The Role of Pelvic Floor Muscles in Male Sexual Dysfunction and Pelvic Pain



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ABSTRACT

Introduction: Sexual function is essential to good health and well-being in men. The relationship between male sexual function, pelvic floor function, and pelvic pain is complex and only beginning to be appreciated.

Aim: The objectives of the current review are to examine these complex relationships, and to demonstrate how pelvic floor physical therapy can potentially improve the treatment of various male sexual dysfunctions, including erectile dysfunction and dysfunction of ejaculation and orgasm.

Methods: Contemporary data on pelvic floor anatomy and function as they relate to the treatment of various male sexual dysfunctions were reviewed.

Main Outcome Measures: Examination of evidence supporting the association between the male pelvic floor and erectile dysfunction, ejaculatory/orgasmic dysfunction, and chronic prostatitis/chronic pelvic pain syndrome, respectively.

Results: Evidence suggests a close relationship between the pelvic floor and male sexual dysfunction and a potential therapeutic benefit from pelvic floor therapy for men who suffer from these conditions.

Conclusion: Pelvic floor physical therapy is a necessary tool in a more comprehensive bio-neuromusculoskeletal-psychosocial approach to the treatment of male sexual dysfunction and pelvic pain.

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Key Words: Sexual dysfunction; Chronic prostatitis; Pelvic pain; Pelvic floor; Male

INTRODUCTION

Sexual dysfunctions are multifactorial and can be caused by a variety of psychological and biologic issues. As it concerns male sexual dysfunctions, most of the sexual medicine research regarding biologic factors has focused on hormonal, neurologic, and/or vascular issues. There has been a dearth of sexual medicine research on the biologic contribution of pelvic floor disorders to various male sexual dysfunctions. This is in sharp contrast to the large number of studies that have linked pelvic floor disorders in women to female sexual dysfunctions. In fact, pelvic floor therapy is one of several suggested sexual medicine strategies to successfully manage female sexual dysfunctions. ¹

Sexual dysfunctions are highly prevalent in men, increasing with age, and sexual function is regarded by many men as a vital and

Received May 1, 2015. Accepted August 2, 2015.

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http://dx.doi.org/10.1016/j.sxmr.2015.10.001

critical part of their overall health and wellness; moreover, male sexual dysfunctions have been linked to reduced quality of life and negative interpersonal relationships.^{2–4} Despite pelvic floor physical therapy representing a conservative, modifiable, noninvasive, nonpharmacologic, and nonsurgical intervention in the treatment of male sexual dysfunction, the biologic relationship between pelvic floor function and male sexual function is seldom emphasized.⁵

To fully appreciate the contributions of the pelvic floor in male sexual function, a basic understanding of its anatomy and physiology is necessary. To standardize terminology, The International Continence Society has proposed the following definitions: The *pelvic floor* is a compound structure that encloses the bony pelvic outlet, consisting of muscle, fascia, and neural tissue, while the term *pelvic floor muscles* refers to the muscular layer of the pelvic floor. These terms are used henceforth accordingly.

There are many examples of the relationship between pelvic floor function/dysfunction and male sexual function/dysfunction. Male pelvic floor dysfunction has been associated with erectile dysfunction as well as dysfunction of ejaculation and orgasm.^{7–11} Male pelvic floor muscle training has been shown to increase penile rigidity and penile hardness in some men with erectile dysfunction, potentially facilitating vaginal penetration during thrusting.¹² Shafik described erectile dysfunction caused

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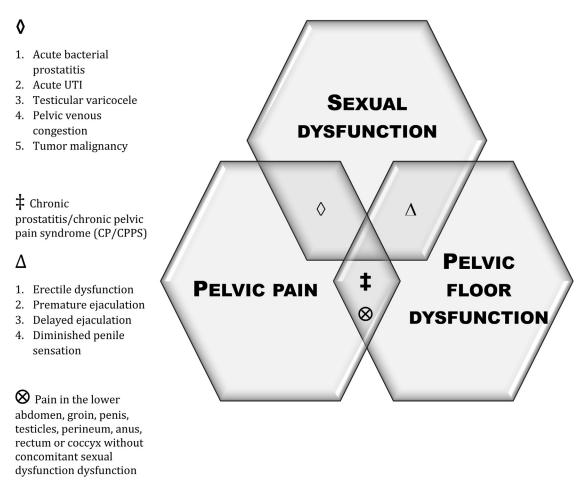


Figure 1. Associations between commonly observed elements of male sexual dysfunction, pelvic floor dysfunction, and pelvic pain.

by a condition called pudendal artery syndrome—a syndrome characterized by decreased internal pudendal blood flow secondary to external compression within the pudendal canal—which is thought to result from pelvic floor muscle dysfunction. ^{13,14} Male pelvic floor muscle function also is involved in coordinating ejaculation. ¹² Pelvic floor therapy has been shown to improve control over ejaculation and allow for increases in intravaginal ejaculatory latency times in men with premature ejaculation and pelvic floor muscle dysfunction. ¹⁵ Strong bulbospongiosus (sometimes called bulbocavernosus) contractions may enhance and intensify orgasmic pleasure during ejaculation/orgasm. Improvements in both ejaculation/orgasm and erectile function have been demonstrated with implementation of male pelvic floor treatment plans. ^{15,16}

Another example of the relationship between pelvic floor dysfunction and male sexual dysfunction has been shown in chronic prostatitis/chronic pelvic pain syndrome (CP/CPPS). This condition is usually associated with problems with urination, defecation, and/or sexual activity. Men with CP/CPPS may experience pain constantly or intermittently, and this pain can occur with sitting, standing, routine daily activity, or sexual activity. ^{17,18} Effective management of CP/CPPS has been demonstrated in programs that emphasize treatment of pelvic floor dysfunction. Pelvic floor muscle tone, the varying degree of tension

within the muscles of the pelvic floor during rest and with activity, is an important factor in CP/CPPS. For example, neuromuscular reeducation with the guidance of electromyography or other methods of biofeedback has been shown to result in reduced resting baseline tone of and improvement in pain scores. ^{19–24}

The relationship among male sexual dysfunction, pelvic pain, and CP/CPPS is complex, with the 3 conditions often overlapping (Figure 1). The objectives of this literature review are to examine the relationships between the male pelvic floor, male sexual dysfunctions, and CP/CPPS, and to demonstrate how pelvic floor physical therapy can potentially improve the treatment of various male sexual dysfunctions. Attention will be provided to the anatomy and physiology of the pelvic floor and present understanding of how pelvic floor muscle function contributes to male sexual function/dysfunction and to CP/CPPS. Greater understanding of the importance of pelvic floor physical therapy and its implementation alongside available pharmacological treatments will allow a more comprehensive bio-neuromusculoskeletal-psychosocial approach to the treatment of male sexual dysfunction and pelvic pain.

Anatomy and Physiology of the Male Pelvic Floor

The male pelvic floor consists of several tissue layers. Anatomic details of the male pelvic floor are demonstrated in Figure 2.

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