

Women aren't men

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Women's bodies and medical needs are vastly different than men's way beyond their reproductive systems. Women wake sooner from anesthesia, have less familiar symptoms of cardiovascular disease and are more likely to suffer from depression and sleep problems-- just to name a few of the differences.

Yet, there's a cavernous void in research based on sex and gender. Historically, most studies have been done on men and the findings applied to women.

Northwestern University's Feinberg School of Medicine has launched the Institute for Women's Health Research to spur much needed research on health issues that affect women throughout their lifespan. Some topics on the ambitious research agenda: cancer, autoimmune disease, anesthesia, cardiovascular disease, depression, sleeping disorders, osteoporosis, osteoarthritis and menopause.

Another mission of the institute will be to create an Illinois Women's Health Registry to provide a large pool of potential study subjects for researchers, who often have trouble recruiting enough participants for their studies. Scientists at the institute also will identify gender-based guidelines for the treatment and prevention of disease in women. For example, do women need a differently designed knee joint than men in replacement surgery or do women need to be given anesthesia differently" The institute will link physicians to these guidelines as they are developed.

"We should look at every research study with a sex and gender lens and see what applies to women as opposed to men," said Teresa Woodruff, executive director of the new Institute for Women's Health Research and the Thomas J. Watkins Professor of Obstetrics and Gynecology at the Feinberg School. "What are the differences between women and men that need further exploration" What does gender mean in development of disease throughout the lifespan" What is the influence of hormones" We have many questions, but we don't have concrete answers."

"Our goal is to deepen the medical and research community's understanding of women's health," Woodruff added. "The knowledge we gain through fundamental research will be translated into improved sex and gender-specific clinical care."

Vivian Pinn, M.D., director of the Office of Research on Women's Health for the National Institutes of Health, came to Chicago to speak at the recent inauguration of the Institute for Women's Health Research.

"It's rare to see this kind of commitment to research in women's health. I can count the institutions on my fingers," Pinn said. "The issues Northwestern is working on will hopefully unlock the answers for many of these health issues. The results will have implications for the health of women worldwide. To improve women's health care, it's important to generate new knowledge."

To produce that knowledge, Woodruff is reaching out to researchers at the university and its clinical affiliates with grants to encourage them to incorporate gender differences into their studies. "We are trying to instill the premise that biological sex matters in everybody's thought processes," she said, noting many scientists have never considered gender in their research.

One such physician was Melina Kibbe, M.D., assistant professor of

surgery at the Feinberg School and a vascular surgeon at Northwestern Memorial Hospital and the Jesse Brown VA Medical Center. Kibbe researches how to extend the effectiveness of such vascular procedures as balloon angioplasty and stenting, bypass grafting and other vascular procedures with limited durability.

Kibbe wasn't doing any gender-based research until Woodruff met with her a few months ago and asked if she would include a cohort of women in her research. Thus, Kibbe began a new study with funding from the new institute to see whether her therapy -- which extends the effectiveness of the vascular procedures with nitric oxide-- produced different results in male and female animals. To her surprise, preliminary findings showed it did.

Kibbe's early results reveal male animals respond better to the nitric-oxide-based therapy better than females. "If we actually see gender differences in our therapy when the study is complete, it may mean that we have to tailor our therapy so that it could be equally effective in both genders," she said. "This could lead me down a whole new research path."

In cardiovascular therapies, gender research is in its infancy, Kibbe noted. "Right now very few investigators are looking at the differences between men and women with respect to these cardiovascular therapies," she said.

A common obstacle for most researchers is recruiting enough participants for their studies. To address this challenge, the institute will develop the Illinois Women's Health Registry to provide a vast pool of potential study subjects with diverse backgrounds. This registry will be a critical tool for researchers who don't necessarily have the staff or the marketing skills to go out and recruit people.

The registry will tap the 12,000 women who come through Prentice Women's Hospital each year as well as the community at large, so all women will have an opportunity to participate. Woodruff hopes this registry will encourage researchers to do more gender studies.

One reason researchers have shied away from using women in studies is their fluctuating hormones. "Hormones are complex, but they can be taught," Woodruff said.

Source: Northwestern University

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