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# Vulvodynia

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Vulvodynia is a complex disorder reported by up to 16% of women in the general population. While most patients describe it as burning, stinging, irritation, or rawness, it is underreported and underrecognized by providers. Vulvodynia is costly both economically and psychologically due to its negative impact on quality of life. Vulvodynia is a diagnosis of exclusion with unknown etiology and may involve multiple sources of pain in the same woman. Thus, there are no clinical or histopathologic criteria for the diagnosis other than consideration and careful evaluation to exclude other causes of pain. Successful therapy often requires a multidisciplinary approach with more than one therapeutic intervention to address the physical, psychological, psychosexual, and relationship components.



## Introduction

The International Society for the Study of Vulvovaginal Disease (ISSVD) most recently defined vulvodynia as “vulvar pain occurring in the absence of an underlying recognizable disease.” [1]. Vulvodynia is further classified based on the site of the pain, whether it is provoked, unprovoked, or mixed and subcategorized as generalized or localized.

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Vulvodynia significantly impacts patients' quality of life and can be the source of physical, psychosexual, and relationship distress for affected women. Similarly, clinicians experience frustration in diagnosing and treating vulvodynia in an efficient and effective manner.

The cost of vulvodynia management in the United States is estimated to be $31 to $72 billion per year [2]. Unfortunately, there remains a relative paucity of research despite the impact on women and society.

*Epidemiology*

Among women living in the United States, the prevalence of vulvodynia has been estimated to range from 4% to 16% [3–6]. A clinic-based prevalence study identified 15% (of 210 women) with localized vulvodynia [4]. Half of the patients reported lifelong symptoms whereas a significant proportion of the remaining patients reported onset following childbirth [4]. Subsequently, a population-based study found nearly 16% (of 4915 women) reported a 3-month history of vulvar pain [3]. Localized vulvodynia was confirmed in 78% who presented for clinical exam [3]. Symptoms were associated with younger age, earlier menarche, and pain with first tampon use [7]. White and African American women had similar prevalences, whereas Hispanic women were 80% more likely than either white or African American women to experience vulvar pain [3].

While 60% of women reporting vulvar pain sought treatment (the majority by at least three providers), the diagnosis remained elusive [3,7]. Similarly, a population-based study including >2200 women found that about half of women meeting vulvodynia criteria sought treatment for their symptoms and only 1.4% were diagnosed with vulvodynia [5]. Because vulvodynia is a diagnosis of exclusion, findings from epidemiologic studies without clinical confirmation should be interpreted with caution.

*Etiology*

While many theories regarding associated factors and vulvodynia have been suggested, evidence for the underlying etiology remains elusive.

*Embryology*

Vulvodynia has been associated with other chronic pain conditions including painful bladder, irritable bowel syndrome, and fibromyalgia [8,9]. Given the shared embryologic origin (urogenital sinus) for the lower genital tract, a unifying mechanism of pain development has been proposed.

*Neuropathic pain*

Perhaps the most compelling origin of vulvodynia is a neuropathic pain disorder. Neuropathic pain is defined by the International Association for the Study of Pain as a complex pain initiated by a primary lesion or dysfunction of the nervous system [10]. The pain described by patients with vulvodynia is similar in nature to that described by patients with neuropathic pain such as postherpetic neuralgia and diabetic neuropathy. Patients most often describe a burning pain which can be constant, but may be exacerbated by certain triggers. Studies suggest both central and peripheral responses to neuromodulating agents, further supporting this etiology. Additionally, patients with vulvodynia have an increase in number and caliber of nerves, specifically pain-sensing nociceptors, which may lend to increased sensitivity [11–13].

*Infection*

Potential infectious etiologies have been investigated [14–16]. While Farage et al. reported that up to 80% of women with vulvodynia have a self-reported history of recurrent vulvovaginal candidiasis, Bornstein noted that treatment with fluconazole did not improve vulvar pain symptoms among 40 women with vulvodynia, several of whom had culture-proven vulvovaginal candidiasis [17,18].