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## Review Article

# Chronic pelvic pain: a comprehensive review on its physical and mental effects

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## ABSTRACT

Chronic pelvic pain (CPP) is a multifaceted and often debilitating condition that affects a significant portion of the female population wherein there is persistent acyclic pain in the pelvic region continuing for a long period of time. It has multifactorial etiology which may encompass gynecological, urological, gastrointestinal, musculoskeletal, and neurological components. This comprehensive review highlights the physical and psychological effects of CPP and briefly summarizes the various treatment modalities for CPP.

**Keywords:** Chronic pelvic pain, Physical Effects, Psychological effects, Endometriosis, Adenomyosis

## INTRODUCTION

Chronic pelvic pain (CPP) is a multifaceted and often debilitating condition that affects a significant portion of the female population. It is characterized by persistent acyclic pain in the pelvic region lasting six months or longer, not exclusively associated with menstruation or intercourse. It affects around 26% of the female population.<sup>1</sup> The concomitant existence of other pathologies which may be causing CPP is present in about 50% of the cases.<sup>2</sup> The complexity of CPP stems from its multifactorial etiology, encompassing gynecological, urological, gastrointestinal, musculoskeletal, and neurological causes, among others. This review aims to provide a comprehensive overview of the physical and mental effects of CPP, highlighting its impact on patients' quality of life and the importance of a multidisciplinary approach to management.

## PHYSICAL EFFECTS OF CPP

### *Gynecological causes and effects*

Gynecological conditions are a primary cause of CPP. Endometriosis, characterized by the presence of

endometrial-like tissue outside the uterus, is a leading cause. It results in chronic inflammation, scarring, and adhesions, contributing to severe pain. Studies have shown that endometriosis can significantly impact sexual function, causing dyspareunia (painful intercourse) and reducing overall sexual satisfaction.<sup>3,4</sup>

Pelvic inflammatory disease (PID), often resulting from sexually transmitted infections, is another gynecological cause. PID can lead to chronic pain due to inflammation and scarring of the pelvic organs.<sup>5</sup> Adhesions formed as a result of PID can cause organ distortion and pain, particularly during movement or sexual activity.

Adenomyosis, where endometrial tissue invades into the muscular wall of the uterus, also contributes to CPP. This condition leads to an enlarged, tender uterus, causing severe menstrual cramps and non-cyclic pelvic pain.<sup>6</sup>

### *Urological causes and effects*

Interstitial cystitis (IC), also known as painful bladder syndrome, is a chronic urological condition characterized by bladder pressure, bladder pain, and sometimes pelvic pain. IC can lead to frequent urination, urgency, and

nocturia, significantly impacting the patient's daily activities and sleep quality. The chronic nature of IC often leads to a cycle of pain, increased bladder sensitivity, and subsequent pain amplification.<sup>7</sup>

### ***Gastrointestinal causes and effects***

Irritable bowel syndrome (IBS) is a common gastrointestinal cause of CPP. IBS is associated with abdominal pain, bloating, and altered bowel habits, which can exacerbate pelvic pain.<sup>8</sup> The overlapping symptoms of IBS and other pelvic conditions can complicate diagnosis and management. Additionally, inflammatory bowel diseases (IBD) such as Crohn's disease and ulcerative colitis can present with pelvic pain due to chronic inflammation and complications like fistulas and abscesses.

### ***Musculoskeletal and neurological causes and effects***

Musculoskeletal issues such as pelvic floor dysfunction can lead to CPP. Pelvic floor dysfunction includes conditions like levator ani syndrome, myofascial pain syndrome, and pelvic organ prolapse, all contributing to chronic pain and discomfort.<sup>9</sup> Neuropathic pain resulting from nerve entrapment or damage, such as pudendal neuralgia, is another significant contributor to CPP.<sup>10</sup> These conditions often lead to a vicious cycle of muscle spasm, nerve irritation, and pain amplification.

Due to the chronic pain, these patients may become victim of neuroplasticity where their pain perception to painful stimulus is modified and amplified perception is at the central nervous system level.<sup>11</sup>

Some other conditions like cervical neoplasia, fibrosis and adhesions due to previous surgeries may be the etiological factors associated with CPP.<sup>12</sup>

## **MENTAL EFFECTS OF CPP**

### ***Psychological impact***

The persistent nature of CPP significantly impacts mental health. Studies have consistently shown a high prevalence of depression and anxiety among CPP patients.<sup>13,14</sup> The chronic pain experience can lead to feelings of hopelessness, helplessness, and frustration. The uncertainty surrounding diagnosis and treatment often exacerbates these feelings, leading to a decreased quality of life.

### ***Social and occupational impact***

CPP can lead to significant social and occupational impairments. Patients often experience limitations in physical activities, affecting their ability to work, engage in social activities, and perform daily tasks. This can lead to social isolation, reduced social support, and strained relationships.<sup>15</sup> The stigma associated with chronic pain

and the lack of visible symptoms can further contribute to social isolation and misunderstanding from peers and employers.

### ***Sexual and reproductive impact***

The sexual impact of CPP is profound, with many patients reporting decreased libido, sexual dysfunction, and pain during intercourse.<sup>16</sup> This can lead to relationship difficulties and decreased sense of intimacy. Reproductive concerns, especially in conditions like endometriosis and PID, can add to the emotional burden, with fears of infertility and complications during pregnancy.

### ***Multidisciplinary approach to management***

Given the multifactorial nature of CPP, a multidisciplinary approach is essential for effective management. This involves a team of healthcare providers, including gynecologists, urologists, gastroenterologists, pain specialists, physical therapists, and mental health professionals.

### ***Medical and surgical treatments***

Medical management of CPP includes pharmacological treatments such as nonsteroidal anti-inflammatory drugs (NSAIDs), hormonal therapies, and neuromodulators.<sup>17</sup> In cases of endometriosis or adenomyosis, surgical interventions like laparoscopy can be beneficial in reducing pain and improving quality of life. For conditions like IC, bladder instillations and neuromodulation therapies are employed.

## **PHYSICAL THERAPY**

Physical therapy is crucial in managing musculoskeletal causes of CPP.<sup>18</sup> Techniques such as pelvic floor muscle training, manual therapy, and biofeedback help alleviate pain and improve pelvic floor function. Physical therapists also educate patients on posture, movement, and relaxation techniques to reduce pain and improve quality of life.

## **PSYCHOLOGICAL INTERVENTIONS**

Psychological interventions, including cognitive behavioral therapy (CBT), mindfulness-based stress reduction (MBSR), and counseling, are essential components of CPP management.<sup>19</sup> These therapies help patients develop coping strategies, reduce pain-related anxiety and depression, and improve overall well-being. Support groups and psycho education are also beneficial in providing social support and reducing feelings of isolation.

## **INTEGRATIVE THERAPIES**

Integrative therapies, such as acupuncture, yoga, and dietary modifications, are increasingly recognized for their role in CPP management. Acupuncture has been shown to reduce pain and improve quality of life in CPP patients.<sup>20</sup>

Yoga and mindfulness practices help reduce stress, improve mental health, and enhance physical function.<sup>21</sup> Dietary modifications, particularly in patients with IBS or IC, can help alleviate symptoms and reduce pain.

## CONCLUSION

CPP is a complex condition with profound physical and mental effects. Its multifactorial etiology requires a comprehensive and multidisciplinary approach to management. Understanding the diverse causes and effects of CPP is crucial for developing effective treatment strategies and improving the quality of life for affected individuals. Continued research and increased awareness are essential for advancing the diagnosis, treatment, and support for CPP patients.

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