

# Practical Guide to Office Procedures in Gynecology & Urogynecology

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## Sodium Office treatment of Pelvic Floor Muscle Spasm

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### Introduction:

Normal function of the pelvic floor musculature is essential in maintaining appropriate function of the pelvic organs, as well as appropriate sexual response. Abnormal function of this musculature is seen in an estimated 70% of women with genitourinary, bowel or sexual disorders. Pelvic floor dysfunction refers to conditions in which the pelvic floor muscular support system is functioning abnormally. High-tone pelvic floor muscle dysfunction (HTPFDD) can be closely associated with sexual dysfunction [1,2]. HTPFD is a newer term, although the concept has been used extensively in the colorectal literature by Thiele and others, referred to as "tension myalgia of the pelvic floor" and "levator ani syndrome" [3]. HTPFD can result from childbirth, postural stressors, microtrauma, infections, adhesions and surgical trauma and can contribute to symptoms of frequency, urgency, dysuria, urinary retention, fecal retention/constipation, penetrative dyspareunia and/or vaginismus [1-3]. Embryological development of the urogenital system has shared innervations and muscular support of the bladder and pelvis, resulting in shared symptoms.

Musculoskeletal and pelvic floor diaphragm disorders are commonly affected by the surrounding visceral structures via viscerosomatic reflexes and therefore urogenital disorders flares are often associated with pelvic floor muscle dysfunction. Wesselman and Lai demonstrated that chronic irritation of visceral structures could cause trophic changes within connective tissue [4]. On the other hand, a primary muscle skeletal disorder (e.g. levator ani muscle, Sacro-iliac joint) can affect the surrounding viscera via a somato-visceral dysfunction and results in bladder, bowel and sexual dysfunction. Animal studies demonstrate that an ongoing painful stimulus to rat tails cause changes to the bladder in the absence of any abnormal underlying pathology.

The musculoskeletal system is often involved in chronic pelvic pain. Tu *et al.* in 2008 and Baker *et al.* in 1991 found that many women with CPP have musculoskeletal abnormalities compared to healthy control subjects. More specifically, studies demonstrate strong correlations between lumbo-pelvic and sacroiliac joint dysfunction as potential underlying factors in the complex picture of pelvic pain [5,6].

The perception of pain, regardless of the etiology can lead to both reflex and voluntary muscle contraction, which may result in more pain and dysfunction. Hypersensitivity or sensory urogenital conditions such as chronic bacterial cystitis, chronic yeast infections, endometriosis urgency/frequency syndrome, urethral syndrome, provoked vestibulodynia and interstitial cystitis/painful bladder syndrome are often associated with HTPFD and treatment directed at these conditions and all pain generators is key for a successful outcome when treating pelvic floor muscle spasm.

Another presentation of pelvic floor dysfunction is the occurrence of myofascial trigger points (MTrPs). A MTrP is defined as a highly localized and hyperirritable spot in a palpable taut