Vulvar Vestibulodynia

**General Definitions:**

- **Dyspareunia**: Difficult or painful sex in women
- **Vulvar Vestibule**: the entry way to the vagina, inside the labia but not really deep inside
- **Vulvar vestibulodynia**-also termed **vulvar vestibulitis** or **provoked localized vulvodynia**: This is a chronic clinical syndrome characterized by: 1) severe pain on vestibular touch or attempted vaginal entry, 2) tenderness to pressure localized within the vulvar vestibule, and 3) physical findings of redness of various degrees. Pain can be provoked or unprovoked by touch but it is usually not painful unless touched (provoked). Most women with this condition have painful intercourse. This is felt to be a localized superficial condition in the vestibule of the vulva.

**Vulvodynia**: This is a general term to describe vulvar pain. As defined by the International Society for the Study of Vulvar Disease (ISSVD) it is a chronic vulvar discomfort, especially characterized by burning, stinging, irritation or rawness. This is the general name used for several kinds of chronic vulvar pain.

**Generalized vulvodynia**: once termed **essential vulvodynia** or **dysethetic vulvodynia.** It describes a condition of burning sensations of the vulva outside the vestibule area. This condition is characterized by some degree of pain that occurs without touch or provocation; there are no abnormalities to skin on physical examination. This is thought to be a nerve disorder. Touch nerves may become pain nerves, for instance.

**Pelvic floor myalgia**: Tight and painful muscles in the pelvis around the vagina making intercourse painful. Tender muscles hurt with penetration. Tightness can be called vaginismus, but it is better to speak of myalgia, because historically vaginismus became thought of as a mental condition. Myalgia can feel like a “blockage” or “wall” inside the vagina. This condition is separate from vestibulodynia but the two often go together. This muscle tightness can keep the vaginal opening smaller, causing little splits in the skin at the vaginal opening during penetration. Muscles in spasm can also create a burning feeling.

**Confusing names**: vulvodynia is a general term and is also a specific diagnosis. Reading materials, internet resources and published pamphlets may use the names interchangeably. Since 2006, the ISSVD has updated the terminology but it can still be confusing.

**Anatomy:** Where is it? It is the vulvar entryway to the vagina. It is the central area of moist skin inside the inner small lips and not very far inside. It is not the vagina. The vulvar vestibule extends from near the clitoris to the back of the vaginal opening. In earliest embryo development it is related to the bladder. The tissues outside the vestibule (outer labia) and inside the vestibule (vagina) arose from different embryo layers. Each zone therefore has different and unique tissue properties including different nerve sensitivity. As a special narrow portion of skin that forms the entryway to the vagina, the vestibule is supposed to be sensitive in a positive way, but has a capacity to develop localized exquisite tenderness, i.e., vulvar vestibulodynia.

**Primary and Secondary Vestibulodynia**: Those who have always had tenderness since they first tried to use tampons or first tried intercourse are considered to have primary vulvar vestibulodynia. Secondary vulvar vestibulodynia is the term for those who were without pain or tenderness initially but later developed vulvar vestibulodynia. Bad bladder infections or episodes of bad vaginitis can precede some of these secondary cases. Experts have argued about whether a cause of secondary vestibulodynia is human papilloma virus (HPV), and it may act as a “hit and run” agent, but there is rarely evidence of the virus at biopsy years later. Topical chemical irritants can switch on vulvar vestibulodynia. Some clinicians are suspicious that yeast (candida) or candida treatments are to blame, but episodes and treatments are so common that cause and effect are hard to prove.

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**History:** Textbooks of gynecology one hundred years ago described and offered treatments for what we now realize was vulvar vestibulodynia. The original term was vaginismus but they described both skin pain and muscle tightness together. The skin aspect dropped out of the writings by the 1930s, presumably with the increasing interest in psychosomatic theories of pain. “Vaginismus” is actually a psychiatric diagnosis related to aversion to penetration, not mentioning pain. Our modern references to vulvar vestibulodynia began appearing in 1985.

**Premenopausal vulvar vestibulodynia:** the majority of women with vulvar vestibulodynia are young premenopausal women who present to their doctor or practitioner with the concern of painful intercourse. The majority of women have visited multiple providers before a clear diagnosis is determined. Other gynecologic disorder like chronic yeast infections, hormonal changes, poor relaxation and inflamed tissue are blamed for pain. Many women suffer with pain for years before help is found.

**Postpartum vulvar vestibulodynia:** 37% of women delivering babies may develop vulvar vestibulodynia as a reaction to lowered hormones after delivery and during lactation. This may be mild, moderate or severe pain and may last an average of four months. It is temporary, due to lack of estrogen that characterizes the postpartum period, although in a few women it does not resolve with the return of natural estrogen and periods.

**Menopausal pain with sex:** This is commonly called vaginal dryness or atrophy. Atrophy is a condition of thinned genital tissues from the lack of estrogen that characterizes menopause. Atrophy can be accompanied by pain with intercourse. We find that just as in younger women, the pain is usually at the entryway and is tenderness, not dryness. Use of lubricants is a good idea in menopause, and silicone lubricant is a good option. Worse pain may indicate **menopausal vulvar vestibulodynia.** Estrogen therapy usually corrects this, but not in all women. Usual instructions are to apply estrogen into the vagina, but the important location is the vestibule, and vaginal therapy may not be strong enough.

We are also seeing women in the later years of menopause who have constant burning pain arising from the vestibule. These women often have not used estrogen for years or they have used special anti-estrogen medications (such as aromatase inhibitors) as treatment for breast cancer. Their burning pain is constant and debilitating. It is a very severe example of vestibulodynia and responds to estrogen therapy directed to the vestibule.

Breast cancer survivors who cannot use estrogen products can get excellent results by learning to use a compress of liquid lidocaine anesthetic applied for 3 minutes to the painful area (followed by lubricant) just before intimacy.

**Theories to Explain Vulvar Vestibulodynia:**

Vulvar vestibulodynia is a problem of too many skin nerves in a small zone around the vaginal opening. Nerve growth seems stimulated by certain special inflammation cells that are also found in the tender zones. There are many theories explaining why vulvar vestibulodynia develops. Mine is based in Nature. The condition is strategic in its specific effect on intercourse, since intercourse is so painful that it is often intolerable for many women with this condition. My theory is that there is one circumstance in many women’s lives when Nature purposefully makes sex painful. After delivery of a baby, during breast feeding, if intimacy pain prevents another pregnancy soon, that baby has better survival. Estrogen is low during nursing and we believe this is a trigger for temporary vestibule pain. We see women who come with this personal history. Later in life with menopause, the estrogen again goes down, and the vestibule is vulnerable to developing tenderness (menopausal vestibulodynia). We have also wondered whether an estrogen trigger may explain primary vulvar vestibulodynia (pain since first attempt at vaginal penetration in young women.) Girls have no estrogen until puberty. Perhaps many girls have tender vestibules (something we don’t know since we try not to examine girls’ vulvas) and tenderness is supposed to disappear with the rise of estrogen in puberty. If for some girls the hormonal mechanism in the vestibule is faulty and the tenderness does not resolve with puberty, they are left with primary vulvar

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vestibulodynia. Primary vulvar vestibulodynia is present in 7% of young women, so it is not uncommon. Only in menopause is estrogen therapy really helpful; younger women have estrogen circulating, but somehow the vestibule may not sense it. My estrogen theory has yet to be proven, but it connects many findings.

Another observation is that vulvar vestibulodynia develops after inflammation or trauma in the vestibular zone. For instance, a bad bladder infection can cause pain to develop in some who were initially normal (secondary vulvar vestibulodynia). Exposure to a chemical irritant may have the same mechanism arising from inflammation in the vestibule. In all cases of vulvar vestibulodynia, studies of the tissue show an increase in certain inflammation cells and bigger-thicker nerves. This is different from women who do not have vulvar vestibulodynia. Current research is looking at understanding the different triggers for both primary and secondary vulvar vestibulodynia.

**Problems to rule out:** Low-grade infection of the vulvovaginal skin can cause vestibular pain. Infections like yeast infections, trichomoniasis and chronic bacterial changes should be ruled out before the diagnosis of vulvar vestibulodynia is considered.

Pelvic floor muscle tightening can be a source of pain. This results from prolonged protective contracting of pelvic floor muscles as a response to pelvic pain and/or vulvar pain. Physical therapy is very important to help with pelvic floor muscle pain as much as possible.

Dermatologic conditions of the vulva and vagina (lichen planus and lichen sclerosus) can also cause pain with intercourse. It is important to make sure that one of these inflammatory skin conditions is not the cause of painful sex. Rarely, HPV disease of the vulva can cause pre-cancerous skin changes that can lead to itching and burning with occasional cuts at the vaginal opening. Each of these skin disorders is checked by physical exam of the vulva and vagina, and biopsy of the skin can confirm the diagnosis. Vulvar pain syndromes do not pre-dispose to cancer and they are not contagious.

**Treatments for Vulvar Vestibulodynia:**

Many pill and cream therapies have been tried for vulvar vestibulodynia with varying rates of success. These include cortisone creams, hormone creams, anti-herpes therapies, anti-fungals, topical use of hot red pepper extract (capsaicin), injections of steroids, and therapies used for shingles. Since most of these therapies are used for specific infections or dermatologic disorders, it is not surprising that they are often not effective for this pain disorder.

One helpful therapy for symptom relief is topical lidocaine applied just before intercourse. This, plus use of an effective lubricant, can help many who have mild and even severe vulvar vestibulodynia have comfortable intercourse. With the temporary absence of the skin pain, women with this condition can learn to relax their pelvic floor muscles, thereby further reducing discomfort.

Diet therapy, particularly a low oxalate diet, has never been shown to have benefit in vestibulodynia. A special diet can help with bladder pain, and it suggested sometimes for that complaint. Extreme adherence to a low oxalate diet does not give healthy nutrition.

Oral medicines to treat the nervous system can be tried. Although results vary and good comparative studies are few, this treatment is still a commonly offered by many vulvar practitioners across the country. These classes of medications include the tricyclic medicines (amitriptyline, desipramine, nortriptyline), gabapentin (Neurontin®), pregabalin (Lyrica®) and duloxetine (Cymbalta®). Some of these medicines have also been mixed into a cream and applied directly to the painful vestibule. There are studies supporting the use of topical 5% lidocaine, 2% amitriptyline cream and 6% gabapentin cream as helpful for some patients.

Physical therapy helps the muscle pain (pelvic floor myalgia) that is so often associated with vulvar pain. This muscle pain is still often referred to as vaginismus. The therapist must be specifically trained in pelvic floor muscle work. Soft or firm vaginal dilators of varying sizes can be helpful for home use so that therapy can continue for each woman independently. Biofeedback with a vaginal sensor is a technique that some physical therapists may employ.
Surgery has been shown in research to give the best results in correcting vulvar vestibulodynia. More than 20 scientific studies show it to be a successful and acceptable treatment for this condition. We offer a minor procedure that we developed that is very superficial and localized to only the areas of pain. This surgery removes only the surface layer of the vestibule where the tenderness is, therefore not causing any disfigurement to the vulva. It is commonly done in the hospital’s Day Surgery Unit, but sometimes in the office with local anesthesia. Our cure rate is 85%. Usually more physical therapy is necessary after surgery to help with the relaxation of tense muscles and the transition to comfortable sex.

Professional counseling is important for patients and their partners. Vulvar vestibulodynia has a profound effect on a woman’s sense of sexuality. Many couples suffer from intimacy problems and need help coping with this difficult condition. Sex therapists are specialists in this area and can help with the complicated emotions and difficult communication that is so common with these pain problems.

**Multidisciplinary Approach to Pain:**
We like to emphasize that that treatment for vulvar vestibulodynia is most successful when it is multidisciplinary and engages several specialists. So often this problem involves skin pain, muscle tightening and emotional challenges.

![Diagram showing interrelated factors in vulvar pain](image)

- Vestibule surface pain
- Poor sexual confidence & identity
- Levator myalgia

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Conclusion:
Vulvar pain is complicated sexual pain disorder affecting 8-15% of all young women and perhaps 50% of postmenopausal women. Although it was written about in early gynecologic text books, it was “re-discovered” in the 1980s. Research is being done by us and others in hopes of providing insight as to why this affects so many women. We are devoted to helping you find a treatment to improve not only the physical pain but the emotional and psychological distress caused by vulvar vestibulodynia. This problem touches many aspects of your health—which is why we believe a multidisciplinary approach provides the best strategy for success.

References:

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