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Pelvic floor disorders

PT helps resolve symptoms of pelvic pain, urinary incontinence

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Pelvic pain and urinary incontinence (UI) are two of the most common problems caused by pelvic floor dysfunction, which has been estimated to affect half of women age 55 and older. A Kaiser Permanente study reported in 2008 that one-third of women in the United States have one or more pelvic floor disorders, and age has no significant effect on these disorders. Physical therapy can help resolve symptoms of these conditions and help women manage them.

Pelvic pain: symptoms and causes

According to the International Pelvic Pain Society, nearly 15 percent of all American women ages 18–50 suffer from chronic pelvic pain. Fear and embarrassment prevent many women from seeking help for pelvic pain, which can have a strong negative effect on intimate relationships and feelings of self-worth.

Pelvic pain can be a multifaceted problem that requires a multidisciplinary model to treat. Often patients work with a team of health care providers that could include ob-gyn physicians, urologists, family practice physicians, psychiatrists, psychologists, and physical therapists.

Pelvic pain can occur with or without symptoms of urinary incontinence or urgency. Common conditions include dyspareunia (painful sexual intercourse), coccydynia (tailbone pain), vaginismus (painful, involuntary spasm of the muscles surrounding the vaginal entrance), vulvodynia (vulvar pain), and vulvar-vestibulitis (vulvar pain accompanied by complaints of burning and irritation). Symptoms may include impairments in sitting or walking; urination or defecation dysfunctions; urgency or frequency of voiding; burning of the clitoris, urethra, vagina, or rectum; and pain upon penetration. Predisposing factors that can contribute to pelvic pain include trauma from childbirth, infections, pelvic instability, muscle imbalances from faulty posture or past injuries, diastasis recti, scar adhesions from previous surgeries, endometriosis, nerve entrapments, and sexual trauma.

Assessing musculoskeletal problems that may contribute to these pain symptoms begins with an evaluation of the alignment of the pelvic ring. Any asymmetries will cause instability of the pelvis, with resultant muscle imbalances occurring through the trunk, hips, and pelvic floor muscles. The effect of asymmetry is that the pelvic floor muscles will be in a shortened position on one side of the pelvic outlet and elongated on the other side, so they are unable to contract with strength. This imbalance will not allow the pelvic floor to sit in a neutral position for normal resting tone. To compensate, the pelvic floor muscles attempt to continue to work in this imbalanced state, leading to muscle spasms and hypertonus.

Pelvic pain also can occur with poor coordination when co-contracting the abdominal wall with the pelvic floor. The pelvic floor serves as the foundation for core stability, along with the diaphragm and the back and abdominal muscles.

Nerve entrapments and myofascial restrictions can also contribute to pelvic pain. Nerve entrapments can occur from incisions made in the abdominal wall. Scarring after cesarean deliveries, hysterectomies, appendectomies, and spinal surgeries done with an anterior approach can lead to referred pain into the mons pubis, labia, and vulva. Entrapments of the pudendal nerve and vessels may occur as the result of myofascial restrictions or an asymmetrical pelvis.

Physical therapy for pelvic pain

Physical therapy offers treatment for the musculoskeletal aspects of pelvic floor pain. Physical therapists who specialize in the pelvic floor focus on correcting the pelvic alignment, maintaining stability through the pelvis, and balancing strength at the hips. Therapy includes exercises to improve abdominal and trunk stability, and instruction in diaphragmatic breathing. Initially, patients are taught relaxation techniques to "downtrain" the pelvic floor muscles, as well as biofeedback to improve their awareness of pelvic floor tensing habits. After satisfactory resting tone of the pelvic floor muscles is achieved, patients are taught how to coordinate contractions of their transverse abdominis (TA) muscle with breathing to strengthen the pelvic floor.

Manual therapy may be used to treat areas of scar or myofascial restrictions, and patients also may be shown how to self-release these areas. Patients may be taught to use vaginal dilators as a tool for self-release to the pelvic floor muscles and to keep the pelvic floor muscles relaxed with penetration. Instruction in body mechanics while sitting, work-

ing, and doing housework may also be included. Therapists may also discuss techniques for self-release prior to intercourse, lubrication products, sexual positions that may be less painful, and self-management of painful flare-ups.

Urinary incontinence: symptoms and causes

Urinary incontinence is a common, yet often untreated, diagnosis for many men and women. More than 25 million people suffer from some form of incontinence, and the annual cost for treatment is over $16 billion. The high prevalence of this condition underscores the need for preventive strategies and treatment.

The first step toward treatment and prevention should be to identify patients who have undiagnosed UI or those at risk for developing UI. Many patients are too embarrassed to discuss their concerns or they assume that urine leakage is normal. At any age, the bladder should be able to hold approximately 2 cups of fluid. It is typical to void five to seven times during the day (or every two to four hours). Nighttime voiding once during the night and a steady, pain-free stream are considered normal. Leakage is never normal.

Physicians can play a front-line role by asking the following questions:

- Do you experience involuntary urine leakage with a cough, sneeze, or laugh?
- Do you experience involuntary urine leakage with physical exertion (lifting, walking or running, getting out of a chair)?
- Do you experience, or have you experienced, urinary leakage when you have the urge to void?
- Do you have difficulty making it to the toilet on time?
- How frequently do you use the bathroom?
- Do you strain to empty your bladder or bowels?
- Do you feel that you are unable to empty your bladder or bowels?
- Have you ever been treated for UI?

Among the many risk factors that contribute to UI are repetitive lifting, high-impact sports, poor core strength, ligament laxity, poor timing of pelvic floor muscle recruitment, benign prostatic hyperplasia, prostatectomy, obesity, pregnancy, childbirth, and age. UI is a common problem among aging adults, but it is also well documented as a concern for young adults, and athletes in particular.

There are two types of urinary incontinence—stress urinary incontinence and urge incontinence/frequency—and some people experience both.

Stress urinary incontinence (SUI) is the involuntary loss of urine following an abrupt elevation of intra-abdominal pressure. It is most often caused by weak pelvic floor muscles. The pelvic floor functions at its peak when it is supported by a neutral pelvic position; a pelvic or sacral malalignment can contribute to pelvic floor weakness. A women's pelvis is wider than a man's and is typically in a more anterior position, putting a greater strain on the pelvic floor and resulting in an increased risk of UI.

Poor posture and body mechanics often create a strain on the low back and are associated with weakness throughout the core muscles of the trunk. The primary muscle groups affected are the transverse abdominis and internal obliques (IOs). Current research has shown voluntary activity of the IOs and TA to increase pelvic floor muscle activity. A patient with UI must be able to coordinate her TA and IOs in conjunction with the pelvic floor to achieve maximal contraction.

While UI can occur with muscle weakness, overactive external obliques and the rectus abdominis can create a strain on the pelvic floor and weaken the ability of the pelvic floor to contract. Repetitive valsalva maneuvers (attempting to exhale with the mouth and nose closed) also strain and weaken the pelvic floor, setting the stage for prolapse.

Urge incontinence (a sudden, intense urge to urinate, followed by an involuntary loss of urine) *and frequency* can occur independently or in combination with SUI. The neural input to the bladder occurs at multiple levels in the spine. If a nerve becomes entrapped anywhere throughout the abdominal and pelvic cavity, a faulty message may be sent to the bladder signaling to void when the bladder is not truly full. Pelvic malalignments, excessive scarring, and myofascial adhesions are common contributors to nerve entrapments and UI. Post-operatively or following a laparoscopic procedure, adhesions can easily develop in the vast myofascial tissue surrounding the pelvis.

Physical therapy for UI

Although there are many medical interventions to treat UI, ranging from diet modification to medications or surgery, physical therapy is a conservative treatment option that is often overlooked. A physical therapist trained to treat pelvic floor disorders can help identify and treat the underlying cause(s) of the dysfunction and play an important role in helping patients manage UI.

The pelvic floor contributes to many important physical functions; it supports bladder function, contributes to sexual arousal, and assists in spinal stability. The abdominal muscles provide a natural corset for stability, balance, and gait. If any component of this system is disrupted or weak, the remainder of the system will be strained. Therefore, it is imperative to identify and correct any imbalances prior to retraining the pelvic floor. A skilled physical therapist will help identify biomechanical dysfunctions, faulty posture, and muscle imbalances, and will teach patients how to manage and control their urinary symptoms.

Physical therapy interventions for UI depend on the complexity of the problem. The physical therapy evaluation includes a history of complaints, a medical history, a systems screen, a postural assessment, muscle testing, and could involve a pelvic exam. An accurate assessment of the pelvic floor muscles is necessary to determine the right course of care.

Pelvic floor contractions (Kegel exercises) are not always enough to prevent urinary leakage, particularly if they are performed incorrectly. A recent study estimated that 30 percent of pelvic floor contractions are done incorrectly and are ineffective. This is especially true when pelvic asymmetries and breathing patterns have not been addressed. Muscle and movement re-education is done through using exercise, sometimes aided by biofeedback training. Electrical stimulation is less often used but is effective for patients who have a difficult time recruiting the proper muscles.

Manual therapy is often required for the correction of joint mechanics and to release soft tissue restrictions around the pelvis. These corrections are reinforced by exercise programs.

Physical therapy also includes patient education on diet, bladder habits, and other behavioral strategies that affect urinary incontinence.

Effective approaches to self-management

Physical therapy approaches can be effective in treating a number of pelvic floor disorders, including pelvic pain and urinary incontinence. Proper training of the pelvic floor and bladder muscles, combined with patient education and development of a self-care plan, can help patients manage these conditions.

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