



The Stone Center at Cincinnati Children's provides comprehensive, multidisciplinary care for patients with conditions related to stones in the kidney and urinary tract. Our treatment approach involves working collaboratively with experts throughout the medical center to treat acute and recurring stone episodes.

HOW WE'RE DIFFERENT

The Stone Center's multidisciplinary team includes physicians, nurses, dietitians, genetics counselors and social workers from seven specialties at Cincinnati Children's, including nephrology, urology, human genetics, interventional radiology, radiology, emergency medicine and laboratory medicine. Our collaborative approach is essential in providing optimal care, especially for patients with complex medical conditions. In addition to treating acute stones, we perform thorough metabolic and genetic evaluations to help identify each patient's risk for recurrence and develop an individualized care plan to reduce that risk.

Our radiology team participates in Image Gently®, a national initiative to raise awareness about methods that reduce radiation dosage during pediatric medical imaging exams. We follow protocols that limit radiation exposure while still providing high-quality images to assist in the diagnosis of stones.

Working closely with emergency medicine specialists, our team has developed clinical care management protocols for patients who present in the emergency department with a possible kidney or urinary tract stone. These detailed protocols help guide decisions about which laboratory tests and radiologic studies to perform, whether the patient is experiencing his or her first stone or has a history of stones.

CONDITIONS TREATED

Cincinnati Children's treats the underlying conditions and factors that may increase the risk of stones, including premature birth, anomalies of the urinary tract, cystic fibrosis, inflammatory bowel disease, anti-seizure medications, chronic urinary tract infections and obesity. Additionally, types of stones and stone conditions we treat include:

- Cystinuria
- Dent disease
- Hypercalciuria
- Hyperoxaluria
- Hypocitraturia
- Urolithiasis

CONTACT US

For patient referrals, and non-urgent consultation during business hours, contact the program directly at:

Phone: 513-803-ROCK (7625)

Email: stonecenter@cchmc.org

www.cincinnatichildrens.org/service/s/stone-center



Cincinnati Children's is ranked #4 in Urology and #3 among Honor Roll hospitals.



600+

Number of children treated in FY22 for kidney and urinary tract stones

TREATMENT TEAM

Nephrology

Prasad Devarajan, MD
Director, Division of Nephrology and Hypertension; Medical Director, Stone Center

Hillarey Stone, DO, MS

Kelly Burns, MSN, APRN, FNP-C

Urology

William DeFoor, Jr., MD, MPH
Director, Clinical Research

Eugene Minevich, MD, FACS, FAAP
Surgical Director, Stone Center

Human Genetics

Robert Hopkin, MD

Interventional Radiology

John Racadio, MD

Radiology

Brian Coley, MD
Radiologist-in-Chief

Emergency Medicine

Seema Bhatt, MD

TREATMENT APPROACH

Our physicians work closely with experts throughout the medical center, as well as the patient and family, to develop an individualized treatment plan. We also educate patients and families about treatment options and stone prevention.

Treatment for an acute stone episode begins with a thorough physical exam to evaluate the size of the stone, its location and composition, how much pain the stone is causing and whether the stone is blocking any portion of the urinary tract.

Medical management of stones can involve multiple strategies, including diet modification, increased fluid intake, IV fluid therapy and medication, such as analgesics, diuretics and citrate supplements.

Our surgical team offers several options for patients with large and/or painful stones. These include:

- Lithotripsy
- Percutaneous nephrolithotomy
- Ureteral stent placement
- Ureteroscopy

After the stone has been treated successfully, we perform a complete metabolic and genetic evaluation to identify the patient's risk factors for recurrence. We then help patients and families take steps to prevent stone formation.

Preventive measures initiated during Stone Center visits have already dramatically improved the outcomes. Comparing before and after Stone Center visits, the number of patients requiring surgical procedures has decreased from 40% to 18%, and the average number of ED visits per patient per year has decreased from 1.5 to 0.5.

RESEARCH TO IMPROVE CLINICAL CARE

Clinical researchers at Cincinnati Children's are exploring ways to prevent stone formation and treat urinary tract stones non-surgically. For example, researchers from the Divisions of Nephrology and Hypertension, General Surgery and Urology at Cincinnati Children's worked with colleagues at the University of Chicago to study the risk of developing recurrent stone disease following bariatric surgery. This work was published in a peer-reviewed obesity journal.

We recently conducted a study to determine whether different levels of calcium and citrate in the urine could help predict those at risk for recurrent stone formation. This work was published in the Journal of Urology.

The researchers at the Stone Center are also examining postoperative outcomes following surgical procedures to remove large or painful stones.

We are collaborating with the Department of Radiology and Medical Imaging on low dose CT scan protocol to more accurately diagnose and characterize small stones in the kidney and ureters.

Prasad Devarajan, MD, also participates in multi-center research trials of new treatments for kidney stone disorders.

For urgent issues, or to speak with the specialist on call 24/7, call the Physician Priority Link® at 1-888-987-7997.

For international inquiries, www.cincinnatichildrens.org call +1-513-636-3100 or email international@cchmc.org.