



Unsurpassed Support

Women suffering from pelvic floor disorders count on Magee for first-rate care. The urogynecologic community counts on it for first-rate research.

— By Anna Dubrovsky

As medical director of the Women’s Center for Bladder and Pelvic Health at Magee-Womens Hospital of UPMC, Halina Zyczynski, MD, sees something most doctors don’t: a downside to exercise.

“The more physically active you are, the more symptomatic your urinary incontinence is going to be,” she says. “Playing bridge rarely invokes incontinence. But going out there and power walking or doing Silver Sneakers or Jazzercise does.” It’s not unusual for women suffering from incontinence or other pelvic floor disorders to sacrifice their favorite pastimes — and the social interaction that comes with them.

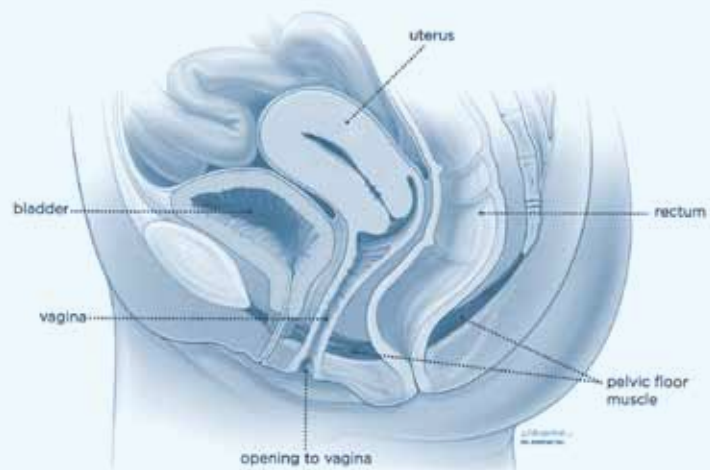
Dr. Zyczynski has devoted a quarter of a century to getting them back in the game. Thanks in part to her research and clinical work, Magee is recognized internationally as a leader in the field of female pelvic medicine and reconstructive surgery, a subspecialty of obstetrics and gynecology that’s better known as urogynecology. Urogynecologists focus on the treatment of bladder and bowel control problems, pelvic organ prolapse, pelvic pain, and other pelvic floor disorders, which are exceedingly common. It’s estimated that nearly half of all women between the ages of 50 and 79 have some form of prolapse, though far fewer experience bothersome symptoms. Urinary incontinence affects 30 to 50 percent of women.

In addition to causing physical pain or discomfort, pelvic floor disorders can exact a psychological toll ranging from embarrassment to depression. While breast cancer patients wear pink and walk en masse to raise awareness and money, women with pelvic floor disorders keep their problems mostly to themselves. “It’s not exactly cocktail party conversation,” Dr. Zyczynski says.

Fortunately, as Magee’s reputation for successfully treating pelvic floor disorders has spread, more and more area women are seeking care. To meet demand, Magee has expanded its physician roster to include six urogynecologists and four urogynecologic fellows — up from two urogynecologists a decade ago — and made them available well beyond the hospital on Halket Street. Women can access their expertise

in half a dozen far-flung communities, including the North Hills, the South Hills, Irwin, and Erie. “We are striving to provide every woman in the region accessible, comprehensive, individualized, state-of-the-art treatments for pelvic floor disorders,” Dr. Zyczynski says.

But Magee’s reputation in urogynecologic circles rests on more than patient success stories. The hospital and its across-the-street neighbor, Magee-Womens Research Institute (MWRI), have produced some of the most valuable research in the field. “More than half of the women who have sought care through our center in the last decade have graciously participated in clinical trials,” Dr. Zyczynski notes. MWRI is home to one of only three basic science laboratories dedicated to urogynecology in the country. At this year’s scientific meeting of the American Urogynecologic Society, the lab’s principal investigator, Pamela Moalli, MD, PhD, presented four papers to an audience of more than a thousand. Furthermore, Magee is one of eight clinical centers handpicked by the National Institutes of Health to participate in the Pelvic Floor Disorders Network, which conducts expansive studies. Drs. Zyczynski and Moalli serve as co-principal investigators in the network.



The Pelvic Floor

The pelvic floor is a set of muscles and connective tissues that support the pelvic organs, which in women include the bladder, rectum, vagina, and uterus. It’s often described as a hammock.

Magee and MWRI are especially well known for their expertise in surgical mesh — a gauzy, porous material that can be used to reinforce the vaginal wall in cases of pelvic organ prolapse or to support the urethra to treat urinary incontinence. Magee clinicians use mesh in about one-third of procedures for pelvic organ prolapse and the vast majority of procedures for stress urinary incontinence, or leakage triggered by activities such as exercising, coughing, and laughing.

The Mesh Crisis

Mesh made headlines in July, when the U.S. Food and Drug Administration issued a warning about the surgical placement of mesh through the vagina to repair pelvic organ prolapse. The agency noted that serious

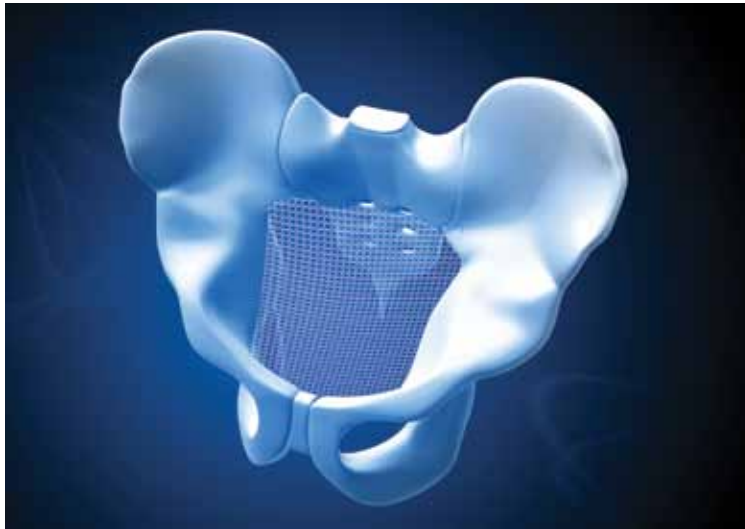
complications are “not rare,” adding that transvaginal repair with mesh may expose patients to greater risk than traditional non-mesh repair. It did not address use of mesh in prolapse surgeries performed through the abdomen, which are far more common at Magee, and reserved judgment on the use of mesh to repair stress urinary incontinence. But the warning turned mesh into a dirty word. “It has created anxiety among

women who have done well with mesh as recipients, who are now wondering: Was that a mistake? Will I have a problem in the future?” Dr. Zyczynski says. “It has created anxiety among those who are suffering with prolapse, have been counseled on their options, and may be best served by a mesh procedure.” It has also created an atmosphere of litigation, prompting some doctors to avoid mesh altogether.

But women who do their homework will find that mesh-related complications are, in fact, well below published rates among Magee patients. That’s because the hospital’s urogynecologists are selective about which meshes they use and which patients they use them in. As sub-specialists, they also bring a great deal of training and experience to the table.

One of the reasons why complications are “not rare” in the general population is that many mesh procedures are performed by non-specialists, explains Dr. Moalli. “Fortunately, in the Pittsburgh area, most general ob-gyns refer their patients to the Women’s Center for Bladder and Pelvic Health for these procedures. We spend all of our time doing urogynecology, and because of our narrow focus, we get highly skilled at what we do. In contrast, general ob-gyns spend a lot of time delivering babies, performing hysterectomies, and doing other gynecologic procedures, leaving limited time to invest in prolapse and incontinence surgeries.” Research has shown that a doctor who performs a procedure several times a week will have better outcomes than one who performs it several times a year or even several times a month.

In addition, non-specialists don’t necessarily understand what makes one mesh different from another and may be more susceptible to the sales pitches of mesh companies. “I can’t tell you how hard vendors push you to use their product,” Dr. Moalli says. “Not surprisingly, mesh information provided by a vendor is often riddled with bias, and the studies used to justify its use non-scientific.”



Dr. Moalli has been sounding the not-all-meshes-are-equal alarm for years.

Thankfully, sales pitches are no match for Magee’s research capabilities. Dr. Moalli’s laboratory conducts extensive testing of currently marketed meshes. It is also developing a new mesh that is more compatible with the material properties of the vagina. “The ideal mesh has yet to be manufactured,” says Dr. Moalli, who splits her time between patient care and lab work. “The major shortcoming is that current materials are inert and do nothing to improve the quality of the structurally compromised tissue in women with prolapse. What we are aiming to develop is a product that enhances the properties of the vagina so that it is restored to its uninjured, uncompromised condition.”

Dr. Moalli has been sounding the not-all-meshes-are-equal alarm for years, and the surgical community is finally taking notice. Her presentation at the American Urogynecologic Society’s scientific meeting in September “was really a ‘wow’ moment for much of the audience,” says Dr. Zyczynski.

Among other things, Dr. Moalli showed the assembled crowd that stiffer meshes are more damaging to the vagina than lighter, more compliant ones. The stiffer the mesh, the more load it takes off the vagina. Without a load to bear, the vaginal tissue becomes lazy, to put it in laymen’s terms. “This is counterintuitive to surgeons who were picking stiffer, stronger materials out of fear that their surgeries would fail. Unfortunately, stronger, stiffer meshes result in increased complications,” Dr. Moalli says. Her research team observed decreases in smooth muscle, collagen, and other structural proteins following implantation with a stiffer mesh. Initially, she couldn’t believe what they were seeing, having hypothesized that mesh implantation would stiffen vaginal tissue. “When they first showed me the results, I said, ‘It has to be wrong. Do it again.’ They repeated the experiments three times with the same results.”

A Misguided Practice?

Dr. Moalli's other major research focus is on the causes of pelvic floor disorders. Giving birth vaginally is considered the leading risk factor for prolapse. That has given rise to the perception that Caesarean delivery will protect women against pelvic floor disorders later in life, which may be part of the reason why pre-labor Caesarean rates are climbing in the United States. But there's no scientific data to support that perception, and Dr. Moalli suspects that C-sections aren't truly protective. Because C-sections carry risks such as uterine rupture and abnormal attachment of the placenta to the uterine wall, she believes that offering Caesarean delivery as a means to prevent pelvic floor disorders is "an extreme and morbid" practice.

Thanks to funding from the Jewish Healthcare Foundation, she recently began a study to determine once and for all whether C-section prior to the onset of labor plays a protective role. She plans to follow 1,500 women during and after their first pregnancy, comparing the prevalence of prolapse in those who deliver vaginally, those who deliver by C-section after the onset of labor, and those who deliver by C-section before the onset of labor.

The study is also expected to shed light on the impact of age, race, body mass index, smoking, constipation, exercise level, and other factors on pelvic floor health.

Dr. Moalli will need further funding to complete the study, and she's crossing her fingers that the National



Dr. Halina Zyczynski

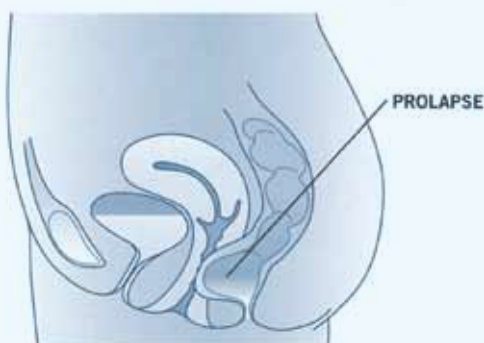
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— Dr. Zyczynski

Institutes of Health (NIH) provides it. But pelvic floor disorders, common as they are, don't garner as much public attention or funding as, say, cancer or cardiovascular disease. "We're in a tough time for research," she says. "If you're in the NIH and you have to decide between funding a study on pelvic floor disorders or funding cancer research, cancer is going to win every time."

After all, cancer is a top killer. While oncologists focus on saving lives or at least prolonging them, urogynecologists focus on quality of life. "Whether we're seeing patients or working in the laboratory, we're constantly striving to improve the quality of women's lives, and particularly the latter half," Dr. Zyczynski says.

"My grandmother lived to be 101, and when a patient walks through the door, I always think of my grandmother," she adds. "They can be 55 years old, but I remember that they have the potential to live to be 101. So whatever intervention we recommend and ultimately perform should be durable and safe for when they're 101."



Pelvic Organ Prolapse

When the pelvic floor is weakened or damaged, one or more pelvic organs may prolapse (bulge) into the vagina. It's estimated that nearly half of all women between the ages of 50 and 79 have some form of prolapse, though far fewer experience bothersome symptoms.



Stress Urinary Incontinence

There are several types of urinary incontinence. Stress incontinence refers to urine leakage that occurs in the course of physical activities that increase abdominal pressure, e.g., exercising, sneezing, or laughing. It is thought to be caused by damage to the muscles and other tissues that close or provide support to the urethra.

FLEX 'EM, LADIES!

If you've ever hit the gym, you know the benefits of exercise. But did you know it's possible to exercise the pelvic floor muscles, which support the bladder, bowel, and other pelvic organs? Strengthening these muscles through Kegel exercises can help you prevent or improve urinary incontinence and other pelvic floor disorders. It's important to identify the right muscles. Here are some tips from the American Urogynecologic Society:

- When urinating, try stopping midstream. If you succeed, you're working the right muscles. (Don't make a habit of stopping your urinary stream because it can lead to incomplete emptying of the bladder.)
- While lying or sitting, insert one finger into your vagina and try to squeeze the surrounding muscles. You should feel your finger lifted and squeezed.
- Use a mirror to look at your vaginal opening and perineum (the area between the vagina and rectum) while contracting your pelvic muscles. The perineum should lift up.
- At your next pelvic exam, ask your doctor or nurse to check if you're working the right muscles.

Once you've identified the pelvic floor muscles, you can begin practicing Kegel exercises.

- Empty your bladder before starting.
- Start by contracting the muscles for three seconds and then relaxing for three seconds. Do 10 repetitions three times a day.
- Lengthen your contraction by one second each week until you're practicing 10-second contractions, with 10 seconds of relaxation in between.
- Do not hold your breath.
- Keep the muscles in your abdomen, buttocks, and thighs relaxed.
- Initially, practice while lying down. As you get stronger, try practicing while sitting or standing.