SEARCHING FOR A SIMPLE SOLUTION TO INFERTILITY

Research continues to shed new light on potential solutions to infertility.

A new study, being led by the University of Utah Andrology Section and funded by the National Institute of Child Health and Human Development, is looking into the effects of folic acid and zinc on the reproductive health of men.

These two inexpensive and easily accessible supplements are thought to potentially improve the quality and quantity of healthy sperm in infertile men, by both promoting the process of DNA synthesis and protecting developing sperm from oxidative stress.

NOW RECRUITING

“This long-term, randomized study will investigate the effects of zinc and folic acid on 6,000 couples seeking treatment for infertility,” says Douglas Carrell, PhD, Professor of Surgery and Director of Andrology and the In Vitro Fertilization Laboratory at the University of Utah. “Patient recruitment officially began June 3 and will continue for the next three years. Enrolled families will receive monetary compensation and access to laboratory testing and other associated medical care at no charge.”

By analyzing a large number of couples seeking treatment for infertility over a period of six months each, Dr. Carrell and his research team hope not only to ascertain the impact of folic acid and zinc on their ability to conceive, but also gain valuable insight into infertility by collecting information on environmental factors and other data potentially related to conception.

“The University of Utah Andrology Laboratory is well-known for research into genetic factors that impact fertility and we foresee using data from this large-scale project in future studies,” Dr. Carrell says. “There are already eight planned research projects that will branch off of this one. We expect that number to grow as we progress.”

To learn more about the research being conducted by the Division’s Andrology group, visit healthcare.utah.edu/andrology and select “Academics.”

THE NIH STUDY:

The effect of zinc and folic acid supplementation on semen parameters and clinical outcomes.

Faculty:
Douglas Carrell, PhD, HCLD
Ahmad Hammoud, MD, MPH
Jim M. Hotaling, MD
Erica Johnstone, MD
Andrew Moore, MD
Matthew Peterson, MD

To refer patients with fertility concerns to Andrology, please call (801) 581-3740.
LETTER from the Chief

Dear Colleagues and Friends,

We hope that summer has treated you all well. It has been a busy one here as we added three new residents and two new faculty members—Drs. Elizabeth Mobley and Jim Hotaling—in July. The Division has grown substantially over the past five years and now includes 16 faculty, 10 residents and will add a pediatric urology fellow starting in 2015. This growth allows us to offer great care and training in all subspecialties and to help push forward the understanding of urologic disorders.

We hope you enjoy this update.

Have a great fall!

Best regards,

Pat Cartwright, MD
Chief, Division of Urology
University of Utah
Surgeon-in-Chief,
Primary Children’s Medical Center
(patrick.cartwright@hsc.utah.edu)

ALUMNI IN ACTION

- Mark Austenfeld, MD, FACS, President of the American Association of Clinical Urologists, Inc. (AACU) Board of Directors, was recently elected the AACU Trustee on the American Board of Urology. Urology (ABU). He also serves on the ABU oral examination committee.

- E. Jason Abel, MD, Assistant Professor of the Department of Urology at University of Wisconsin School of Medicine and Public Health, was one of nine young investigators to present promising research at the American Urological Association special forum in May and has recently secured NIH K08-Mentored Clinical Scientist Career Development Award funding for his research.

How to Refer Patients

Please call the lines below for information about referring patients to The University of Utah for urologic care.

- ANDROLOGY: (801) 581-3740
- GENERAL UROLOGY: (801) 213-2700
- PEDIATRIC UROLOGY: (801) 662-5555
- UROLOGIC ONCOLOGY: (801) 587-4381

To learn more, visit medicine.utah.edu/surgery/urology.

Siam Oottamasathien, MD, FAAP, FACS, pediatric urologist at the University of Utah and Primary Children’s Medical Center, was recently awarded second-place honors for his American Urological Association annual meeting presentation.

One of nine urologists selected nationally for the “Showcase for Early Career Investigators,” Dr. Oottamasathien presented his translational work, entitled “The Physiologic Relevance of LL-37 Induced Bladder Inflammation and Novel Anti-Inflammatory Polysaccharide Therapeutics.” This involved his NIH-funded work on a new class of innovative polysaccharide therapeutic medications with potent inflammation modulating properties and their effect in the bladder. Last year, at the annual American Academy of Pediatrics-Urology Section meeting, Dr. Oottamasathien also received the prestigious First Prize in Basic Research.

Douglas T. Carrell, PhD, Director of Andrology, recently received a 2013 Grant for Fertility Innovation to further study a novel, patented technique to isolate “genetically fit” sperm to be used during IVF.

Dr. Carrell also has two new grants from within the University of Utah. One is a collaboration with the Center on Aging to study changes in sperm that occur as men age, which may increase disease risk in offspring. The other is a Funding Incentive Seed Grant to investigate the role of genetic instability in male infertility.

Catherine R. deVries, MD, pediatric urologist and founder of IVUmed, delivered a lecture entitled “Extreme Affordability: Why It Is Critical to Surgical Care” at The Center for Global Surgery’s 2013 Extreme Affordability Conference. She is also being recognized at the AUA Western Section meeting this fall as its Distinguished Member for 2013.

Recognition CORNER
Options for Treating BPH

Moderate to severe side effects of an enlarged prostate gland—also known as benign prostatic hyperplasia (BPH)—affect an estimated 30 percent of men older than age 50 in the United States.

“BPH is very common as men age,” says Andrew Southwick, MD, board-certified urologist and Assistant Professor in the Division of Urology at the University of Utah. “It is caused by an imbalance in growth and death of the cells in the prostate over time. The cell growth accumulates, and the prostate enlarges. The growth is regulated by testosterone and the conversion of testosterone to the prostatic hormone DHT [dihydrotestosterone].”

BPH and associated lower urinary tract symptoms (LUTS) can be addressed by medical or surgical therapy.

UNDERSTANDING SYMPTOMS

Half of men in their 50s, 70 percent of men in their 60s, and 80 percent of men in their 70s have some form of LUTS. Treatment is called for when symptoms—such as slow urine stream, a feeling of incomplete emptying, frequent urgency to urinate, and hesitancy to initiate the stream—present. A prostate-specific antigen (PSA) test result higher than 1.4 also indicates an increased risk of worsening LUTS.

“Men bothered by voiding symptoms should seek urologic evaluation,” Dr. Southwick says.

FIXING THE PROBLEM

The most effective medical treatments include two classes of medications: alpha-blocking agents and 5-alpha-reductase inhibitors.

“The former act within a few weeks to decrease the smooth muscle tone and relax the prostate,” Dr. Southwick says. “The latter block the conversion of testosterone to DHT and reduce the size of the prostate in four to six months.”

For patients who don’t respond to medication or experience progression of symptoms leading to acute urinary retention or other problems, such as bladder stones, surgery is the best route.

“Many surgical options exist, including TURP [transurethral resection of the prostate], vaporization of the prostate using lasers or bipolar cautery, heat destruction of the prostate with microwave or radiofrequency ablation, enucleation procedures using open techniques, and simple incisions in the prostate,” Dr. Southwick says. “These options are based on the urologist’s experience with each technology as well as the size of the prostate.

“I have had good outcomes using Holmium laser enucleation or HoLEP,” continues Dr. Southwick. “This minimally invasive treatment uses a laser to excise the obstructing prostate tissue, leaving the encapsulating structure in place. Usually performed as short-stay surgery, HoLEP offers better symptom relief, fast recovery times, and lower risk of complications or retreatment than with TURP, so it is rapidly becoming the new standard of care.”

Visit healthcare.utah.edu/urology for more information about the University of Utah’s urology services.
Medical student Jeffrey D. Redshaw joined the Division of Urology this spring as a limited-term research fellow. “As a research fellow, I have the opportunity to pursue research in the areas of urological oncology, pediatric urology, and reconstructive urology,” says Redshaw. “With the guidance of my dedicated mentors, I plan to draw on my engineering background to help further innovative and meaningful research that I am hopeful will ultimately benefit patients needing urological care.” Redshaw will present several of his research outcomes at the upcoming AUA–Western Section meeting in Monterey and plans to pursue a career in urology.

William O. Brant, MD, is an attending urologist in the Division of Urology at the University of Utah. With Jeremy Myers, MD, he co-directs the Center for Reconstructive Urology and Men’s Health. “My main interest lies in symptom management of men after pelvic surgery or treatment for pelvic cancers,” Dr. Brant says. “Other interests include erectile dysfunction, Peyronie’s disease, low testosterone, and other issues within the field of men’s health. One of the things I like most about being here is the ability to form collaborate efforts to improve quality, patient outcomes, and patient experiences.”

William Lowrance, MD, MPH, urologic oncologist and Assistant Professor in the Division of Urology, has co-founded the Huntsman Cancer Institute Prostate Disease Oriented Team. This group of basic, translational, clinical, and health services researchers within the University are attempting to advance the field of prostate cancer treatment.

“As a health services researcher, my goal is to focus on ways to improve both the quality and value of the surgical care we provide our patients,” Dr. Lowrance says. “We are excited to propel the surgical management of urological cancers forward and ensure our practices are evidence-based and bring value to our patients.”

In the Top 10

For the third consecutive year, The University of Utah Medical Center has been named one of 10 academic medical centers in the nation awarded the UHC Quality Leadership Award. The recognition is given for demonstrated excellence in delivering high-quality care, measured annually by the UHC Quality and Accountability Study.

UHC is an alliance of leading nonprofit academic medical centers focused on delivering world-class patient care.