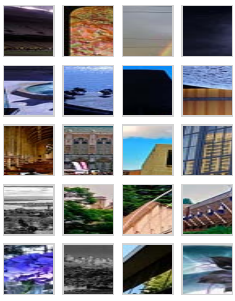
UW Today
Office of News & Information
Contact Us
UW Community Photos
UW Classifieds
UW experts on 9-11
UW earthquake, tsunami, nuclear experts
UW experts on the Arab crises
UW election experts
UW Today (about)

Subscribe to News

SEARCH UW TODAY
GO

COMMUNITY PHOTOS



HOVER TO EXPAND
MORE

BROWSE CATEGORIES
ADMINISTRATIVE AFFAIRS
ARTS AND ENTERTAINMENT
BUILDINGS AND GROUNDS
FOR UW EMPLOYEES
HONORS AND AWARDS
LEARNING

Oct. 18, 2011

The UW's next generation of infertility treatment

By Leila Gray
UW Health Sciences/UW Medicine

SHARE
TEXT SIZE

Learn about UW Medicine reproductive care

UW Male Infertility Lab

National Library of Medicine in vitro fertilization animation

For many the dream of becoming a mom or dad is elusive. Sometimes medical treatments, or other causes of infertility, make it difficult for a man to father a child or for a woman to conceive and carry a pregnancy.

However, several advances are available to assist prospective parents unable to have children on their own. New methods are also at hand to attempt to protect the ability to have babies later on.

“We’re all about family building,” reproductive medicine specialist Dr. Paul W. Zarutskie commented on the UW experts from many fields who work on infertility problems. Zarutskie, acting associate professor of obstetrics and gynecology, directs the newly re-opened University Reproductive Care at UW Medical Center-Roosevelt.

In addition to providing infertility care for all genders, UW Medicine reproductive endocrinologists also diagnose and treat hormonal issues related to female systems, such as menopausal symptoms, menstrual irregularities, hirsuitism (excessive body hair), polycystic ovary disease, and other conditions. In some cases, an endocrine disorder is why a woman of childbearing age is having problems becoming pregnant.

Clare McLean

Reproductive medicine specialist Dr. Paul Zarutskie conducts a diagnostic ultrasound for patient Tammy Hess. By her side is husband Dr. Bruce Hess.

Since the closing of the UW in vitro fertilization service in 2005, UW Medicine urologists and obstetrician/gynecologists continued to diagnose and treat infertility, but in vitro fertilization procedures were performed at another lab.

“Now UW Medicine patients have the opportunity of having all such procedures done in-house in a state-of-the art facility,” said Zarutskie. He had obtained his early experience conducting in vitro fertilization at the UW. He trained with leading UW reproductive care experts with a strong national reputation for good pregnancy outcomes. Seventeen years ago he set up practice in California. When he moved back to the Northwest to retire, he was asked if he would return instead to the UW as chief of the Division of Reproductive Endocrinology and Infertility.

NEWS RELEASES
NEWS ROUNDUPS
PROFILES
RESEARCH
UW AND THE COMMUNITY

More Categories...

A major reason why Zarutskie accepted the post, he said, was that UW clinicians and basic scientists are on the verge of scientific developments and practical applications that could change reproductive medicine, provide more options for patients, and protect the viability and health of babies-in-the-making.

As one of many examples, Zarutskie mentioned work by Dr. Randall Moon, whose basic science lab studies cell-to-cell signals that guide embryonic development. This research is likely to improve the understanding of what promotes optimal growth of a single fertilized egg into a lively baby with all its working parts. In other physiological research likely to improve reproductive care, Dr. Robert Steiner's lab looks at nerve transmitters in the brain that regulate the surge of hormones just before ovulation.

On the clinical side, UW urologist Dr. Tom Walsh and male reproduction biologist Dr. Charles Muller in the Male Infertility Laboratory have made major progress in enhancing sperm motility, recovering sperm with low DNA damage from a sperm sample, and retrieving sperm from testes blocked by structural abnormalities or previous surgeries.

Many UW genomic scientists and anatomists are making discoveries important to pre-implantation screening of fertilized eggs and embryos for genetic and developmental disorders. Maternal/fetal medicine specialist Dr. Edith Cheng is creating new diagnostic and treatment procedures during infertility care and the pregnancies that result.

According to Zarutskie, a good egg is essential to a viable pregnancy.

After age 35, a woman's ability to establish and sustain a pregnancy drops significantly, with another major drop after age 40. Miscarriage rates are high in middle-age pregnancies. Pregnancy loss in these instances is often due to genetic changes in older eggs.

"Age in the woman's body is not so much the factor as is the aging of the egg. As long as you have a healthy egg, a pregnancy is more likely to proceed normally." Zarutskie said. He explained that a healthy older woman's body would likely maintain a normal fertilized egg and a robust embryo.

Clare McLean

Dr. Zarutskie goes over his initial findings with Bruce and Tammy Hess.

When should a couple suspect they are having trouble getting pregnant? Zarutskie said that, on average, a healthy woman who is ovulating regularly and who has a patent uterus and fallopian tubes, and a man who is producing enough active sperm, will usually conceive in six months to a year of unprotected intercourse. Methods to detect ovulation, such as testing with a urine kit, recording changes in body temperature, or charting the color and consistency of vaginal secretions, can help couples with their timing.

Once a woman is over 35, he said, the clock is ticking and she and her partner should consider making an appointment with their physician after four months without success. They would then have more time to detect and fix any problems with infertility before the woman enters menopause and an older man's sperm production or erectile function declines.

Infertility has a number of causes. Sometimes only the man or only the woman has an underlying condition, but in 15 to 20 percent of the cases, both partners have contributing factors.

"That's why couples should realize that the two of them make up the equation," Zarutskie said.

He listed some of the most common causes of infertility: ovulation dysfunctions, pelvic infections, endometriosis (in which the lining of the uterus grows on the cervix or other organs), toxin exposure, diet, and such chronic medical conditions as diabetes or thyroid deficiency, and anatomical differences in the uterus or other reproductive structures. In men, prostate inflammation or infection, anatomical obstructions, and sperm production, including quality and amount, are common factors.

For some younger people – including boys and girls – the issue is protecting their fertility for a future time in their lives when they are established and able to start a family.

Dr. Brenda Houmard, a UW obstetrician/gynecologist, and Dr. Anne Marie Amies, a specialist in pediatric gynecology, are developing a program for young girls with chronic medical conditions, physical disabilities or congenital variations in their reproductive tracts. The program will help transition their medical and surgical care as they move into adulthood and face childbearing concerns.

UW reproductive medicine specialists also see youngsters and young adults just after they are newly diagnosed with a serious condition but before they start medications, radiation or other protocols that could jeopardize their fertility.

Dr. Kathleen Lin, a UW specialist in both male and female infertility, is known for her work in protecting fertility. Many cases are patients about to receive cancer therapy. Among the new technologies are the freezing of eggs or ovarian or testicular tissue. Physicians also do “crash” retrievals for those about to undergo immediate treatment or surgery that will leave them infertile.

“At present, we can’t guarantee the current methods to gather and preserve the tissues and cells necessary for later pregnancy, but some patients are willing to go ahead the hopes that it might succeed,” Zarutskie said. “Dr. Kathleen Lin and her colleagues provide them with the most promising methods and technology to attempt to achieve their desire to have children later on. In many cases, it is their only chance, if they are having medical treatment that will result in permanent infertility.”

Zaruskie said that this is an exciting, dynamic time for improvements in infertility treatments and fertility preservation. For instance, while it still happens, the occurrence of quadruplets or quintuplets (or more) from in vitro fertilization is less likely, due to the fact that fewer embryos are implanted in the hopes that at least one will “take.”

Twins and triplets are still a possibility, he said, even when only one embryo is implanted. More than 20 percent of in vitro fertilizations result in twin gestations. Because multiples increase the chances of pregnancy complications, he said that in vitro fertilization researchers want to understand why and how they happen to reduce the likelihood.

Diagnosis and treatment still cannot give everyone the hoped-for son or daughter. To learn that they cannot have children, despite all efforts to diagnose and treat their infertility, can be devastating to men and women. Zarutskie said many people take some comfort in learning why they are infertile, move through the pain and come to an acceptance. Some decide to adopt, become foster parents, or love and care for their friends’ or relatives’ children. Others turn their lives in a different direction that they find fulfilling.

It’s hard to believe that Zarutskie, with his dedication and understanding of what patients go through, and his desire to improve treatments for infertility, found his calling by accident. In high school he planned to become a pilot and an aeronautics engineer who designed missiles. When he was awarded a grant to intern in a lab in Philadelphia, a mistake was made in the paperwork. He was sent to a world leader in sperm physiology.

“I wasn’t disappointed. Instead I was amazed at the science. I switched my interest from rockets to sperm,” he recalled. As a college student at Duke University he took an introductory psychology course with Dr. Carl Erickson, a noted expert on bird behavior, and was intrigued by how bird hormones get metabolized. In medical school at Hahnemann (now Drexel) he participated in early studies of in vitro fertilization. He learned to apply the heralded findings to patient care, and went on to become a leader in the field of reproductive technology.

“I’m blessed now to be one of the doctors who can now offer tremendous treatment options in reproductive medicine for patients and to work among outstanding UW researchers who are opening new avenues in fertility, contraception, and infertility research, “ Zarutskie said. “These UW researchers from many disciplines are united by a common bond of excellence and altruism in scientific discovery to benefit others.”

Explore the UW

Admissions
Undergraduates
Graduates
Paying for college
Husky Promise
Financial aid estimator
Continuing Education
Summer quarter

Academics
Academic calendar
Colleges/Schools
Departments
Undergraduate learning
Graduate School
Course catalog
Undergraduate majors
Online learning
Evening degree program
English language programs
Study abroad
Graduation requirements
Libraries

Campus Life
Husky Card
Dining
Student housing
Student groups
The HUB
Husky sports
IMA
Diversity
Hall Health
Counseling Center
University Book Store
Computing support
UW Police
Holidays

Leadership
Board of Regents
President's office
Provost's office
Vice presidents
Vice provosts
Deans and chancellors
Government Relations
Faculty Senate
ASUW
GPSS
RHSA

Portals
Business & Industry
Diversity
Educational Excellence
Global Affairs
Creating Global Citizens
Healthy Lives
Innovation Serving Society
Research
Sustainability of the Earth
UW Foundation

Visit the UW
- Planning a visit
- Things to do
- Tours

Connect with us
Facebook
YouTube
iTunes U
Twitter
m.UW

CONTACT US | JOBS | MY UW | RULES DOCKET | PRIVACY