

# Pelvic Floor Disorders (PFDs) and Women's Health

## *Advancing Treatments & Improving Patient Outcomes*

### **What are PFDs?**

The “pelvic floor” describes the group of muscles and tissues that support the pelvic and abdominal organs, such as the bladder, urethra, intestines, rectum, and uterus. PFDs occur when the pelvic floor is weakened or injured, causing organs to move or fall out of place or not function properly. Common risk factors for PFDs include genetics, aging, and childbirth. Anyone can experience symptoms of PFDs, such as urinary and fecal incontinence. Pelvic organ prolapse, when the organs sag into and sometimes through the vaginal canal, only affects women.

### **How does NICHD support research on PFDs?**

NICHD is a long-time funder of research on PFDs. The institute established the Pelvic Floor Disorders Network in 2001 to encourage collaborative research and improve patient care. NICHD-supported research has advanced understanding of treatments for PFDs, including factors associated with treatment failure. By providing evidence and listening to women with lived experience, the institute has also helped improve women's health outcomes.

## **Success Snapshots**

### **Evaluating Surgical Options for Prolapse**

Vaginal prolapse treatments include pelvic floor exercises, pessary use, or surgery. An NICHD-funded study compared outcomes from two surgical options: uterosacral ligament (USL) suspension, which attaches the vagina to USLs in the pelvis, and mesh hysteropexy (MH), which adds surgical mesh support to the vagina/pelvic organs. Groups had similar successful outcomes at 3 years post-op. Up to 5 years post-op, both groups had improved PFD symptoms and sexual function, but only the MH group had lower rates of prolapse recurrence. These data can help inform treatment decisions.

### **Studying PFD Effects on Sexual Health**

To gauge patient views on treatment success, NICHD-supported researchers examined quality-of-life measures, such as episodes of painful sex, after PFD surgeries. An analysis of four clinical studies found that women who did not report painful sex before surgery were very unlikely (<4%) to report new instances after surgery. Among women (~20%) who reported painful sex before surgery, about 75% reported no painful sex experiences after surgery. These findings suggest that, overall, sexual function seems to improve after PFD surgery.

## Selected NICHD-Funded Projects on Pelvic Floor Disorders (PFDs)

### Surgical Treatment Advances

#### Comparing Common Surgical Treatments

An ongoing NICHD-supported study is comparing outcomes from vaginal prolapse surgery that uses a patient's own tissues, to two surgical mesh procedures. The former has fewer risks but may be less durable over time. Mesh surgeries have higher likelihood of long-term success (based on anatomic criteria), but pose unique risks. This study, the first to compare on all three procedures, will provide valuable insight on treatment success, quality-of-life improvements, patient satisfaction, sexual function, and more.

#### Treating Urinary Incontinence (UI)

Different types of UI, the most common PFD, have different treatments. Stress UI (SUI), leakage from a sneeze, laugh, or action that increases pressure in the abdomen, differs from Urgency UI (UUI), defined as leakage when bladder muscle contractions cause a sudden, intense need to urinate. Mixed UI (MUI) includes features of SUI and UUI. One NICHD-supported trial of women with MUI found that, counter to common beliefs, both SUI and UUI symptoms improved after midurethral-sling surgery. Another NICHD-funded study showed that proactively adding a surgical mesh sling during prolapse repair surgery substantially reduced risk of post-op SUI, but increased other risks. Benefit and risk data can help determine the best treatment course.

#### Understanding Patient Perspectives

An NICHD-supported study compared 5-year outcomes of USL suspension (described earlier in the *Evaluating Surgical Options for Prolapse Success Spotlight*) to sacrospinous ligament (SSL) fixation, another vaginal prolapse surgery that attaches the vagina to the SSL in the pelvis. Both groups had similar outcomes and higher-than-expected rates of surgical failure (defined by anatomic measures). Despite these data, most women reported improved symptoms, and many did not need re-treatment. The findings reinforce the need to better understand patients' views of treatment success in designing future studies.



### Non-Surgical Treatment Progress

#### Managing UI without Surgery

Medication treatments for PFDs exist but remain understudied. An NICHD-funded clinical study compared anticholinergic drugs, daily pills often prescribed to treat UI, with a single, low-dose injection of botulinum toxin (Botox®). This study, the first to use a randomized, placebo-controlled design (the "gold standard"), showed that, over 6 months, both groups had similar reductions in daily UI episodes, but each group had different side effects. This evidence can help providers further tailor treatments for those with PFDs.

#### Treating Fecal Incontinence (FI)

Sacral nerve therapy, a surgical implant that stimulates the sacral nerve with electric signals, is used to treat FI that does not improve after more conservative options. An NICHD-funded study was the first to examine percutaneous tibial nerve stimulation (PTNS), a less-invasive option using an external device to send signals, in a rigorous clinical setting. The PTNS and "sham" PTNS-like procedure groups had similar outcomes, meaning PTNS was no better than the sham. These data can reduce unnecessary procedures without benefit.

Learn More About  
NICHD PFD Projects



NICHD's PFD Website:  
<https://go.nih.gov/l3kwDvm>



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