

## CAUSES OF CHRONIC PELVIC PAIN AND ORGAN DYSFUNCTION

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**The events listed below, be they acute or repetitive, can injure pelvic muscles and nerves, thereby causing pain:**

- Bicycling on hard, uncomfortable seats
- Sitting for long periods on poorly designed chairs
- Childbirth
- Chronic Muscle Tightening
- External trauma/falls
- Pelvic surgical procedures
- Recurrent vaginal/urinary infections
- Repeated vigorous squatting
- Straining with bowel movements
- Stress/emotional trauma

**The three underlying causes of chronic pelvic pain and dysfunction** that practitioners generally fail to recognize are *myofascial (muscle) trigger points*, *pudendal neuralgia*, and *pudendal nerve entrapment (PNE)*. Because they are the ultimate culprits that must be addressed to resolve the patient's pain, we will focus on them here.

### **Myofascial Trigger Points**

Many chronic pelvic pain conditions, as well as the need to urinate urgently and frequently, are commonly caused by pelvic floor muscle spasms. Because the spasm that is causing the pain or dysfunction may not be felt by the patient or apparent to the practitioner, only its effects on the body organs captures our attention.

The major pelvic organs (urethra, vagina and rectum) are surrounded by the muscles of the pelvic floor. When these muscles become stressed, they compress the organs, creating dysfunction and/or pain. Further, the surrounding skin, or possibly the bladder lining, may become sensitive or inflamed when the compressed, painful muscles stimulate the pelvic nerve reflexes.

Pelvic floor muscle spasm can usually be attributed to the development of hypersensitive myofascial trigger points. These are tight, tender knots in the muscle fibers that are quite painful when compressed and typically refer pain to other areas of the body. Referred pain often sidetracks practitioners by drawing their attention away from the trigger point's actual location. This makes it difficult to correctly diagnose and effectively treat the patient's problem.

Trigger points form when the pelvic muscles become repeatedly strained or overloaded. Emotional or physical stress, straining with chronic constipation, recurrent bladder infections, surgery, childbirth and muscle holding patterns developed during childhood are typical stressors that can generate trigger points over time.

A particularly deceptive feature of trigger points is that their presence may not be known until the accumulated muscle stress exceeds the level of trauma the muscle or muscle group can withstand. For example, a spine or hip problem, poor posture and/or abnormal muscles tightening

patterns can cause pelvic muscle trigger points to form, yet remain latent or asymptomatic. Then, a further insult, such as a bladder or vaginal infection or an external or surgical trauma may be more than the already compromised muscle(s) can tolerate. At this point the trigger point becomes “activated” or symptomatic, causing acute pain and/or abnormal functioning. The activating event may be relatively inconsequential or seemingly unrelated to the problem and therefore not suspected as a causative factor.

## **Pudendal Neuralgia**

To further complicate the picture, muscles are not the only source of pelvic pain and dysfunction. In 40 years of practice, Dr. Weiss has found that the number one, generally unrecognized, root cause is pudendal neuralgia, or pudendal nerve pain.

The word *pudendal* derives from the Latin *pudere*, which means to be ashamed. It is easy to understand why early anatomists chose this name for a nerve associated with sexual, bowel and bladder functions. When the pudendal nerve is injured or traumatized, shame sometimes delays diagnosis. The word *neuralgia* describes pain that runs along the path of a nerve. Its derivatives are *neuro* (nerve) and *algia* (pain).

Three sacral nerves converge to form each of the two pudendal nerves, which are located on either side of the pelvis. These nerves supply the pelvic floor structures with sensory, motor, and autonomic function. They control the sphincters, the pelvic floor muscles, and the surrounding skin, organs, and connective tissue. A damaged or traumatized pudendal nerve can cause pain in the urethra, penis, clitoris, vagina, perineum (“crotch”), prostate, anus, sit bones, groin, pubis, inner thighs, and tailbone. Pudendal neuralgia is an umbrella term that includes pain experienced in any of these areas that relates back to an injured or hypersensitive pudendal nerve.

The pudendal nerves follow a tortuous winding course, entering the pelvis under the piriformis (hip rotator) muscles, running between the major ligaments that attach to the sacrum and then navigating through a narrow, winding canal inside the sit bones where they can easily be traumatized. If they are irritated or entrapped during this passage, a pain signal will be sent to the muscles and skin, where discomfort (possibly excruciating) will be experienced.

The most common causes of pudendal neuralgia, estimated to occur in 20% of pelvic pain patients, are trauma and stretch injuries. Sources of trauma include bicycle riding on hard, uncomfortable seats, sitting on hard or poorly designed chairs for prolonged periods of time, external trauma or falls, and pelvic surgical procedures. Stretch injuries can be caused by chronic straining with bowel movements, childbirth, and work or exercises requiring repetitive and/or vigorous squatting.

However, trauma or injury with scar formation and entrapment are not the only causes of pudendal neuralgia. The pudendal nerves can also become sensitized when they receive repetitive pain signals from distressed muscles, internal organs, the surrounding skin, or viral infections, such as herpes.

**Bottom line:** The term *pudendal neuralgia* is the general designation for pudendal nerve pain. It does not identify the cause of the nerve damage or sensitivity that resulted in the pain. A more specific diagnosis is therefore also required in order to effectively treat the problem.

## **Pudendal Nerve Entrapment (PNE)**

Pudendal nerve entrapment is a specific diagnosis and the unequivocal captain of the pudendal neuralgia team. Only now is it gaining recognition for the misery it causes.

With PNE, the nerve is entrapped in scar tissue, similar to carpal tunnel syndrome. Either repetitive or severe trauma or stretching can cause inflammation and scar formation, which binds the nerve to the surrounding tissue causing an entrapment.

Because of the diagnostic complexity associated with pudendal nerve entrapment, it can be a long time before a practitioner finally detects this underlying problem. Patients with PNE spend, on average, 4 years and see 10 or more physicians before receiving an accurate diagnosis. In fact, the majority of our PNE patients actually come to me after making their own diagnoses using resources on the internet.