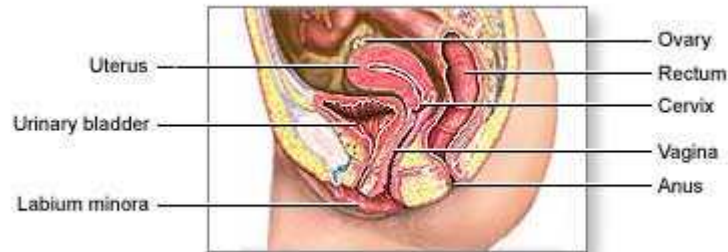


Vaginal Discharge – Normal versus infection
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Normal vaginal discharge:

All women have some vaginal discharge. Vaginal discharge is the result of secretions produced from small glands in the lining of the vagina and the cervix. Normal discharge may appear clear, cloudy white, and/or yellowish when dry on clothing. It may also contain white flecks and at times may be thin and stringy. All women have a little discharge starting a year or two before puberty and ending after the menopause.

Vaginal and cervical secretions are important to maintaining a healthy environment in the female reproductive tract. These vaginal secretions are normal vaginal discharge. Any interference with the delicate balance of vaginal secretions sets up an environment conducive to infection.



How much is normal:

The amount of discharge varies from woman to woman and varies throughout the menstrual cycle. The greatest amount of normal discharge usually occurs at midcycle (near the time of ovulation). Different women probably also have different opinions of what is normal. But if it always involves using panty shields, or changing protection or underwear several times a day, then it is probably heavier than normal and a doctor should be consulted. Changes in normal discharge can occur for many reasons, including emotional stressors, nutritional status, pregnancy, usage of medications - including birth control pills, and sexual arousal.

Vaginal Discharge in pregnancy:

It's quite common to experience increased vaginal discharge during pregnancy. It is typically caused by the same normal vaginal secretions described above. There's just a lot more of it now, partly due to increased estrogen production and greater blood flow to the area around the vagina.

The flow generally increases nearer to labor and can be quite heavy. In fact, an increase in discharge towards the end of pregnancy can be a sign that the mucus plug has become dislodged and labor may occur in the next few days. If there's a lot of thin, clear discharge, it can be hard to tell if it's just mucus or leaking amniotic fluid — if there's any doubt, contact your doctor. If you notice an increase in discharge *before* 37 weeks, especially if it's watery, mucus-like, or bloody (even if it's just tinged with pink or brownish old blood), call your doctor right away, as it can be a sign of preterm labor.

Abnormal Discharge:

Any changes in color or amount of discharge may be a sign of a vaginal infection. Vaginal infections are very common; most women will experience some form of a vaginal infection in their lifetime. If you experience any of the symptoms below, this may be a sign of vaginal infection:

- ✓ Discharge accompanied by itching, rash or soreness
- ✓ If there is suddenly a greater amount of discharge.
- ✓ Burning on skin during urination
- ✓ White, clumpy discharge (somewhat like cottage cheese)
- ✓ If the discharge changes colour from yellow-whitish to brownish, reddish or greenish.
- ✓ If it is accompanied by a foul odor

Causes of abnormal vaginal discharge:

Some conditions that can lead to abnormal vaginal discharge include:

1. Bacterial Vaginosis

Bacterial vaginosis is an overgrowth of bacteria which occurs in the vagina and can include one or more of several strains of germs. Many women mistakenly believe that yeast infections are the most common type of vaginal infection, but bacterial vaginosis affects from 10 to 64 percent of the female population at any given time, making it the most common infection of the vagina. If left untreated bacterial vaginosis may increase a woman's risk of pelvic inflammatory disease (PID), endometritis, cervicitis, pregnancy complications, and post-operative infections among other health conditions.

The vast majority of bacterial vaginosis is caused by overgrowth of the bacteria called Gardnerella. The healthy vagina includes a small amount of this bacteria and other organisms. When the vaginal balance is disrupted by the overgrowth of these bacteria, other protective bacteria are unable to adequately perform their normal function.

Risk of bacterial vaginosis increases with menopause, and in women with diabetes, routine vaginal douching, as well as women whose resistance is lowered due to other conditions.

Multiple sex partners may increase a woman's risk of bacterial vaginosis although African-American women with only one partner still have a high prevalence of infection.

Signs and Symptoms:

- ✓ Increased amount of discharge
 - ✓ Grey/white, thin, watery discharge
 - ✓ Foul/fishy odor with discharge
 - ✓ Increased odor to discharge immediately after intercourse
- Nearly half of the women with bacterial vaginosis don't display any symptoms.*

Treatment:

There is no over-the-counter treatment available. There are two treatment options with metronidazole (Flagyl) - an oral antibiotic or a topical antibiotic cream. Metronidazole can cause nausea and darkening of urine. Alcohol consumption should be avoided while on this medication, and for 48 hours after treatment, due to possible alcohol intolerance, which can result in nausea and vomiting. If you are using the vaginal antibiotic cream, it must be used daily for five days.

2. Yeast (Monilia) Infection



There is normally a small amount of yeast (*Candida albicans*) present in the vagina. A yeast infection occurs when there is an overabundance of yeast, often caused by a change in the pH balance of the vagina. Yeast infection may follow a course of antibiotics (particularly tetracycline) that were prescribed for another purpose. The

antibiotics change the normal "balance" between organisms in the vagina by suppressing the growth of protective bacteria that normally have an antifungal effect. Yeast infections are not usually sexually transmitted. However, 12% to 15% of men will develop symptoms such as itching and penile rash following sexual contact with an infected partner.

Infection is common among women who use estrogen-containing birth control pills and among women who are pregnant. This is due to the increased level of estrogen in the body. The increased hormone level causes changes in the vaginal environment that make it perfect for fungal growth and nourishment.

Yeast infections may also occur in association with diabetes or problems that affect the immune system (such as AIDS or the HIV virus).

Some Factors That May Increase Susceptibility to Yeast Infections:

- ✓ Increased stress
- ✓ Diabetes
- ✓ Pregnancy
- ✓ Use of oral contraceptives
- ✓ Use of antibiotics (protective bacteria are destroyed by antibiotics, allowing yeast overgrowth)

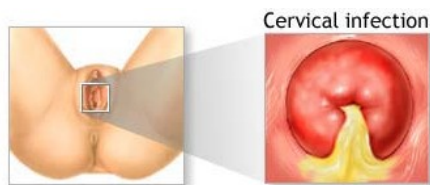
Signs and Symptoms:

- ✓ Increased amount of discharge
- ✓ Redness, itching, burning in vaginal/vulvar area
- ✓ White, clumpy (cottage cheese-like), discharge
- ✓ Pain with intercourse
- ✓ Painful Urination

Treatment:

Treatment consists of antifungal agents in the form of tablets, vaginal creams or suppositories. Over-the-counter treatments are available. However, if you are pregnant, always be sure to have any medications approved by a health care provider. Partners are not usually treated unless they are displaying symptoms such as itching or irritation in the genital area. Treatment for male partners consists of the use of fungicidal cream on the penis.

3. Trichomoniasis



This infection is caused by a one-celled protozoan organism. Trichomoniasis is almost always spread through sexual contact. However, the protozoan organism can survive for up to twenty-four hours in a moist environment, making wet towels or bathing suits

possible instruments of transmission from someone with the infection. This disease-causing protozoan cannot survive in the mouth or rectum, so it is only spread through contact with the vagina or penis. It is often found in individuals with other sexually transmitted diseases.

Signs and Symptoms:

Most men and some women don't display any symptoms, which may include:

- ✓ Yellow/green, frothy, discharge
- ✓ Foul odor with discharge
- ✓ Increased amount of discharge
- ✓ Increased frequency of urination
- ✓ Inflammation of vulva/vagina
- ✓ Itching may occur on the labia and inner thighs and the labia may appear swollen.

Treatment:

The treatment used is the oral antibiotic, metronidazole. Remember -- no alcohol consumption when taking the medication and for 48 hours after treatment. It is recommended that both partners be treated at the same time to avoid recurrent infections. Partners should be treated even if they aren't displaying any symptoms. Avoid intercourse until treatment is completed. Trichomoniasis can also increase the probability of acquiring HIV infection from an infected partner.

4. Other Sexually Transmitted Diseases:

Gonorrhea and chlamydia are other common sexually transmitted diseases that can cause an abnormal vaginal. These diseases are discussed in the Sexually Transmitted Disease topic in the ERASE website.

5. Foreign Bodies

Foreign material, such as a forgotten tampon, can cause abnormal discharge.

Ways To Prevent Abnormal Vaginal Discharge:

As discussed above, certain types and varying amounts of vaginal discharge are normal and only require routine, daily hygiene. Some tips to prevent occurrence of the abnormal discharge:

- ✓ Keep your genital area clean and dry.
- ✓ Avoid douching. While many women feel cleaner if they douche after menstruation or intercourse, it may actually worsen vaginal discharge because it removes healthy bacteria lining the vagina that are there to help protect you from infection.
- ✓ Use an over-the-counter cream or vaginal suppository, like miconazole (Monistat) or clotrimazole (Gyne-Lotrimin), **IF** you **know** that you have a yeast infection.
- ✓ Try to reduce stress.
- ✓ Eat yogurt with live cultures or take Lactobacillus acidophilus tablets when on antibiotics to try to avoid a yeast infection.
- ✓ Use condoms to avoid catching or spreading sexually transmitted diseases.
- ✓ Keep your blood sugars under good control if you have diabetes.
- ✓ If the discharge is caused by a sexually transmitted disease, your sexual partner (or partners) must be treated as well, even if they have no symptoms.

When Should You See a Doctor About The Discharge:

You should contact your doctor whenever you have a concern. Some reasons to have concern:

- ✓ Your discharge is associated with fever or pain in your pelvis or abdomen.
- ✓ You have been exposed to a sexual partner with gonorrhea, Chlamydia, or other sexually transmitted disease.
- ✓ You have increased thirst or appetite, unexplained weight loss, increased urinary frequency, or fatigue -- these may be signs of diabetes.
- ✓ You think that your discharge may be related to a medication.
- ✓ You are concerned that you may have a sexually transmitted disease or you are unsure of possible exposure.
- ✓ Your symptoms worsen or last longer than 1 week despite home care measures.
- ✓ You have blisters or other lesions on your vagina or vulva.
- ✓ You have burning with urination or other urinary symptoms -- you may have a urinary tract infection.

For more information on these topics, please see these websites:

1. www.nlm.nih.gov/medlineplus
2. www.netdoctor.co.uk/health_advice/facts/discharge.htm
3. www.mckinley.uiuc.edu/health-info/womenhlt/vagdisch.html

Pictures from A.D.A.M.