



# Vulvovaginal Disorders: An algorithm for basic adult diagnosis and treatment

## GENERAL VULVAR CARE

Through the influence of family, culture, and marketing in the United States, women are “educated” that the vulva and vagina are dirty areas that must be scrupulously cleaned and kept dry and fragrant. Achievement of these mythical goals often causes irritative symptoms or adds to the impact of vulvovaginal problems. Nature knows best how to protect the vagina and vulva and keep them clean and healthy. They do not usually require more than plain water or water with a mild, hypoallergenic soap to stay “fresh.”

### **Is a shower preferable to a bath?**

Either baths or showers are acceptable. Baths are not a risk for vaginal infection, but prolonged soaking in hot water dries the vulva, and is to be avoided.

Excessive washing is a leading cause of vulvar irritation, while lack of cleanliness is not a cause of irritative symptoms! Daily bathing or showering, once a day, is adequate. Gentle fingertip washing (avoiding cloths, sponges, or loofahs) is suggested. Scrubbing is never needed. A handheld shower is invaluable for any woman, especially when she is having difficulty reaching the anogenital area. A squirt bottle with warm water in it, used while sitting on the toilet, provides a quick bidet-like service.

### **Is soap necessary?**

Soap is not considered necessary. Anti-bacterial soaps are not usually necessary. A safe soap is Dove® bar with 50% cold cream or Cetaphil lotion cleanser®. Ivory® is pure soap and therefore tends to cause drying. Soaps with essential oils such as lavender, though natural, can be irritating. Aloe, though natural, is also highly sensitizing to some women. Body washes contain multiple chemicals, with the potential for triggering contact dermatitis.

### **What is the best form of hair removal?**

Pubic hair is there to cushion the mons and labia majora during sexual activity. Yet, many women choose to remove the hair for a number of cosmetic reasons. In most cases, this is a personal choice, and not harmful if properly done according to the type of hair and skin.

Any form of pubic hair removal has the potential to cause folliculitis and/or skin irritation in susceptible women. Shaving in the direction of the hair's growth with plenty of lather and a man's mobile-headed razor works for many women, but shaving is a significant cause of folliculitis for African American women. Laser is an excellent choice for them. Waxing can cause irritant reaction and mild folliculitis for some. Depilatories may cause contact reactions. Hair that is growing back in may be itchy and irritating.



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In some women, wiry hair can work its way under the hood of the clitoris causing irritation. In rare cases, pubic hair has caused a tourniquet around the glans clitoris. Women with coarse, wiry hair are encouraged to clip it short with scissors. Do this in the shower to prevent hairs from being entrapped. After drying, retract the hood of the clitoris and wipe with mineral oil on a cotton ball to ensure complete removal of the hair. Even a single hair stuck under the prepuce can cause considerable discomfort.

### **What is the best way to clean after using the toilet?**

Wet wipes and baby wipes are widely advertised as safe and effective, but an industry-sponsored study of safety of wet wipes was limited to four weeks.<sup>1</sup> All of these products contain alcohols and chemicals that can irritate the skin to the point of cracking or fissuring.

Cleansing after each urination or defecation can be a contributor to anogenital irritation. Washing with drying soap after each urination or bowel movement may irritate. The anogenital area should be cleansed no more than once or twice daily. Washing with soap strips away natural oil so that the skin dries out.

Undetected fecal soilage or incomplete removal of feces often leads to anal itching and perianal dermatitis. Plain white toilet paper without aloe or scent is recommended. Repeated wiping with dry toilet paper can abrade the anal area. Best practice: use a dab of plain Vaseline®, Cetaphil®, or Albolene® on a soft tissue. Clean anal area as gently as possible with several lubricated tissues, and then do a final pass to leave moisturizing ointment in place. More than a dab will result in a greasy sensation unacceptable to women and can penetrate through underwear to stain clothing.

Urinary loss is another source of irritation. Use of menstrual pads for incontinence keeps wetness against the skin; pads designed for incontinence, e.g. Poise®, Depends®, promote dryness and lessen irritation, but women who chronically leak urine may develop reddening and irritation of the vulvar skin.<sup>2</sup>

### **What practices work best for a menstrual period?**

#### **Tampons**

Tampon use can be present with infection, dermatitis, dermatosis, or vulvar pain and pelvic floor dysfunction. For many, insertion is painful and removal may be even more painful. However, it is our experience that, if tampons (slender, in an applicator that, augmented with lubricant and/or lidocaine, can slide easily) can be painlessly inserted and are used appropriately (correct absorbency for flow), they are less irritating than pads since they do not shift back and forth on the vulva. Women with severe vulvar dermatitis or dermatosis may report irritation from a tampon string. It is possible to minimize this by curling the string up into the lower vagina. For such a patient, a tampon is still less irritating than a pad.

Tampons are not the source of the bacteria that cause toxic shock syndrome (TSS). TSS is caused by toxins acting as superantigens from staphylococcus present in the vagina<sup>3</sup> or introduced by fingers or insertion of a tampon. Changes in



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the manufacturing and use of tampons led to a decline in staphylococcal menstrual TSS (mTSS) over the past decade, while the incidence of non-menstrual staphylococcal TSS has increased. Despite the very low incidence of mTSS, the disease remains of interest, because tampons are widely used.<sup>4</sup> The relationship between tampon absorbency and TSS continues, unexplained. To minimize the risk of toxic shock syndrome (TSS), the FDA encourages women to use the lowest absorbency tampon appropriate for their flow, to change every four hours, and not to leave in place overnight.<sup>5</sup>

### Menstrual pads

Skin irritation from pads can occur from chemicals such as chlorine, petroleum products, and other chemical residue from the manufacturing process. Mechanical abrasion of the pad against the skin increases the risk of irritation from chemical residues. Acrylate adhesive in Always pads can act as a contact irritant.<sup>8</sup> Organic pads (like Natracare) do not contain chemical residues, are made without petroleum, and are biodegradable. The other option is all-cotton reusable pads (such as GladRags) that are gentle for the skin, comfortable and environmentally friendly. Women with chronic vulvar irritation almost always find the switch to one of these products helpful.

### Daily panty liners

A series of 13 randomized, prospective trials of panty liners or ultra-thin pads demonstrated no clinically significant adverse effects either on the skin or on isolation frequencies or cell densities of representative genital microflora. Yet, the practice has been thought to be a source of irritation to the vulvar area, and, indeed, we recommend avoidance of both Always brand panty liners (because of acrylate in the adhesive) and the use of daily panty liners for women with vulvovaginal problems. In the woman who is comfortable day to day, who also wears panty liners, there is obviously no problem. The woman who seeks relief from chronic itching, burning, irritation or pain, needs to examine all of her behaviors.

**Menstrual cups** have been available for decades. They are a satisfactory alternative to tampons.<sup>6</sup> There are many types of cups available and multiple factors that go into the choice of cup. Check out the website: <http://www.wikihow.com/Buy-a-Menstrual-Cup>. Women who are latex allergic must take care to choose a silicone cup. Fans praise the cup for its comfort and utility, but acknowledge that it can leak.

**Natural sea sponges** have been promoted for use as menstrual tampons. Public interest in these products grew after the publicity associating toxic shock syndrome with the use of menstrual tampons. In late 1980, twelve "menstrual sponges" were examined by the University of Iowa Laboratory and found to contain sand, grit, bacteria, and various other materials.<sup>7</sup> The sponges were voluntarily recalled by the distributor. The Centers for Disease Control (CDC) in Atlanta, Georgia also reported at least one case (and possibly another) of TSS associated with the use of a sea sponge. Menstrual sponges remain controversial. The FDA has strict approval protocols for them. See the website: [www.fda.gov/ICECI/ComplianceManuals/CompliancePolicyGuidanceManual/ucm123803.htm](http://www.fda.gov/ICECI/ComplianceManuals/CompliancePolicyGuidanceManual/ucm123803.htm). Makers of Sea Pearls Sponge Tampons maintain that they have never had a case of toxic shock associated with the sponge tampon use.



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### **Is douching necessary?**

Some health researchers remain skeptical about the harm of douching, given methodological limitations and inconsistent results of prior research.<sup>9 10</sup> At the same time, there is strong evidence that vaginal douching, at best, has no benefits, and is associated with an increased risk of pelvic inflammatory disease, bacterial vaginosis, cervical cancer, low birth weight, preterm birth, HIV transmission, STIs, ectopic pregnancy, recurrent vulvovaginal candidiasis, and infertility.<sup>11</sup> It appears that, with its lack of efficacy as well as its potential for disruption of normal vaginal ecology, douching should be discouraged in all women, especially patients with vulvovaginal problems.

If vaginal odor is a problem, see your clinician to work on it.

### **What about feminine hygiene products?**

Likewise, "feminine care products" are unnecessary and contribute potential contact/ irritant exposure to women who use them. Perineal talc has been linked to ovarian cancer,<sup>12</sup> but this linkage is controversial.<sup>13</sup> We encourage women to avoid talc products. They should avoid application of feminine sprays, douches, powders, wipes, or other personal care products, prescription or over-the-counter topical preparations, herbals or natural oils not specifically recommended by an educated clinician.

We do not recommend the alternative of cornstarch routinely; we do suggest its use to reduce moisture under the abdominal pannus and in the groin (not on the vulva).

### **What about sexual activity?**

Sexual activity can cause either minor or major abrasions to the vulvar skin. Often, these are very short-lived and experienced by women as a brief interlude of post-coital burning. On occasion, the discomfort can be experienced over a longer time and a work up must be done whenever a woman complains of dyspareunia or post-coital pain bothersome enough to bring her in. Assumptions cannot be made that the sexual behavior in and of itself caused the discomfort.

In rare cases, intercourse with ejaculation can cause an allergic reaction.

Women may lubricate adequately during intercourse or not, and they sometimes use lubricants. Remember that the best possible lubricant is adequate sexual arousal.

If a lubricant is absolutely necessary, a recommended product is Pre-Seed®. This is water soluble and pH balanced. A dab of baby oil or plain cooking oil, if not attempting conception, is acceptable. Olive oil has recently been found to have the potential to harm the desmosomes (material responsible for cell to cell adhesion in the skin). Well known irritants for many: FemGlide® (hypo-osmotic, negative mucus production), Replens®, KY jelly®, Astroglide® (hyper-osmotic, irritating).



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### **What kind of clothing is preferred?**

There is no high quality evidence showing a link between vulvovaginal candidiasis and hygienic habits or wearing tight or synthetic clothing.<sup>14</sup> However, contact dermatitis produced by allergic or irritant reactions to clothing is more frequent than previously thought.<sup>15</sup> Allergy to textile dye is also increasing.<sup>16</sup> So, the advice to wear plain white undyed cotton underwear holds. Rough fabrics such as wool are also irritants.

Women frequently report that tight clothing such as jeans with a prominent in-seam, can exacerbate vulvar pain as well as the irritation of vulvar dermatoses such as lichen sclerosus. The abrasion of thong underwear can exacerbate most vulvar conditions, and has been suggested as a cause of recurrent perineal fissuring. We have noted that Tencel wick-away athletic clothing and underwear is particularly helpful to those whose skin is irritated by perspiration. Women with skin problems affecting the groin, e.g. intertrigo, hidradenitis, and dermatoses, do well avoiding briefs with elastic around the leg openings. Women's boxer shorts are made by Hanes and are available through other suppliers on-line.

Women need to know that exercising in tight, Lycra clothing may predispose them to vulvar irritation. Rinsing with warm water after exercise, if not a shower, and a change into loose clothing is good preventive activity.

Women with all types of vulvovaginal disease tell us that they are most comfortable when able to go without underwear and wear a longish skirt or caftan. Many women are accustomed to wearing underwear to bed. For symptomatic women we suggest sleeping without underwear in loose pajamas or a gown.

### **What are safe laundry products?**

While one review suggests that consumer use of enzyme-containing laundry detergent products does not pose any greater risk of skin irritation than non-biological variants, concern over these chemicals for women with irritated skin promotes encouragement of using products as free of dyes, scents, and additives as possible. Use fragrance and enzyme-free detergents such as Arm and Hammer® or All Free®. Avoid Tide® (contains enzymes).

### **What exercise and sports could cause problems?**

There is no medical evidence regarding horseback riding but the question of its contribution to pain and irritation arises. For a woman with active irritation or pain, many activities, even walking, may be problematic. Avoidance of biking, spinning, and horseback riding until the condition is in control is advised. However, it is important to consider that if a saddle is properly fitted and proper equestrian technique used, impact against the saddle is minimized. Saddles with an opening to minimize vulvar impact are also available. The same is true of bicycling.

### **Are tattooing and piercing safe?**

In many communities, these practices are unlicensed and unregulated and therefore not subject to health regulations. Risks include infections, prolonged bleeding, scarring, Hepatitis B and C, tetanus, and HIV, as well as contact irritant reactions. Since many women are sensitive to nickel jewelry, stainless steel is recommended.



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### **What is the best way to avoid allergic or irritant reactions?**

A woman may experience either allergy or irritant reaction in the vulvar area. Contact reactions occur soon after exposure and result in irritation, stinging and burning; the corresponding skin color may be deeper than in other conditions. Allergic reactions can take 48-72 hours to appear and can last up to three weeks. Allergic reactions in the vulvar area are more likely to produce itching than burning. Removal of the offending substance is the first course of action, usually by way of a soak in warm water. A thin film of Vaseline® can be applied to soothe the skin. Skin breakdown can occur in this type of reaction and either yeast or superimposed bacterial infection can follow.

The best way to avoid irritants or allergens is to be aware of their identities and stay away. Although almost any substance may be an irritant or an allergen, the most common are listed below.

### **Vulvar allergens:**

- Benzocaine
- Dyes
- Ethylene diamine in Neomycin
- Propylene glycol, other preservatives
- Fragrances
- Chlorhexidine in KY jelly
- Tea tree oil
- Imidazole anti-fungals
- Nickel
- Latex condoms, diaphragms
- Semen
- Disinfectants
- Lanolin

### **Vulvar irritants:**

- Soap, bubble bath, detergents
- Sanitary pads, adhesive on pads
- Tampon strings
- Synthetic underwear
- Secretions, sweat, and urine
- Douches, hygiene products, 5-FU cream, HPV treatments, shampoo, conditioner
- Chemically treated clothing, paper
- Nonoxyl 9, spermicides
- Lubricants
- Imidazole antifungals
- Tea tree oil
- Alcohols
- Fragrance, talc
- Methylated products
- Yogurt