stents are common, but some people have severe pain and problems when using the bathroom (like needing to pee often) while the stent is in place. The STENTS study asked: **How can we know which patients are most likely to have these problems after surgery?**

Why did we do this study?

We know stents can cause pain and problems when using the bathroom, but it’s hard to know ahead of time who will have the most trouble. We wanted to create tools to help doctors find patients who are at higher risk so they can plan better care and make recovery easier.

How did we do this study?

1. We followed 424 teens and adults who had ureteroscopy and a stent put in for kidney stones.
2. We collected information about each person’s health, pain, problem when using the bathroom, and other details before and after surgery.
3. We used the information gathered to create prediction tools.
4. We tested our prediction tools in another group of 115 adults to see how well the tools worked.



What did we learn?

- Certain factors—like being female, younger age, higher body weight, having chronic pain, anxiety, and where the kidney stone was located—were linked to worse pain after the stent was placed.
- Pain and problems when using the bathroom before surgery also helped predict who would have the most trouble after surgery.
- The prediction tools worked well in both groups of patients.

What does this mean for patients and care teams?

- **Personalized care is possible:** These tools could help doctors plan pain relief and support for patients who may have more severe symptoms.
- **Know the risks:** Patients can talk with their doctor about their potential risk factors and what to expect after surgery.
- **Improved recovery:** Finding high-risk patients early could lead to better pain control and a smoother recovery.

Learn more about this study from the full research article:

<https://pubmed.ncbi.nlm.nih.gov/37021358>