

INFECTIOUS DISEASE



The human body is constantly infected by organisms — bacteria, fungi, viruses, and protozoa. Some are actually helpful, such as the intestinal bacteria that produces some of our vitamins. Others are harmful and cause illnesses that can range from a mild cold to life-threatening meningitis. The body's immune system produces antibodies to fight and help prevent an infection.

BACTERIA Bacteria are present in soil, water, and air and can cause serious illnesses such as tetanus, typhoid, and pneumonia. Antibiotics are effective in destroying most bacteria, and some vaccines prevent certain bacterial infections, such as tetanus or diphtheria.

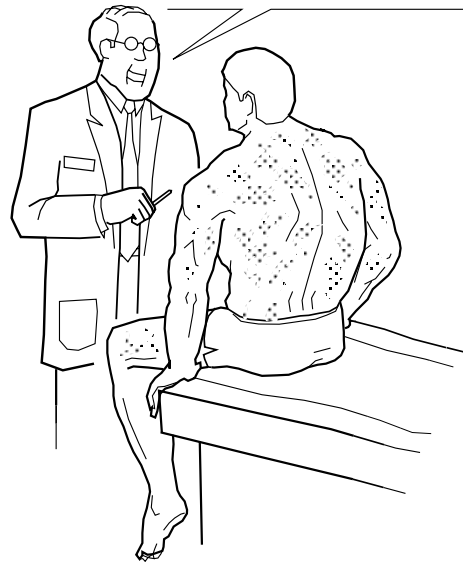
VIRUSES Infections that develop from viruses cause a wide range of diseases, including colds, the flu, hepatitis, and AIDS.

The body must produce specific antibodies to fight each virus. There are some newer drugs, however, that help to control some viruses.

FUNGI Fungi are organisms that are drawn to dead or rotting tissue. Some fungi infect humans, causing either harmless diseases of the skin, hair, nails, or mucous membranes, or fatal infections of certain vital organs, such as the lungs.

PROTOZOA Protozoa are single-celled, primitive animals (some are parasites) and can cause disease in humans, such as malaria. Malaria is very common and affects more than one-third of the world's population. Parasites have many ways of avoiding the immune system defense.

No, it probably won't clear up by this swimming party. But at least you will be a "fun guy" around the pool.





Transmission of these infectious organisms takes place in four different ways:

1. **Contact transmission**

Direct contact is person to person where there is actual physical contact. For example, herpes simplex.

Indirect contact occurs when there is a contaminated object involved in the transmission. For example, the transfer of hepatitis B virus or HIV through a contaminated needle.

Droplet spread occurs when large particles containing these organisms pass through the air to the susceptible person less than three feet away, such as coughing or sneezing infectious droplets onto another person.

2. **Airborne transmission**

This involves varying distances between the source and the receiving person. Droplets or dust particles remain in the air for extended periods of time. For example, measles, chicken pox, and tuberculosis can be spread through the air.

3. **Common vehicle transmission**

This refers to contact with a contaminated object, such as food, water, or blood products that transmits the organism to multiple persons.

4. **Vector borne transmission**

This is the spread of microorganisms by contact with insects, such as ticks, mosquitoes, or fleas. A human may inhale the organisms and affect the respiratory system. They can also enter the urinary tract, or the gastrointestinal tract by contaminated foods, water, or objects. They can enter the fetus through the placenta, or the body through a skin injury or surgery. Finally, the person receiving these organisms may be lacking effective resistance to the organism they are exposed to and become infected.



HAND WASHING

Hand washing, when done correctly, is the most effective way to prevent the spread of communicable diseases. Diseases are spread through fecal-oral transmission often as a result of not washing the hands after using the restroom. These include Salmonella, Shigella, hepatitis A, Giardia, enterovirus amebiasis, and Campylobacter. Because these diseases are spread through the ingestion of even minute particles of fecal material, hand washing following defecation cannot be over emphasized. Infections transmitted indirectly, such as influenza, strep, and the common cold can be spread indirectly by hands freshly soiled by respiratory discharges of infected people. Good hand washing technique, by rubbing your hands vigorously with soapy water, suspends both the dirt and germs trapped inside and are then quickly washed away. Follow these five simple steps:

1. Wet your hands with warm running water.
2. Add soap, then rub your hands together, making the soap lather. Do this for at least 10 seconds before washing the lather away. Wash the front and back of your hands as well as between your fingers and under your nails.
3. Rinse your hands well under warm running water. Let the water run into the sink, not down your elbows.
4. Turn off the water with a paper towel and then dispose of it.
5. Dry hands thoroughly with a clean towel.

Help children learn good hand washing techniques before eating, after playing with pets, after using the bathroom, and after blowing their noses.



SEXUALLY TRANSMITTED DISEASE (STD)

STDs are bacterial or viral infections that are transmitted through intimate sexual exposure. The diseases are caused by a number of organisms that may affect the individuals involved, their future sexual partners, and any children born with an infectious exposure from the mother.

THE MOST INFECTIOUS DISEASES

In 1995, the Center for Disease Control (CDC) found that sexually transmitted diseases account for 87 percent of cases reported for these top ten diseases. The diseases are listed in order of prevalence:

■ CHLAMYDIA (STD)

Chlamydia infections are caused by bacteria and can cause inflammation of the urethra and epididymis (men) and infection in the cervix and pelvis (women). If a baby is born through a vaginal tract with the infection, the baby can contract conjunctivitis (inflammation of the eyes or eyelids) or chlamydia pneumonia. Untreated females can develop infertility and sterility from the inflammation of the tubes.

SIGNS AND SYMPTOMS Painful urination; vaginal discharge (women); urethral discharge (men).

DRUG TREATMENT If the diagnosis is determined, both sexual partners must be treated with antibiotics, even though one may not have any symptoms. Otherwise, the infection will be continuously passed back and forth between them.

■ GONORRHEA (STD)

Gonorrhea is caused by bacteria. In men, chronic urethritis and prostatitis (inflammation of the urethra and prostate) can result. In women it may spread to the uterus and fallopian tubes causing pelvic inflammatory disease. This may result in scarring of the tubes and infertility. In some cases it may spread through the blood stream and affect other organs resulting in fever, rash, or arthralgia (painful joints).

SIGNS AND SYMPTOMS Thick pus-like discharge from the urethra, burning with urination.

TREATMENT Avoid all sexual contact until completion of drug treatment; refer sexual partner for medical checkup. Warm sitz baths and rest may help the discomfort.

DRUG TREATMENT Appropriate antibiotics will be prescribed.



■ HUMAN IMMUNODEFICIENCY VIRUS (HIV) ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

Acquired immunodeficiency syndrome, or AIDS, is caused by the human immunodeficiency virus (HIV). The disease first began in Africa and has spread throughout the world. Research has shown that there are various forms of the virus that show their prominence with different methods of transmission in various geographical areas. The virus destroys a specific type of white blood cell. As the number of these cells decline, the immune system loses its effectiveness, and death eventually occurs. New medications, however, have been effective in slowing the viral growth.

An estimated one million people in the United States are presently infected with HIV. It is transmitted through unprotected sexual contact (including oral and anal sex) with an HIV-infected partner, sharing needles for drug injections, and contaminated blood used for transfusions (an extremely low risk today). Pregnant women with HIV can pass it on to the baby before or during birth.

HIV is not spread by casual contact. The virus is very fragile and cannot live outside of the human body. HIV cannot be contracted from toilet seats, telephones, dishes, eating utensils, or drinking fountains. The virus cannot be spread by saliva, sweat, tears, sneezes, or insects such as mosquitoes, bed bugs, lice, or flies.

EFFECTS OF AIDS

Many people infected with AIDS have no symptoms and are called “asymptomatic (without symptoms) carriers.” Many people live for several years without knowing they have been infected with HIV. The only way to know is to be tested. Early medical intervention can help slow the progression of HIV infection. If you have reason to believe you are at risk, contact your physician or local health department to arrange confidential testing. HIV infection is only confirmed through documented, appropriate HIV test results. There is a “window period” between becoming infected with HIV and the development of antibodies to a level that is sufficient for detection. This window period is called “seroconversion.” Within six months of infection, approximately 95 percent of those infected can be detected with standard test procedures. Once an HIV infection is confirmed, laboratory test results are combined with the findings of the physical examination to determine the stage of the infection. Once the seroconversion has past, the patient is considered infected and is infectious to others. If tested positive for HIV, it is referred to as the chronic or ongoing stage — a new term, replacing such terms as “latency” or “asymptomatic.” These old terms are misleading, as this second stage is neither truly latent nor asymptomatic. The chronic stage lasts from 8 to 12 years. During this stage, minor signs show the breakdown of the immune system, such as weight loss, frequent infections, and swollen glands. A slow decrease in the number of



CD4 cells and T-lymphocyte cells (the white blood cells that fight to prevent infection) is reproduced. As HIV progresses,

T cells stop reproducing completely, resulting in a continual lowering CD4 count. When a healthy person gets ill, the CD4 count will at first decrease and then gradually increase back to normal levels as health is regained. When an HIV-infected individual gradually loses CD4 cells, the loss is permanent and the cells are never replaced. The normal count is between 1200 and 1500. When the CD4 count drops below 500, an HIV-infected person is diagnosed as having AIDS. At this point, he/she reaches the critical stage. The critical stage can last for an average of two to three years.

Full-blown AIDS results in different types of cancer and a wide variety of infections that affect various body sites. For example:

LUNGS	A person with HIV often develops lung infections from parasites, which often result in pneumocystitis carinii pneumonia (PCP), a severe and life-threatening pneumonia.
SKIN	Kaposi's sarcoma is the cancer most often associated with AIDS. Bluish or brown patches and nodules appear on the skin and spread to other body surfaces. Internal organs are also affected.
NERVOUS SYSTEM	If the HIV virus spreads to the brain and nervous system, it can cause mental disturbances and blindness.
DIGESTIVE SYSTEM	Persistent diarrhea is one of the most common problems caused by AIDS and is the result of an infected gastrointestinal tract.

TREATMENT

Once identified as an HIV-positive person, ongoing monitoring by CD4 cell counts and viral load is important. Often, HIV-related medical, psychiatric, and psychosocial problems are addressed. Medical interventions are made including antiretroviral therapy and prophylactic (prevention against disease) intervention for PCP. Patients with CD4 cell counts below 100, regardless of symptoms, should receive prophylactic therapy (preventative) for many infections. Personal counseling and assistance in changing unhealthy behaviors (counseling for reducing risk), such as substance abuse, is also received.

Presently, there is no cure for HIV or AIDS, and no preventive vaccine, but after 15 years of anticipating an early death, people with HIV learned in 1996 that they may have a future after all. A new type of drug may double the life span of many people infected with the HIV virus, allowing them to live 20 to 30 years or even longer. These include azidothymidine (AZT or Retrovir), dideoxycytidine (ddc), and dideoxyinosine (ddi) plus newer protease inhibitors (Ritonavir and Indinavir). These are now used earlier in the management and in combination with other antiviral drugs. When the protease inhibitors are taken with two older AIDS drugs, they block HIV so successfully that it can't even be detected in the blood



of many patients. It can also be combined with several other drugs to cripple HIV by preventing it to connect with the cell it has invaded. The protease inhibitors then prevent HIV from sending new viruses into the bloodstream in search of more cells to infect.

PREVENTION

- ◆ Because there is presently no cure for AIDS, prevention is the most important step to avoiding exposure to HIV.
- ◆ Store your own blood if you know you will be needing surgery in the near future. Contact your local blood bank for more information.
- ◆ AIDS or HIV is not always obvious by appearance. A person may be infected with HIV for ten years or more before signs of AIDS appear, and can also infect others during this period. Regardless of gender or sexual preference, routine HIV screening is advised for all persons at risk.

■ **SALMONELLOSIS** (See Digestive chapter)

■ **HEPATITIS A** (See Digestive chapter)

■ **SHIGELLOSIS** (See Digestive chapter)

■ **TUBERCULOSIS** (See Respiratory chapter)

■ PRIMARY AND SECONDARY SYPHILIS (STD)

Syphilis is a complex disease caused by a type of bacteria (a spirochete) called *treponema pallidum*. Although it was once very prevalent, it became uncommon compared with gonorrheal and chlamydia infections. Recently, the incidence has begun to rise, especially in urban areas of the United States. Usually transmitted by sexual contact, the organism enters the body through minor cuts or abrasions in the skin or mucous membranes. It can also be transmitted by infected blood and from a mother to her unborn child during pregnancy. Syphilis has three stages:

The primary stage is where painless sores appear on the genitalia, the genital area, the rectum (particularly in male homosexuals), or the mouth. This usually occurs 10 days to six weeks after exposure. Pain may occur if there is a secondary infection (common with a bacteria).

The second stage begins anywhere from one week to six months after the first bacteria has spread through the body. A red rash may appear on any surface of the body and these lesions on the skin and mucous membranes are extremely infec-



tious. Flu-like symptoms, loss of appetite, headaches, and aching in the bones and joints often occur. The disease is extremely contagious during this time.

The final stage of syphilis (tertiary) includes widespread infection, often serious, and may not develop until three to 15 years or more after exposure. The organisms spread throughout the body and may affect any of the internal organs (eg, bones, heart, brain). Rubbery tumors (gummas) appear and fester before healing with a scar. The tertiary stage may be painless and unnoticed (except for the gummas) or there may be deep pain with these sores. Syphilis can be completely cured if the diagnosis is made early and the infection is treated; however, if not treated, the disease can lead to death. If a woman contracts the disease while she is pregnant, it can be transmitted to her unborn child, causing deformities or death of the child.

In the primary and secondary stages, antibiotic therapy is the only drug treatment necessary. Since it is so infectious, the syphilitic person should not engage in sexual contacts until a blood test can prove the infection has been eliminated. Follow-up tests are required for at least one year.

■ LYME DISEASE

Lyme disease, first found in Lyme, Connecticut, is an acute inflammatory disease, involving one or more joints, and believed to be transmitted by a tick-borne disease organism. It is caused by *Borrelia burgdorferi*, a spirochete of bacteria. Symptoms recur at intervals from one to several weeks. The severity decreases over a two or three-year time period. The diagnosis is established, when suspected, by a new test called PCR (polymerase chain-reaction).

SIGNS AND SYMPTOMS

Rash; fever, chills, headache; joint pain with stiffness; and fatigue. Left untreated, late-stage Lyme disease can have severe consequences, resulting in encephalitis, heart blockage, and chronic arthritis.

DRUG TREATMENT

Antibiotics are the main course of therapy. Pain killers are often prescribed for joint symptoms. Corticosteroid hormones are often prescribed to reduce heart and nervous system symptoms. Treatment of the various signs and symptoms may continue indefinitely.

IMMUNIZATION

A new vaccination is now available to consider if repeated exposure to ticks is present

SELF TREATMENT

If fatigue is severe, rest as necessary. Avoid excessive use of inflamed or swollen joints to prevent permanent damage.



AVOIDING TICK INFESTATION DISEASES

- ◆ In tick infested areas, try to walk along cleared or paved surfaces rather than through tall grass or wooded areas.
- ◆ Wear long sleeved shirts, long pants tucked into socks, and closed shoes.
- ◆ Use insect repellants containing DEET.
- ◆ Use flea and tick collars on pets.
- ◆ If you are bitten by a tick, remove tick immediately by grasping it, as close to the skin as possible, with tweezers and tugging gently.
- ◆ If you live in an area in which deer ticks are common, mow the weeds and grass around the house.

■ HEPATITIS B (See Digestive system chapter)

OTHER SEXUALLY TRANSMITTED DISEASES

■ GENITAL HERPES

Herpes is caused by the herpes simplex virus (HSV) and may infect the genital area or the mouth and lips. It is transmitted by vaginal or oral sex. The virus enters the body through tiny cuts in the skin or mucous membranes. It can infect the eyes when contacted with contaminated fingers. It affects both men and women.

Periodically, outbreaks occur and there are usually no permanent complications besides the sores. Newborn infants can become infected as they pass through the birth canal of mothers with open sores, and may experience subsequent brain damage, blindness, and/or death. There is no known cure for herpes.

SIGNS AND SYMPTOMS

Initial pain or itching in the genital area (women) or on the penis (men) resulting in open sores and water blisters.

For women who have been diagnosed with herpes, a yearly Pap smear is highly recommended.

TREATMENT

To reduce irritation, keep the infected area clean and dry.

DRUG TREATMENT

The medication currently used is acyclovir, which speeds up healing. If the problem is continually recurring, continuous oral acyclovir treatment for several months may be helpful to avoid recurrences.



■ VENEREAL WARTS

Venereal warts (also called genital warts) are caused by the human papilloma virus (HPV). This virus causes warts on the skin. Venereal warts affect both men and women and are easily transmitted through sexual contact. Persons who have low immune systems and pregnant women are more susceptible.

SIGNS AND SYMPTOMS

Venereal warts are very similar to common skin warts in appearance. They may develop three weeks to three months after exposure to the virus. In men, they usually appear on the tip of the penis, the shaft, or scrotum. In women, they appear on the vaginal lips, inside the vagina, on the cervix, or around the anus. Venereal warts are usually not serious but are contagious. However, women with cervical lesions, caused by HPV, have a higher risk of cervical cancer and should have a pap smear each year.

DRUG TREATMENT

A topical medication may be applied directly to the warts and is prescribed for both partners.

SURGICAL TREATMENT

Treatment of the lesions may be performed with cryosurgery (freezing), laser vaporization (lasered), or burned with an electrical current (cauterized). Local or general anesthesia is necessary to perform some of these treatments.



PREVENTING SEXUALLY TRANSMITTED DISEASES

Practice safe sex. This is a term resulting from the outbreak of the deadly disease Acquired Immune Deficiency Syndrome (AIDS) and the increase in other sexually transmitted diseases (STD). Because transmission takes place through body fluids, (sperm, saliva, feces, and vaginal secretions) and genital contact, it might seem that almost all forms of sexual activity would not be safe. But, that is not true — safe sex means using a condom and spermicide and avoiding those practices that carry a high risk, such as anal sex and having sex with many partners.

See a physician, or contact the city, county, or state Board of Health Infectious Disease clinics if there is a suspicion of a sexually transmitted disease or upon learning that a sexual partner is infected. Screening and checkups for sexually transmitted diseases are simple, accurate, and confidential. If left untreated, they may result in serious health risks, infertility, or sterility. Some individuals may have noticeable symptoms while others do not. Take the precautions necessary to prevent you and your partner from contracting a STD.



KNOWLEDGE

Learn all there is to know about HIV/AIDS. There are many publications available or call your local AIDS Foundation.



ABSTINENCE

Abstinence, of course, is safest. This includes oral and anal sexual activity.



MONOGAMY

Monogamy is advised. Remember...every time you engage in sex with someone, you are having exposure from all of their former sexual partners.



SAFE SEX

Take responsibility for using condoms — do not leave it to your partner. Condoms are considered effective if used properly, *every time*.



I.V. NEEDLE USE

Avoid using intravenous recreational drugs. Never share a needle with another person. When using needles, use a new one for each injection.



LIFESTYLE TIPS

ANTIBIOTIC USE AND MISUSE

According to a recent Gallup pole, 52 percent of patients do not finish taking all of their antibiotics as directed. Of those who stop taking their medication early, one-half stop because they “feel better.” If you do not take 100 percent of the prescribed antibiotic treatment, you could be setting yourself up for a recurrence of the same bacteria or a stronger strain of that bacteria. Taking only a portion of the prescribed dose kills only the most sensitive bacteria in your system. This allows the strongest, drug-resistant bacteria to multiply and cause further problems.

A high percentage of doctors say their patients do not understand the difference between viral infections and bacterial infections, so seven out of 10 patients ask for antibiotics to treat a viral infection (eg, cold, flu), even though antibiotics cannot kill viruses — they never have, they never will. According to many health professionals, doctors who freely dispense antibiotics, as well as patients who demand them for every sniffle, have created the impending crisis of drug-resistant bacteria. Many bacteria (from the overuse or unnecessary use of antibiotics) have developed intricate ways of resisting antibiotics, resulting in a dangerous condition leaving the body with bacterial infections and no enemy to fight back.

WHO SHOULD GET A FLU SHOT?

Anyone who would rather not suffer from a case of the flu. Unless a person has had an allergic reaction to a previous flu vaccination, there is no medical reason to avoid the shot and there are good reasons to get it — nausea, sore throat, fever — to mention only a few. Anyone who cannot afford to spend a week in bed, being totally miserable, should get the shot. It is espe-



cially important in people over 65 years of age or those who have a chronic illness, such as heart or lung disease. Since the flu season usually lasts from December to March, it is a good idea to get vaccinated in October or November.

VACCINATION FOR SOME INFECTIOUS DISEASES

Smallpox was the first disease to disappear as a result of vaccination, but it will not be the last. Vaccinations are being developed for nearly two dozen major conditions ranging from HIV, herpes and gonorrhea to otitis media (ear infections, mostly in children) and rotavirus (severe inflammation of the stomach and intestines, mostly in infants).

Vaccination continues to be the most cost-effective public health measure available.

New advancements in vaccines are the development of acellular vaccines that have been

Age → ↓ Vaccine	Birth	1 Mo	2 Mo	4 Mo	6 Mo	12 Mo	15 Mo	18 Mo	4-6 Yrs	11-12 Yrs	14-16 Yrs
Hepatitis	Hepatitis B										
		Hepatitis B			Hepatitis B-3					Hep B	
Diphtheria, Tetanus, Pertusis			DTaP or DTP	DTaP or DTP	DTaP or DTP			DTaP or DTP	DTaP or DTP		DTaP or DTP
H. Influenzae type B			Hib	Hib	Hib		Hib				
Polio			Polio	Polio			Polio		Polio		
Measles, Mumps, Rubella							MMR		MMR	or	MMR
Varicella							Var				Var



effective in reducing whooping cough rates in the U.S.A. and Europe. Rotavirus, the leading cause of diarrheal disease in children is very successfully tested and has shown 100 percent protection against this severely dehydrating and often fatal disease. Others are currently being researched. The following is the recommended childhood immunization schedule in the United States as of January 1, 1997.

INFECTIONS WITH A HIGH FEVER



Fever plays a big role in combating infection, and is not all bad. It is, however, uncomfortable, so most people prefer to minimize their discomfort with remedies such as acetaminophen (Tylenol), aspirin, and ibuprofen. A word of warning, however, is in the use of aspirin for children and teenagers. Aspirin may cause Reye's syndrome that affects the brain and inner organs, a rare but sometimes fatal disease. The following tips may be helpful when one has a fever:

- ◆ If medication is prescribed, follow your doctor's instructions and be sure to report any new symptoms. Good hygiene, particularly hand washing, is important in preventing infectious illnesses that cause fever.
- ◆ Warm, but never cold baths or showers, can also help to lower fever. Cool sponge baths may help in the case of a high fever — 102 degrees or higher. Never give a child an alcohol bath. Be sure to read all the labels and instructions carefully to determine the proper dosage of medications for children. Dosage is based on weight and age. If the fever is high in children, remove the child's clothing and apply cool cloths to the head and chest.
- ◆ Children with contagious illnesses should be kept home from school or day care.
- ◆ Immunization is an important step in preventing fever-related illnesses in children and adults.

Some infectious diseases are common and can recur in the same person. Others occur only once in a lifetime because the immune system remembers the organism and resists subsequent infections. To prevent an epidemic of a serious infectious disease, (eg, polio) immunization artificially creates a memory before the disease can be acquired.



WHAT TO DO

SEVERITY LEVEL	SYMPTOM	POSSIBLE DIAGNOSIS
 <p data-bbox="311 305 472 414">Seek Medical Help Immediately!</p>	<p data-bbox="511 305 808 414">Prolonged high fever, loss of consciousness or loss of mental status</p>	<p data-bbox="932 305 1278 378">Determined by a healthcare provider</p>
 <p data-bbox="311 475 451 584">Make an appointment to see your doctor</p>	<p data-bbox="511 475 808 584">Painful urination, vaginal discharge (women), urethral discharge (men)</p>	<p data-bbox="932 475 1150 511">Chlamydia (STD)</p>
	<p data-bbox="511 620 868 693">Thick pus-like discharge from the urethra, burning with urination</p>	<p data-bbox="932 620 1143 657">Gonorrhea (STD)</p>
	<p data-bbox="511 766 836 839">Painless sores on the genitalia, genital area, rectum or mouth</p>	<p data-bbox="932 766 1229 802">Primary stage of syphilis</p>
	<p data-bbox="511 884 872 1030">Red rash on any surface of the body. Flu-like symptoms, loss of appetite, headaches, and aching in the bones and joints</p>	<p data-bbox="932 884 1258 920">Secondary stage of syphilis</p>
	<p data-bbox="511 1066 872 1175">Rubbery tumors (gummas) appear and fester before healing with a scar</p>	<p data-bbox="932 1066 1229 1102">Tertiary stage of syphilis</p>
	<p data-bbox="511 1203 872 1348">Initial pain or itching in genital area (women) or on the penis (men), resulting in open sores and water blisters</p>	<p data-bbox="932 1203 1093 1239">Genital herpes</p>
	<p data-bbox="511 1385 843 1494">Warts found on genitalia which are similar in appearance to common skin warts</p>	<p data-bbox="932 1385 1108 1421">Venereal warts</p>
	<p data-bbox="511 1530 872 1603">Rash, fever, chills, headache, joint pain with stiffness and fatigue</p>	<p data-bbox="932 1530 1093 1567">Lyme disease</p>



Make an appointment to see your doctor

Continued

Persistent or recurring jaundice; fatigue, loss of appetite, nausea and vomiting, flu-like symptoms.

Hepatitis

Nausea, abdominal pain, 12-48 hours following ingestion of food.

Salmonellosis

In children - sudden onset of fever, irritability or drowsiness, loss of appetite, nausea or vomiting, diarrhea, abdominal pain and distention.

Shigellosis

In adults - episodes of gripping abdominal pain which increase in severity and frequency. Stools contain mucus, pus and often, blood.