

Urologic Diseases

Research Updates

National Kidney and Urologic Diseases Information Clearinghouse

Spring/Summer 2008

Urinary Tract Stones Pose Challenges for Researchers

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) hosted a 2-day symposium recently to share information about potential research on and treatment for urolithiasis, a growing and increasingly expensive health problem in the United States.

Urolithiasis—the formation of stones in the urinary tract—affects up to 15 percent of the U.S. population, costing the health care system more than \$2 billion annually, according to Yair Lotan, M.D., a symposium speaker and assistant professor in the department of urology at the University of Texas Southwestern Medical Center at Dallas.

The incidence of urolithiasis peaks between the ages of 20 and 60. A promising strategy for reducing health care costs related to urolithiasis, Lotan said, might be promoting primary and secondary prevention strategies through education of high-risk populations.

Identifying appropriate medical expulsive therapies (MET)—administering muscle relaxants to hasten the expulsion of stones without surgical intervention—and educating patients and practitioners about them could help decrease costs of stone therapy.

Lotan said 10 percent of people with urolithiasis will have a recurrence of stones within 1 year, 35 to 50 percent within 5 years, and 50 percent or more by 10 years. According to Lotan, improvements in the medical management of

people who form recurrent stones are needed, including better guidelines, the use of MET, and the timing of surgery.

Treatments for Urolithiasis

The most common treatment for urolithiasis is extracorporeal shock wave lithotripsy, according to Christopher Saigal, M.D., M.P.H., associate professor in the department of urology at the David Geffen School of Medicine, University of California, Los Angeles.



Lithotripters are used to break up kidney stones.

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However, lithotripsy results in a higher rate of stone recurrence, depending on the size and location of the stone, compared with other treatments.

Other options for treating stones include dietary therapy, medication, and surgery.

Researchers, clinicians, and industry representatives who attended the meeting identified several areas of study for potential NIDDK research funding, including

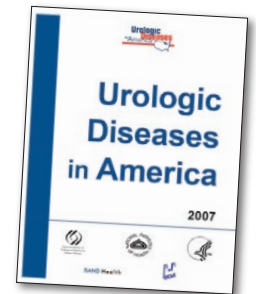
- adjuvant therapy clinical trials
- improved stone removal technology
- development of a lithotripter rating system
- creation of a stone registry

Robert A. Star, M.D., director of the NIDDK's Division of Kidney, Urologic, and Hematologic Diseases, suggested several funding methods for urolithiasis research. For example, the National Institutes of Health (NIH) has a new funding mechanism for investigator-initiated, modest-sized trials with costs between \$700,000

and \$1.5 million annually. The U34 and U01 funding mechanisms also can support implementation and full-scale trial phases.

Star also suggested collaborating with the Department of Veterans Affairs for large trials, partnering with the pharmaceutical industry, and using Multicenter Clinical Study Implementation Planning Grants, which are designed to support the early steps in the development of a complicated, multicenter, clinical trial. Star added that plans for future research will have to be designed within a framework of limited funding since the "era of large NIH budget increases is over."

The NIDDK's *Urologic Diseases in America Compendium* includes a chapter about urolithiasis and is available at www.kidney.niddk.nih.gov/statistics/uda/index.htm. For more information about NIDDK research and funding, go to www2.niddk.nih.gov/Research. ■



Urolithiasis—the formation of stones in the urinary tract—affects up to 15 percent of the U.S. population, costing the health care system more than \$2 billion annually.

Urologic Diseases Research Updates



Urologic Diseases Research Updates, an email newsletter, is sent to subscribers by the National Kidney and Urologic Diseases Information Clearinghouse (NKUDIC). The newsletter features news about urologic diseases, special events, patient and professional meetings, and new publications available from the NKUDIC and other organizations.

If you would like to subscribe, go to <http://catalog.niddk.nih.gov/newsletter.cfm>. You can read or download a PDF version of the newsletter at www.kidney.niddk.nih.gov/about/newsletter.htm.

Editor: Leroy M. Nyberg Jr., Ph.D., M.D.

Dr. Nyberg is the director of urology and urology centers programs at the National Institute of Diabetes and Digestive and Kidney Diseases, part of the National Institutes of Health (NIH) in Bethesda, MD. Dr. Nyberg is a graduate of Tufts University in Boston, Columbia University in New York, and the University of Massachusetts Medical School in Worcester and completed residency training in urology at The Johns Hopkins Hospital in Baltimore. He has also held faculty positions in urology at The Johns Hopkins Medical School, in urology and biochemistry at the Medical University of South Carolina, and in urology at the University of Connecticut. Dr. Nyberg received the Distinguished Service Award from the American Urological Association for significant clinical and research contributions to urology. He also received the NIH Directors Award for excellence for the development of urologic research programs at the NIH.





Star Named Director of Kidney, Urologic, and Hematologic Research

National Institute of Diabetes and Digestive and Kidney Diseases Director Griffin P. Rodgers, M.D., M.A.C.P., has named Robert A. Star, M.D., director of the Division of Kidney, Urologic, and Hematologic Diseases (KUH). Star, who has been acting director of the extramural research division since September 2006, oversees a \$400 million grants and contracts program.

Star was a postdoctoral fellow at the National Institutes of Health (NIH) in the mid-1980s before joining the faculty at the University of Texas Southwestern Medical Center at Dallas. In 1999, he returned to the NIH as a senior scientific adviser for kidney disease and to run a laboratory studying acute kidney injury. In 2002, he became senior adviser for clinical research in the NIH Office of Science Policy and Planning.

“Dr. Star is an exemplary and creative physician-scientist, leader, and manager,” said Rodgers.

“He rolls up his sleeves, steps up to tough issues,

and attracts problem-solving, talented scientists from within, as well as outside, the NIH to craft solutions.”

Star graduated *summa cum laude* in applied mathematics from Harvard College and *cum laude* from the Harvard Medical School-Massachusetts Institute of Technology Joint Program in Health Sciences and Technology. He performed his internship and residency in internal medicine at Michael Reese Hospital in Chicago. ■

NIDDK Publications Win NIH Plain Language Awards

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) received recognition in this year’s National Institutes of Health (NIH) Plain Language Awards Competition.

The NIDDK Awareness and Prevention Series was honored with a gold award and the easy-to-read booklet *What I need to know about Bladder Control for Women* won a bronze. An awards ceremony was held at the NIH campus in Bethesda, MD, on April 15.

The NIDDK Awareness and Prevention Series, created for health fairs and similar events, presents brief overviews in English and Spanish of common health problems in a colorful, two-page format. Designed for people not yet diagnosed with diabetes or digestive, kidney, or urologic disorders, the handouts encourage readers to seek further information from the NIDDK or their health care provider.

The *What I need to know about Bladder Control for Women* booklet explains treatments and techniques for managing urinary incontinence and helps women prepare to speak with their doctors about the problem.

The NIH created the Plain Language Awards to promote the NIH Plain Language Initiative, established in response to a 1998 White House memorandum calling for all Federal Government writing to be in an easy-to-read format. The booklet and Awareness and Prevention Series publications can be downloaded or ordered through the NIDDK website at www.niddk.nih.gov. ■



NIDDK Welcomes Four New Advisory Council Members

U.S. Department of Health and Human Services Secretary Michael O. Leavitt appointed four new members to the Advisory Council of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). The Advisory Council guides the NIDDK's discussion of broad science policy issues and provides second-level review of funding requests. The new members, who will serve 4-year terms, are

David M. Altshuler, M.D., Ph.D., professor of genetics and medicine at Harvard Medical School, member of the Diabetes Unit and Department of Molecular Biology at Massachusetts General Hospital, and director of the Program in Medical and Population Genetics at the Whitehead Institute/Massachusetts Institute of Technology Center for Genome Research in Boston. Altshuler serves on the Diabetes, Endocrinology, and Metabolic Diseases Subcommittee.

Nancy C. Andrews, M.D., Ph.D., dean and vice chancellor of Academic Affairs at Duke University School of Medicine in Durham, NC. She is the only woman to lead one of the nation's top 10 medical schools and is an internationally renowned researcher in pediatric hematology and oncology. Andrews serves on the Kidney, Urologic, and Hematologic Diseases Subcommittee.

James W. Freston, M.D., Ph.D., the Boehringer Ingelheim Chair of Clinical Pharmacology and professor emeritus at the University of Connecticut School of Medicine at Farmington. Appointed to the NIDDK Advisory Council last year for a 1-year term, Freston has been reappointed this year for a 4-year term. He continues to serve on the Digestive Diseases and Nutrition Subcommittee.



Pictured with NIDDK Director Griffin P. Rodgers, M.D., M.A.C.P. (center), are (from left) Nancy C. Andrews, M.D., Ph.D.; James P. Schlicht, M.P.A.; James W. Freston, M.D., Ph.D.; and David M. Altshuler, M.D., Ph.D. Photo credit: Michael Spencer, NIH.

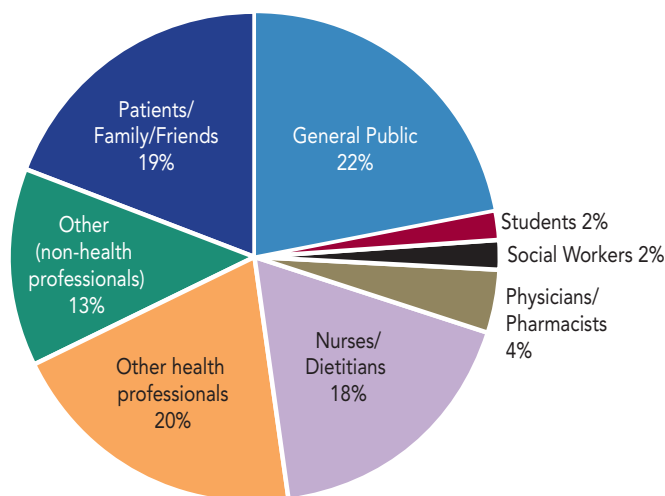
James P. Schlicht, M.P.A., executive vice president and chief government affairs and advocacy officer at the American Diabetes Association (ADA). He is directly responsible for management of all advocacy and government affairs functions and the formulation, adoption, strategic development, and implementation of all ADA public policy positions. Schlicht serves on the Diabetes, Endocrinology, and Metabolic Diseases Subcommittee. ■

NKUDIC Answers Nearly 9,000 Queries in 2007

The National Kidney and Urologic Diseases Information Clearinghouse (NKUDIC) responded to 8,859 requests for information during calendar year 2007. While the percentage of inquiries that came from patients, their families, or friends fell by half from 2006—to 19 percent—inquiries from the general public increased 3 percent, according to Kathy Kranzfelder, director of the Clearinghouse. Kranzfelder presented a Clearinghouse update at the National Institute of Diabetes and Digestive and Kidney Diseases' (NIDDK's) annual NKUDIC Coordinating Panel Meeting in March.

“What’s more impressive is traffic to our website, which essentially represents self-service inquiry response,” said Kranzfelder. “In 2007, an average of 25,000 to 30,000 visitors would come to the NIDDK’s kidney and urologic topics each day.”

Forty-four percent of the 8,859 “traditional” requests for information came from health professionals. The breakdown of NKUDIC customers in 2007 is depicted in the graph below.



The majority of information requests—4,856—came through online orders. The other most popular ways to request Clearinghouse information were via email messages (1,851); phone calls (1,482); letters (451); and faxes (94).

The NKUDIC inventory includes 208 publication titles. Last year, the Clearinghouse produced 12 new publications and updated 20 existing resources. The NKUDIC distributed 309,710 publications in 2007, including fact sheets, booklets, reports, journal reprints, and materials from patient and professional organizations. The most popular NKUDIC publications in hard copy were

- *Kidney Failure: Choosing a Treatment That’s Right for You*
- *Your Kidneys and How They Work*
- *Interstitial Cystitis/Painful Bladder Syndrome*
- *What I need to know about Bladder Control for Women*

NIDDK Reference Collection

The number of visitors to the NIDDK Reference Collection last year increased to more than 510,000 from more than 310,000 in 2006. The NIDDK Reference Collection is a free, online database of educational materials not typically referenced in other databases. The most popular kidney and urology search topics were renal artery stenosis, pediatric kidney disease, urinary incontinence in men, and kidney stones. Reference Collection materials and all of the NKUDIC’s other resources are available at www.kidney.niddk.nih.gov. ■

UITN Aims to Improve Quality of Life for Those with Urinary Incontinence

Attendees at the National Kidney and Urologic Diseases Information Clearinghouse Coordinating Panel Meeting learned about the benefits of multicenter trials and the activities of the Urinary Incontinence Treatment Network (UITN), a group of gynecologists and urogynecologists conducting urinary incontinence research supported by the National Institute of Diabetes and Digestive and Kidney Diseases in collaboration with the National Institute of Child Health and Human Development.

Specific goals of the UITN are high-impact clinical research; better prevention, evaluation, and management of urinary incontinence; and an improved quality of life for adults with this disorder, with a focus on women.

Some advantages of multisite studies are that they allow protocols to be completed in less time, enable pooling of multidisciplinary expertise, and yield more generalizable results, according to Holly E. Richter, Ph.D., M.D., professor and division director, Women's Pelvic Medicine and Reconstructive Surgery, Kirklin Clinic, University of Alabama at Birmingham. In addition, developed definitions can be used in subsequent networks and trials, and the use of common, standardized measures provides the potential to analyze data across studies.

Rectifying Problems

The UITN was created in 2000 to address some of the problems with urinary incontinence studies, according to Richter, such as poorly defined enrollment criteria and outcome measures, low rates and short-term follow-up, small sample size, and a lack of comparator groups.

Specific goals of the UITN are high-impact clinical research; better prevention, evaluation, and management of urinary incontinence; and an improved quality of life for adults with this disorder, with a focus on women. The network, which consists of nine clinical continence treatment centers and a biostatistical coordinating center, is involved in several studies, including the

- Stress Incontinence Surgical Treatment Efficacy Trial (SISTEr), a randomized trial

comparing 24-month outcomes of the Burch urethropexy compared with the autologous rectus fascial sling for the treatment of stress urinary incontinence (SUI)

- Behavior Enhances Drug Reduction of Incontinence (BE-DRI) trial, a randomized trial to determine whether combining antimuscarinic drug therapy with supervised behavioral training, compared with drug therapy alone, improves the ability of women with urge incontinence to achieve clinically important reductions in incontinence episodes and to sustain these improvements after discontinuing medication
- Trial of Mid-Urethral Slings (TOMUS), a randomized trial comparing the outcomes of a retropubic versus transobturator mid-urethral sling procedure for treatment of SUI

Richter suggested that for future trials and studies, researchers should consider addressing prevention of urinary incontinence and the addition of basic science considerations.

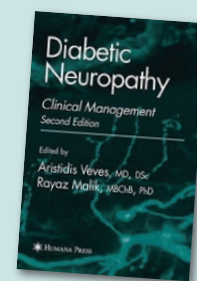
For more information about the UITN, visit www.uitn.net. For an easy-to-read booklet about urinary incontinence in women entitled *What I need to know about Bladder Control for Women*, go to www.kidney.nidDK.nih.gov/kudiseases/pubs/bcw_ez/index.htm.



Featured in the NIDDK Reference Collection

Genitourinary Problems

The chapter “Genitourinary Complications” is from the textbook entitled *Diabetic Neuropathy: Clinical Management*. The chapter notes that disturbances in bladder storage and emptying are often asymptomatic to the patient, particularly in the beginning of diabetic neuropathy. However, sexual dysfunctions are readily perceived by the person with this condition. The chapter covers topics including the physiology of micturition, the pathophysiology and clinical symptomatology of the diabetic bladder, a diagnostic approach and treatment options for micturition disturbances, the epidemiology of erectile dysfunction (ED), the physiology and pathophysiology of erection, treatment strategies for ED, other sexual problems in men with diabetes, and sexual dysfunction in women. The chapter points out that both impairment of bladder storage and emptying and sexual dysfunction should be systematically screened for because they have severe organic and psychosocial consequences. *Diabetic Neuropathy: Clinical Management* is available for \$169 from Springer, 233 Spring Street, New York, NY 10013, 212-460-1500, 212-460-1575 (fax), service-ny@springer.com, www.springer.com/humana+press?SGWID=0-146902-0-0-0.



The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) Reference Collection is a free, online database that helps health care professionals, health educators, patients, and the general public find educational materials not typically referenced in most databases. To find more resources about urologic diseases, visit www.catalog.niddk.nih.gov/resources. ■

Additional Resources

New and Updated Publications

The National Kidney and Urologic Diseases Information Clearinghouse (NKUDIC) has two new easy-to-read, Spanish-language booklets:

- *Lo que usted debe saber sobre el control de la vejiga en las mujeres* (*What you need to know about bladder control for women*)
- *Lo que usted debe saber sobre la cistitis intersticial (síndrome de vejiga dolorosa)* (*What you need to know about interstitial cystitis/painful bladder syndrome*)

The NKUDIC has also updated a fact sheet about interstitial cystitis/painful bladder syndrome. All of these publications are available at www.kidney.niddk.nih.gov/kudiseases/a-z.asp.



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New Interactive Tools

New to the Interactive Health Education Tools section of the National Institute of Diabetes and Digestive and Kidney Diseases website are

Podcasts

- State-of-the-Science Conference: Urinary Incontinence

Streaming Audio

- State-of-the-Science Conference: Urinary Incontinence

Videocasts

- Prevention of Urinary Incontinence in Adults (Days 1 through 3)

The website's interactive tools section consolidates all the tools and resources about urologic diseases from the National Institutes of Health and the National Library of Medicine. To access these resources, visit www.kidney.niddk.nih.gov/resources/HealthTools. ■

Upcoming Meetings, Workshops, and Conferences

The National Institute of Diabetes and Digestive and Kidney Diseases will exhibit at the following upcoming conferences:

American Academy of Family Physicians Scientific Assembly

September 17 to 21 in San Diego.

For more information, go to www.aafp.org/online/en/home/cme/aafpcourses/conferences/assembly.html.

Society of Urologic Nurses and Associates Annual Conference

October 3 to 6 in Philadelphia.

For more information, go to www.suna.org/cgi-bin/WebObjects/SUNAMain.woa/wa/viewSection?s_id=1073743837&ss_id=536873129.

American Academy of Pediatrics 2008 National Conference and Exhibition

October 10 to 14 in Boston.

For more information, go to www.aapexperience.org.

American Academy of Nursing 35th Annual Meeting and Conference

November 6 to 8 in Scottsdale, AZ.

For more information, go to www.aannet.org/i4a/pages/index.cfm?pageid=3577. ■