THE SEXUALLY TRANSMITTED DISEASES MANUAL
Includes color photos of most diseases!
THE SEXUALLY TRANSMITTED DISEASES MANUAL

5TH EDITION

ALFRED RICKS JR., M.D.

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THE SEXUALLY TRANSMITTED DISEASES

Awareness of the sexually transmitted diseases (STDs) is increasing, but the majority of the general public lacks a real understanding of these many different diseases. What can you do to protect yourself from these diseases? Can you die from any of them? What treatments are available? These and many other questions arise each and every day.

The purpose of this manual is to answer these questions and others that you may have. You should read the entire manual before you have specific questions concerning not only STDs but other diseases as well. This manual should at least provide you with a basic knowledge concerning not only STDs but other diseases as well. This manual should at least provide you with a basic knowledge concerning the absence of a vaccine to immunize for STDs. Finally, in half of the STDs referred to in this manual, it is possible to have no symptoms at all, thereby leading the infected person to unknowingly transmit the disease to others.

This brings up the subject of contacts. Contacts are those persons that have sexual contact with someone having a STD. These individuals must be treated if we are ever going to gain control of sexually transmitted diseases. If you have contracted a STD from someone and you are subsequently treated, this by itself does little to control the STD. The person to whom you subsequently may have transmitted the STD and/or the person that transmitted the disease to you MUST BE TREATED also. Oftentimes this person has no symptoms and therefore has no idea that he or she has the disease. Such persons can continue spreading the disease worse, or may alter the result of tests used in diagnosing the disease.

Whether you are sexually active or not, you should be aware of the sexually transmitted diseases (STDs) is increasing, but the majority of the general public lacks a real understanding of these many different diseases. What can you do to protect yourself from these diseases? Can you die from any of them? What treatments are available? These and many other questions arise each and every day.

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Whether you are sexually active or not, you should be aware of the sexually transmitted diseases (STDs) are the most common communicable diseases combined. The stigma of VD must be eliminated so that the disease can be dealt with effectively. Many people contract the disease because they lack a real understanding of these many different diseases. The negative attitudes of the general public also contribute to the spread of sexually transmitted diseases. Many otherwise "nice" people do not realize that mononucleosis, as well as strep throat, is spread by "nice" people to "nice" people. This attitude is blaming the victim and placing them into a false concept of guilt in those that have STDs. This can influence them into reluctance in seeking proper medical help, are probably infecting others as well as harming themselves before finally seeking treatment. If you have any suggestions of a possible STD, you should see your doctor. Persons that are sexually active should have regular medical examinations for STDs. This should at least include a visual inspection, a
blood test for syphilis, and a culture for gonorrhea. Those persons with possible STDs involving areas other than the penis or vagina (such as anal or throat gonorrhea) should have appropriate studies of those areas. Don't be afraid or embarrassed to tell your doctor if you engage in orogenital and/or anal sex. Such information will be very useful in the evaluation and treatment of a STD. Your doctor has no interest in your sexual activities other than for information to use in deciding the appropriate evaluation and treatment program for you. Don't lie or hide information from your doctor. If you are afraid or embarrassed to confide in your doctor, not only concerning STDs but in any medically related matter, then you should find a doctor with whom you can discuss such matters.

The best treatment of a disease is prevention. Since refraining from sexual contact is possibly the only sure way of preventing STDs, protective measures would seem to be a more practical approach. Protective measures are not birth control pills or the IUD. These are measures to protect against unwanted pregnancy. They are not for protection against infections. Spermicides, condoms, diaphragms, and the contraceptive sponge all provide some degree of protection from STDs. Birth control foam and other spermicidal agents offer a protective effect against many of the STDs. Spermicides containing nonoxynol-9 have been found to kill the AIDS virus and help reduce the transmission of AIDS. Spermicides and condoms are available in pharmacies and do not require a prescription. The use of spermicides with a condom and/or a diaphragm further reduces the risk of STD. The diaphragm reduces the risk of STD, pelvic inflammatory disease (PID), and cervical cancer (uterus) The vaginal sponge (trade name: Today) contains nonoxynol-9 and also reduces the risk of STD. The condom offers a high degree of protection. With the increase use of birth control pills, the use of condoms has decreased. Condom use is not only for birth control but will greatly reduce the spread of STDs. A condom (also referred to as a "rubber") is simply a thin sheath that is placed over the erect penis to prevent direct skin to skin contact during sexual contact. This not only keeps the semen/sperm inside the protective sheath but it also prevents infectious material from either sexual partner from reaching the other sexual partner. Most condoms are made of latex rubber, but there is also a type called lambskins which are made of lamb intestines. There are a wide variety of condoms: with or without lubrication, with or without spermicides, ribbed or smooth, reservoir end (extra space to hold the sperm) or plain end, and various sizes, colors, contours, and thinness. Condoms are not absolutely protective. They are about 98% effective when used correctly. Never use petroleum jelly for lubrication as this can damage the condom. Always put the condom on gently being careful not to tear it. Remove air bubbles as the condom is completely rolled on (and not pulled on) to the bottom of the penis. Leave a small empty space at the end of the condom (the tip of the penis) to hold the semen. Condoms are available that have a reservoir on the end to hold semen. Always be aware of acts that can result in tears or breaks in the condom. The condom must be used during the entire period of sexual contact. That is, the condom should be worn before any genital contact. The condom should be used only one time and should not be allowed to remain in the sexual partner until erection is lost which then allows the condom to slip off. Protect the condom from heat and abuse such as the heat exposure inside hot cars or the abuse of sitting on them inside back pockets or wallets. Condoms can provide protection against herpes, chlamydia, trichomonas, AIDS, syphilis, gonorrhea, yeast, and possibly other STDs. Of course, the condom will not protect those areas which it does not cover (pubic area and upper legs). Herpes sores can spread the virus from areas the condom does not cover. The condom will not provide protection from lice and scabies. Other diseases such as hepatitis can be transmitted by nonsexual means and therefore the condom does not necessarily guarantee protection from those diseases. The viruses of AIDS and herpes cannot penetrate the condom in most cases. There are few side effects from the condom. Very rarely, there may be an allergy to the latex of which the condom is made or to the spermicide used with the condom.

Thorough washing of the genitals and the pubic area after sexual contact can also provide slight protection from STDs. Urinating after sexual contact may also aid in lessening the chance of acquiring a STD. Reducing the number of sexual contacts will help also, as this reduces the chance of exposure. It is important to be in control and sure of your sexual decisions. Don't be reluctant to look and examine your sexual partner's genitals or to refuse sexual contact if you are unsure (particularly with a new sexual partner).

Any infection of illness may produce a wide range of emotional responses. For example, a person may respond to having the common cold with feelings of being irritable or even with depression. The same is true with a STD. An emotional response is part of the normal process of dealing with the infection. The added burden of the current negative attitudes of the general public concerning STDs plus the frequent inability to confide in friends for emotional support leads to a wide variety of emotional responses. Some of the usual predictable emotional responses are shock, anger, guilt, and fear. Of course, the emotional responses are influenced by the person's basic personality, the type of
STD, and the circumstances surrounding the contraction of the STD.

SHOCK: Learning that you have a STD is often accompanied by shock. "How could this happen to me?", "I thought that this only occurred to someone else" are not uncommon responses. Although other factors are involved in STDs, shock is a usual response to any new illness.

ANGER: Anger directed at your sexual partner for giving the STD to you or even at yourself for getting the STD is also not unusual. Some people `let off steam' or 'vent their emotions'. Anger is one way used to cope with a STD. This must be understood and controlled so as not to allow the anger to get out of hand.

GUILT and SHAME: Many people still associate STDs with lower class and the lack of personal hygiene. STDs are still associated with something that happens only to prostitutes. Many feel that a STD is punishment for their sexual activities. You will be one giant step ahead if you learn that STDs have nothing to do with income, class, or cleanliness. It does not discriminate against anyone. It can and does affect all.

FEAR: Fears associated with STDs usually are those involving concerns about developing infertility, impotence, cancer, or transmitting the disease to someone else. While all these fears are justifiable, they could be alleviated by gaining an understanding of STDs.

The National VD Hotline is 1-800-227-8922 (in California 1-800-982-5883). This toll free number service is sponsored by the American Social Health Association. They have a list of private doctors and health clinics that will accept patients for the treatment of STDs. Also, they answer questions about sexually transmitted diseases.

The diseases covered in this manual are felt to represent the most common and the most important diseases that are transmitted sexually. STDs are not restricted to any one group of society. It is quite evident that almost all infectious diseases could, in a broad sense, be classified as sexually transmitted by whatever means during sexual contact. Such infections are not included herein because, concerning the purpose of this manual, they are neither primarily transmitted by genital sexual contact nor are they significant in being transmitted by any means during sexual contact. An explanation of many of the terms used in this manual can be found in the definitions and abbreviations section (Appendix B).
Illustration of the female pelvis

Illustration of the male genitourinary tract
GONORRHEA

Gonorrhea, also referred to as the clap, GC, or strain, is caused by a bacteria known as Neisseria gonorrhoeae. It can involve the eyes, mouth, throat, anus, vagina, and the penis. "Gonorrhea" originally meant a flow of seed ( semen) and was referring to the discharge from the male penis. In 130 AD, the Greek physician, Galen, thought that this disease was an involuntary flow of semen and therefore used the name gonorrhea. "Neisseria" comes from Albert Neisser who, in 1879, first identified the organism responsible for gonorrhea.

Transmission is by sexual contact with someone that has gonorrhea. Sexual intercourse with someone with gonorrhea does not always result in transmission of the disease. If the male has gonorrhea at the time of sexual intercourse, the female's chance of getting gonorrhea is around 80%. If the female has gonorrhea at the time of sexual intercourse, the male's chance of getting gonorrhea is only about 20-35%. The more numerous the exposures, the higher the chance of getting gonorrhea. The incidence rises to about 80% with repeat exposures to the same infected woman.

Symptoms vary from person to person and also at different sites. Beginning from 2 to 8 days after contact, there will be a thick white or yellow discharge ( pus) from the penis or vagina. There may rarely be symptoms as early as 1 day after contact or as late as 1 month after contact. Many persons with gonorrhea will have tender and swollen lymph nodes present with the discharge. There is a moderate burning sensation while urinating. The person may however have only a discharge and no burning or only a burning sensation without a discharge. Rarely, neither a discharge or burning will be noticed. Therefore, if you have only minimum symptoms, you should see a physician.

The cervix is the usual site of infection in the female, resulting in a discharge of pus. The cervix is deep inside the vagina and therefore this discharge may or may not be noticed. Consequently, in the female, the symptoms are usually less noticeable than in the male. The infected person without symptoms is still capable of transmitting gonorrhea. Seventy-five to eighty percent of females with gonorrhea may not recognize symptoms. Asymptomatic gonorrhea is felt to represent only about 20% of the males with gonorrhea. Most infections are transmitted by individuals that do not have symptoms or do not recognize the symptoms of gonorrhea.

Gonorrhea of the throat (gonococcal pharyngitis or pharyngeal gonorrhea) may also go unnoticed. This type of gonorrhea is contracted by orogenital sex. Symptoms, if noticed, consists of fever, chills, and a sore throat. It should be pointed out that not all of the different types of treatments for gonorrhea will eliminate or cure pharyngeal gonorrhea. Again, some of the treatments given for gonorrhea involving the urethra or cervix will not cure pharyngeal gonorrhea and it is therefore important to tell your doctor that you may have gonorrhea involving the throat.

Because there may be no symptoms, gonorrhea of the anus can also go unnoticed in more than 50% of infected persons. Anal gonorrhea is contracted either by anal sex or by autoinoculation. If the vaginal or penile discharge contaminates the anal area, it is possible for this to result in anal gonorrhea (autoinoculation). A person with anal gonorrhea may have a discharge from the anus, an anal burning sensation which is more intense during bowel movements or intercourse, blood or pus in the stool, and a sensation of incomplete bowel movements. As is the case in pharyngeal gonorrhea, some of the treatments used for gonorrhea involving the urethra or cervix will not cure anal (anorectal) gonorrhea.

Gonorrhea may involve the eyes producing a condition known as gonococcal conjunctivitis (ophthalmia). One of both eyes will become red and swollen. There will also be a drainage or pus from the infected eye(s). This infection can be very serious. Blindness can result from an infection that is not treated or that is treated too late. Gonococcal conjunctivitis usually results from transferring the infection by hand. This occurs when infected sites are touched and subsequently the eyes are touched. In the infant, the eye infection can result at birth during passage through the birth canal. Cultures are done to detect this type of infection. Treatment consists of antibiotic injections AND eye drops. Persons with gonococcal conjunctivitis should be hospitalized.

Almost half of those with gonorrhea have been found to also have a chlamydia infection (see sections on CHLAMYDIA, NONSPECIFIC URETHRITIS, and LYNPHOGRANULOMA VENEREUM).

COMPLICATIONS

GONOCOCCEMIA: Gonococcemia is an infection of the blood by the gonorrhea bacteria. It usually develops within two months of untreated gonorrhea. It is more common in females and frequently begins around the premenstrual period. There is a gonococcal arthritis-dermatitis syndrome which can result as a result of gonococcemia which causes fever, chills, joint inflammation, joint pain, conjunctivitis, pharyngitis, and skin involvement. The skin lesions are small red nodules and pustules that may or may not be tender and usually do
not itch. The joint involvement may consist of pain in several joints or it may be a single joint that is swollen and painful.

**ARTHRITEIS:** Arthritis can develop as a result of gonorrhea. This arthritis is more common in females than in males and frequently begins around the menstrual period. Gonorrhea is the most common infectious arthritis in young people. The arthritis consists of pain in various joints. The joints may be hot, red and swollen with fluid or they may only be painful. Tendonitis (inflammation of the tendons) is commonly present and there may also be fever and chills. The arthritis consists of pain in various joints. The joints may be hot, red and swollen with fluid or they may only be painful. Tendonitis (inflammation of the tendons) is commonly present and there may also be fever and chills. The arthritis consists of pain in various joints. The joints may be hot, red and swollen with fluid or they may only be painful. Tendonitis (inflammation of the tendons) is commonly present and there may also be fever and chills. The arthritis consists of pain in various joints. The joints may be hot, red and swollen with fluid or they may only be painful. Tendonitis (inflammation of the tendons) is commonly present and there may also be fever and chills.
complications result from the inflammation caused by spread of gonorrhea to other nearby areas. Other bacteria may result in infections of these areas. Because effective antibiotics for gonorrhea are available, prostatitis and epididymitis are now very rarely due to gonorrhea. In most men under the age of 35 with epididymitis, the cause is Chlamydia trachomatis.

**BARTHOLIN'S GLAND ABSCESS:** Another complication of gonorrhea in the female is infection of Bartholin's glands. These glands are located in the vaginal area. Rarely, a gland will become painfully swollen with bacteria and pus, resulting in a Bartholin's gland abscess. This abscess swells and pushes outward from the vaginal area.

There currently isn't a blood test for gonorrhea. A gram stain and culture are used to diagnose gonorrhea. If you believe there is a possibility of having throat or anal area. In these instances, a culture is much more indicated.

**Culture:** As mentioned previously, gram stains are very useful but may not always be accurate. Gram stains of urinary discharges from the vagina can be misleading since there are other bacteria present in the vagina which may appear as the gonorrhea bacteria. A culture will aid in clarification of an equivocal diagnosis. To obtain a culture, a specimen (the discharge material or a scraping of the suspected involved area) is taken and transferred to a container which has a substance in it which will support the growth of Neisseria gonorrhoeae while inhibiting the growth of other and similar bacteria. After two to three days of growing on this substance, the container will have a very large number of the bacteria present which can then be tested with various methods and chemicals which will positively reveal whether or not it is Neisseria gonorrhoeae, the specific bacteria of gonorrhea. Culturing of the urinary sediment is also helpful in the female. A follow-up culture should be obtained four to seven days after treatment of gonorrhea to verify a cure.

**TREATMENT:**

There are several medications used for the treatment of gonorrhea. Procaine penicillin has been the most used medication in the past. It is given in two injections, one in each hip. Also the drug probenecid is given orally at the same time. Probenecid causes the penicillin to stay in the bloodstream for a longer time. Current treatments include an injection of ceftriaxone (Rocephin) 250mg, or a single oral dose of cefixime (Suprax) 400mg + ofloxacin (Floxin) 400mg, or a single oral dose of ofloxacin (Floxin) 400mg, or a single oral dose of ofloxacin (Floxin) 400mg + ciprofloxacin (Cipro) 500mg + amoxicillin (Augmentin) 500mg + clindamycin (Cleocin) 300mg + tetracycline (Achromycin) 500mg + tetracycline (Achromycin) 500mg. It is possible to have an unremarkable gram stain and still have gonorrhea, therefore a culture is usually indicated.

**Gram Stain:** This procedure is named after Hans Christian Gram, the developer of the procedure. With this stain, bacteria can be identified as gram positive (meaning they take on the dark blue color of the stain) or gram negative (meaning they do not take on the dark blue color but do take on the red color of a subsequent stain). A specimen (discharge or scraping) is smeared on a glass slide. This specimen is then stained with a blue coloring agent and a red coloring agent (other agents and processes are used to complete the procedure). The specimen is then examined under a microscope for bacteria in pairs that take up the red stain (gram positive). If these bacteria are seen, particularly inside white blood cells, there is an almost 100% diagnostic accuracy in discharges from the penis. This drops to a 60% accuracy level in female urinary discharges, and is even less in smears of the throat and anus. In these instances, a culture is much more accurate. It is possible to have an unremarkable gram stain and still have gonorrhea, therefore a culture is usually indicated.

**Culture:** As mentioned previously, gram stains are very useful but may not always be accurate. Gram stains of urinary discharges from the vagina can be misleading since there are other bacteria present in the vagina which may appear as the gonorrhea bacteria. A culture will aid in clarification of an equivocal diagnosis. To obtain a culture, a specimen (the discharge material or a scraping of the suspected involved area) is taken and transferred to a container which has a substance in it which will support the growth of Neisseria gonorrhoeae while inhibiting the 

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A vaccine against gonorrhea is currently being evaluated.

Beta gonorrhea is a gonorrhea bacterium that has the ability to produce an enzyme called beta lactamase (penicillinase). This enzyme breaks up the penicillin and thereby renders the penicillin ineffective against gonorrhea. Of course this means that the standard treatment of gonorrhea with penicillin will not cure the disease and other antibiotics must be used. Everyone should have a culture four to seven days after treatment of gonorrhea to make sure that the treatment has cured the disease. Other cultures should be done one month and three months after the initial negative culture. All treated individuals that are found to have a repeat positive culture should have their cultures tested for the possibility of beta gonorrhea. Anyone with a high possibility of having beta gonorrhea should be checked for this possibility initially. Such persons are those that have a history of sexual activity in Southeast Asia or sexual contact with possible beta gonorrhea.

Although the incidence in the United States is low, the majority of cases of beta gonorrhea have been reported in Florida, New York, and in servicemen in San Diego (probably related to exposure in Southeast Asia). Beta gonorrhea is also referred to as Penicillinase-Producing Neisseria Gonorrhoeae (PPNG). The symptoms and complications of beta gonorrhea are the same as non-beta gonorrhea.
Gonorrhea involving the eyes.
Skin lesion of the foot due to gonorrhea which has spread through the blood to this site.

Illustration of Pelvic Inflammatory Disease (PID) with a swollen and infected fallopian tube plus surrounding inflammation.
SYPHILIS

The name of this disease comes from the name of a mythical shepherd. Syphilis was the name of a shepherd in a poem written in 1530 by Hieronymus Fracastorius. In the poem, Syphilis blasphemed the sun god. As punishment, the sun god gave a disease to the shepherd. The poem describes the effects of this disease. At the time the poem was written, there was awareness of a disease (syphilis) which was known as the great pox due to the severe outbreaks of the disease. The current name—small pox—contrasts to the great pox in the myth. Syphilis, which is the name of the disease, is derived from the mythological shepherd. Syphilis was the name of a shepherd in the mythological story.

During the 1700’s, there were some who felt that gonorrhea and syphilis were separate diseases. The John Hunter incident should serve to remind you that a person can have more than one STD at the same time. Only a few hours and is then transported to every organ in the body. Therefore, the sore may be on the genitals, anus, lips, tongue, and many other sites. When the chancre first appears, the serologic tests for syphilis (STS; blood tests) can be negative, becoming positive within the next 1 to 2 weeks. The chancre is usually as a red nodule that will develop into a sore (a chancre) that will become highly contagious. The chancre can transmit the syphilis organism from one person to another. Contact with the sores or the rash of syphilis can be through skin-to-skin contact, blood-to-skin contact, or mucous membrane contact. The syphilis organism can enter the body through the mucous membranes (mouth, anus, lips, vagina). These mucous membranes are infected through contact with the sores of syphilis on the mucous membranes. The organism is highly contagious and can be transmitted from person to person or from contact with the rashes that are due to syphilis. While transmission through the mucous membranes is more common, the organism of syphilis can enter through any break in the skin. Once inside the body the organism reaches the bloodstream in only a few hours and is then transported to every organ in the body. Except for pregnant women who can pass syphilis to their babies, persons with syphilis for greater than 4 years are generally not infectious.

Syphilis can cause blindness, heart disease, blood vessel disease, brain disease, and many other major illnesses. Syphilis can be thought of as producing diseases and abnormalities in the entire body! Sir William Osler indicated that if a doctor knows syphilis then the doctor knows medicine. This is because of the widespread abnormalities, signs, and symptoms that are a result of the disease.

Syphilis has several stages:
1- Incubation stage.
2- Primary stage.
3- Secondary stage.
4- Latent stage.
5- Late or tertiary stage.

Incubation Stage:
There are no symptoms during this stage. This is not until 10 days to 3 months after sexual contact with the infected person that the blood test is negative. The problem this stage presents is that gonorrhea and syphilis can be transmitted by a person who is not only still at risk of acquiring syphilis. If you have known contact with someone with syphilis you should be treated. Again, a negative blood test does not mean you are free of syphilis. If you have known contact with someone with syphilis they should be treated, too. If you have known contact with someone with syphilis you should seek treatment even if the blood test is negative. A person in the incubation stage cannot be diagnosed by a blood test. This stage lasts 4 weeks. Usually the sore is not painful and begins as a red nodule that will develop into a sore (a chancre). The chancre may go unnoticed, mistaken for another minor ailment, and cause little to no pain. The chancre may go unnoticed on areas other than the penis. The painless chancre on the throat may not be recognized. On the lips or in the mouth it may be mistaken for a cold sore. A rectal chancre can be mistaken for a hemorrhoid or the result of a lack of lube. The chancre may go unnoticed for more than one month. The chancre is usually only a single chancre, but is is possible to have more than one chancre present. The edge of the chancre is highly contagious. The lymph nodes in the area of the chancre may go unnoticed, mistaken for another minor ailment, and cause little to no pain. The chancre will heal.
and disappear in a few days or weeks without any treatment. Be sure to understand that the chancre heals but the infection and the effects of syphilis continues.

Secondary Stage:
If there has been no treatment of the syphilis during the primary stage, it will progress to this stage. The symptoms of this stage begin from 2 to 6 months after the initial infection. It is not uncommon for someone to discover they have syphilis only after the secondary stage appears. There may be several months between the disappearance of the chancre and the appearance of the secondary stage. During these months the person may have no idea of having syphilis. A rash, which is the most prominent symptom of secondary syphilis, will reappear. The rash may range in appearance from small bumps to those resembling measles, chicken pox, and may range in appearance from small bumps to those resembling measles, chicken pox, or (the usual definition) the period after the secondary symptoms disappear and before damage occurs to body organs. Since the rash of secondary syphilis, as the period between recurrences of the signs and symptoms of secondary syphilis, or (the usual definition) the period after the secondary symptoms disappear and before damage occurs to body organs. Since there are no symptoms, this stage is diagnosed by lab studies only. Except for women who can occasionally transmit the disease to their babies during pregnancy, persons with latent syphilis usually are not infectious to others. Persons may remain in this stage for the rest of their lives without progression or they may progress to the late stage. Treatment of syphilis up to and including this latent stage is simple and offers a complete cure. This is not true once a person enters the late stage.

Latent Stage:
This is the stage in which there are no symptoms. The latent stage can be considered as the period between the disappearance of the chancre and the appearance of secondary syphilis, as the period between recurrences of the signs and symptoms of secondary syphilis, or (the usual definition) the period after the secondary symptoms disappear and before damage occurs to body organs. Since there are no symptoms, this stage is diagnosed by lab studies only. Except for women who can occasionally transmit the disease to their babies during pregnancy, persons with latent syphilis usually are not infectious to others. Persons may remain in this stage for the rest of their lives without progression or they may progress to the late stage. Treatment of syphilis up to and including this latent stage is simple and offers a complete cure. This is not true once a person enters the late stage.

Late (Tertiary) Stage:
This stage follows the latent stage, although it may not necessarily develop from untreated latent syphilis. This stage may be diagnosed as the late stage of syphilis in 2 to 3 years. This stage involves the body systems. Such damage can involve the heart and blood vessels, and may result in heart attacks (myocardial infarctions) and strokes. It may also result in damage to the nervous system (neurosyphilis) and may cause memory loss, loss of urine and bowel control, blindness, deafness, paralysis, brain damage, and facial abnormalities. Of those persons with latent syphilis, one in four will develop late organ damage which can result in death. Involvement of the nervous system (neurosyphilis) can also result in paralysis, brain damage, and severe damage to the heart. Congenital syphilis is an infectious disease of the unborn baby which is present at birth. during pregnancy, an infected woman can transmit syphilis to her fetus (baby). This baby may be severely damaged with such abnormalities as blindness, deafness, paralysis, brain damage, and facial abnormalities. From birth to two years of age the infant can have a variety of skin lesions from those resembling diaper rash to vesicular lesions that may also involve the palms and soles. There may be a nasal discharge which is very contagious.
Other later abnormalities are deafness, nasal septal perforation, a saddle shaped nose, teeth abnormalities, joint abnormalities, and other bone problems. Treatment of the mother prior to the 18th week of pregnancy will prevent the baby from having the disease. Treatment of the mother after the 18th week of pregnancy will also cure the baby, however the later in pregnancy that treatment is given the greater the chance that the infant will have some of the effects of congenital syphilis.

Serologic Tests For Syphilis (STS):
Serologic tests for syphilis are blood tests. There are many STS that can be performed. It should be remembered that a person may have syphilis and, during the first 10 days to 3 months after infection, have a blood test that will not indicate the disease. The chancre may be present for up to 2 weeks before the blood test for syphilis is positive. It is important therefore that a repeat blood test is obtained if the test is negative and symptoms of syphilis are present. The tests are also necessary on spinal fluid if there is a possibility of syphilis being at the late stage. The spinal fluid should also be examined if there are signs and symptoms of syphilis involving the nervous system of if the syphilis infection has been present for more than one year. If you are sexually active, it is a good idea to have a blood test for syphilis every 3 months. If you and your sexual partner only have sexual contact with each other, then the chance of a STD is almost zero.

Reagin Tests: These blood tests (also referred to as nontreponemal tests) may be positive in some that do not have syphilis (a false positive result). The reason for this may be unknown or it may be due to other illnesses such as hepatitis, mononucleosis, measles, chickenpox, rheumatoid arthritis, immunizations, leprosy, heroin use, and malaria. There are other reported conditions that can cause false positive results. These tests generally decrease in their degree of reactivity as the person recovers from syphilis and are therefore useful in following the response to treatment.

Wassermann ---- This test is no longer used. It is one of the earliest reagin test, coming into use in 1906. The VDRL and RPR are the most common tests that are now used instead.

VDRL ---- The Venereal Disease Research Laboratory. This blood test is commonly used in screening for syphilis.

RPR ---- Rapid Plasma Reagin. This is similar to the VDRL but the method of the test allows immediate testing. The RPR is a more sensitive test than then VDRL.

General Characteristics Of Reagin Tests (VDRL and RPR):

A- The reagin test will usually remain negative with treatment during the incubation period.
B- The reagin test will usually remain negative with treatment during the early primary stage. Occasionally it will become positive for several weeks and the revert to negative.
C- The reagin test, if positive, will usually become negative within 12 months if treatment is administered during the primary stage.
D- The reagin test, if positive, will usually become negative within 18 months if treatment is administered during the secondary stage.
E- The reagin test, if positive, may or may not become negative with treatment in those having syphilis for 2 or more years.

TREPONEMAL TESTS: These blood tests use the antigen material of the organism that causes syphilis in the testing of a person's blood for possible evidence of syphilis. These tests, if positive, indicate the presence of syphilis at some point in the past. Regardless of treatment, these tests will be positive if a person currently has syphilis or if a person had syphilis in the past.

TPI ---- Treponema Pallidum Immobilization test. This is not an easy test to perform and is expensive. It can be used in especially difficult diagnostic cases to determine the presence of syphilis. The TPI is not as sensitive as the FTA-ABS. Currently the TPI is used only in research.

RPCF ---- Reiter Complement-Fixation test. The RPCF is easy to perform and is not expensive. It is not as sensitive as the other tests and therefore rarely used. Since it is not very sensitive, a positive test is usually indicative of infection.

MHA-TP ---- Microhemagglutination Assay for Treponema Pallidum. This test is less sensitive than the FTA-ABS in primary syphilis.

FTA-ABS ---- Fluorescent Treponemal Antibody Absorption. This is the most commonly used treponemal test.
Here are examples to demonstrate the use of the VDRL and the FTA-ABS blood tests. These are not absolute as other factors may be involved. If the need arises, the physician will consider other possible alternatives.

1- Positive VDRL/Negative FTA-ABS: The person has a false positive test for syphilis.
2- Positive VDRL/Positive FTA-ABS: The person has untreated syphilis.
3- Negative VDRL/Positive FTA-ABS: The person has been treated for syphilis in the past.

All blood tests which are positive for syphilis (including any positive tests done by or in your personal physician’s office) are reported to the public health office. Many types of infections, including several of the STDs, are required by law to be reported to the public health office. These reports are very confidential. Public health offices will also perform tests for syphilis.

The darkfield microscopic exam is another method used to diagnose syphilis. The lesion is scraped and the material is specially prepared for viewing under the darkfield microscope. The examiner then searches with the microscope to identify the organism of syphilis.

TREATMENT

The treatment of syphilis is an injection of a long-acting type of penicillin (Benzathine Penicillin). After treatment for recently acquired syphilis, a person is no longer infectious after approximately 2 days. However, it would be safer to wait for about 1 week or until released by your physician before resuming sexual activity. Persons exposed to syphilis within the past three months and/or felt to be in the incubation stage should be treated regardless of the result of blood tests.

There is a well known reaction which usually occurs shortly (usually within the first 12 hours) after treatment of syphilis. This is called the Jarisch-Herxheimer reaction. This is not an allergic reaction to the medication. It is only an indication that the medication is killing the syphilis organism, Treponema pallidum. Lasting 12 to 24 hours, the reaction consists of an elevated temperature (101 degrees or higher). The patient may experience pain and/or aches, but in the case of syphilis, aspirin can be taken for pain. The rash may become larger or the chancre may become more prominent. The treatment is pain medication and/or medication for fever such as aspirin. The importance of this reaction is to not mistake it for a medication allergy.

FOLLOW-UP:

Follow-up exams in the treatment of syphilis are very important. Your doctor will inform you of the interval for follow-up exams and tests. The interval depends on the treatment and stage of syphilis. In general, those with syphilis for a year or less should have follow-up evaluations every 2 to 3 months for the first year and about every 6 months for the second year. Those with syphilis for more than one year (at the time of initial treatment) the evaluation, treatment, and follow-up schedule will be much more involved and frequent.
The chancre of syphilis on the finger.
The chancre of syphilis on the upper lip.
The rash of secondary syphilis on the palms of the hands.  
This rash is contagious.

The rash of secondary syphilis on the back.  
This rash is contagious.
An infant with congenital syphilis.

The rash of secondary syphilis on the back.

This rash is contagious.
An infant with the chancre of syphilis which was acquired at birth.

Microscopic darkfield appearance of the organism, Treponema pallidum. The spiral-like objects are the syphilis organisms.
HERPES PROGENITALIS

Genital herpes was first described in 1736 by the French physician John Astruc. Genital herpes (Herpes Progenitalis) is considered to be the major STD of the 1980's due to the absence of an effective treatment and because of the large number of people contracting the disease. It is estimated that 20 million Americans have the disease and another 50 million will become infected next year. It is specifically due to the fear that has recently been generated. This fear has probably not provided medical personnel with an opportunity to explain the disease to patients. The media has often done more to frighten the public than to provide meaningful information. The general public is more afraid of getting herpes than gonorrhea or syphilis. Little media attention has been given to the other diseases such as gonorrhea, syphilis, and chlamydia which can, and more often does, result in serious complications.

Herpes infections in general and genital herpes specifically are NOT new or recent diseases. They have recently been emphasized more in the various media. This has probably done more to frighten the public than to help control the disease. It is estimated that 20 million Americans have the virus, don't confuse this with having herpes type I or II.

If you are told that you have shingles caused by herpes virus and is a member of the Herpesvirus Group. Therefore chickenpox and shingles, is known as the Varicella-Zoster virus, don't confuse this with having herpes type I or II.

HERPESVIRUS GROUP:

- Epstein-Barr Virus (Infectious Mononucleosis).
- Cytomegaloviruses (Cytomegalovirus infections; CMV).

The symptoms and lesions are the same for herpes type I and herpes type II. The first symptoms of genital herpes are pain and itching. There may also be a numbness, tingling or burning sensation. Fever may be present. A few days later blisters will appear. These blisters will appear from 2 to 20 days after contracting the virus. When the blisters appear, they may be accompanied by muscle aches, malaise, low-grade fever, chills and swollen glands. The blisters break open and are very painful. The broken blisters become small shallow ulcers which tend to progress to crust-covered sores. A few weeks later (usually 4 to 6 although the virus does not leave the body. Instead, the virus travels along nerves to the base of the spinal cord (dorsal root ganglion) where it travels. It is possible for the virus to reappear. These blisters are due to emotional stress, menstruation, fever, sunlight, poor health, fatigue, friction from tight clothing, lack of sleep, etc. Since the virus may be dormant for years, one should not automatically assume infidelity when herpes develops in a person. It is possible for the virus to reappear. These blisters are due to emotional stress, menstruation, fever, sunlight, poor health, fatigue, friction from tight clothing, lack of sleep, etc. Since the virus may be dormant for years, one should not automatically assume infidelity when herpes develops in a person.

HERPESVIRUS GROUP:

- Varicella-Zoster Virus (Chickenpox and Shingles).
- Herpes Simplex Virus Type I (HSV-I).
- Herpes Simplex Virus Type II (HSV-II).

Rectal herpes is more frequently seen in the homosexual population although it is not limited to this group. Pain and blisters are still the major symptoms. The person may also have swollen glands, constipation, and abdominal pains.

Herpes involving the eyes is serious and can cause
inflammation (conjunctivitis or pinkeye) and blindness. This usually occurs through the touching the eyes with the fingers that have been in contact with the herpes lesions. This should emphasize the importance of hand washing. Persons with eye irritation and either present or past herpes infections should not only see a doctor immediately but should also inform the doctor that they have a history of herpes.

Women with herpes have an increased chance of developing cancer of the cervix. The incidence of cancer of the cervix may be up to 4 times greater in women with herpes than in those without herpes. Pregnant women with genital herpes should give birth by cesarean section or do develop the disease to the baby at the time of birth. Sexual contact with infected infants will either die or have a severe handicap. Herpes has also been associated with an increased risk of having encephalitis, brain damage, or even dying. Over half of the infected infants will die and a fourth of those will show changes early enough to be treated successfully.

Transmission of herpes infection to the baby at the time of birth can be prevented by having the baby abort if the herpes virus is currently present or if the presence of herpes virus is uncertain, a cesarean section should be performed. If the herpes virus is not demonstrated to be present at the time of delivery, the chance of the infant getting the infection with vaginal delivery is very low. Some studies have indicated that even in pregnancies with active infections, 60% or more of infants delivered vaginally will not be infected. After birth, mothers should wash their hands, wear a gown, and cover any exposed lesions when handling the baby to prevent transmission to their children. It should be emphasized that over half of the infected infants will die and a fourth of those will show changes early enough to be treated successfully.

In the United States, pregnant women with herpes are at risk of transmitting the disease to the baby at the time of birth. Sexual contact between the mother and father during pregnancy as a result of herpes. Some infants will have birth defects if the mother has a serious genital herpes infection during pregnancy. Sexual contact with infected infants will either die or have a severe handicap. Herpes has also been associated with an increased risk of having encephalitis, brain damage, or even dying. Over half of the infected infants will die and a fourth of those will show changes early enough to be treated successfully.

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transmission of herpes. They should be used because in those without symptoms there isn’t any way to tell by looking if they are shedding the virus. The use of condoms, foam, diaphragm, etc. is not appropriate when active lesions are present. Remember, there should be no sexual contact while symptoms and/or lesions are present. One also must be careful not to spread the virus to other areas of the body, particularly the eyes. This could result in a very serious infection.

Soap and water must be done after each contact with the genitals if the herpes is on the lip if the herpes is on the vagina. Infection with one type of herpes virus does not protect one against the other. The absence of a cure does not mean that the feared complications of genital herpes can be prevented. Remember, there is also no cure for the common cold. Acyclovir ointment (Zovirax 5%), approved by the Food and Drug Administration (FDA) in 1982, may help but it is not a cure. It is more effective in initial lesions than in recurrent lesions. Acyclovir is applied to the lesions every three hours, six times per day, for seven days. Treatment with acyclovir within six days of the initial lesions will reduce both the shedding of the virus and the healing time of the lesions. It may also reduce pain.

In infection with one type of herpes virus does not protect one against the other. There are also suggestions that reinfections are not only possible but may result in more recurrences. There is no cure for herpes but treatment is available. The absence of a cure does not mean that the infection is fatal or will result in serious consequences. Most of the feared complications of genital herpes can be prevented. Remember, there is also no cure for the common cold.

Microscopic cell studies of scrapings from the lesions is not very helpful unless a herpes antibody titer (blood test) obtained 3 or 4 weeks later. Determining the type of herpes virus (type I or type II) is needed because special equipment and chemicals are needed. In comparison with a titer (blood test) obtained 3 or 4 weeks later. Determining the type of herpes virus (type I or type II) is needed because special equipment and chemicals are needed. Comparing the characteristic cells. The blood test for herpes antibodies will reduce both the shedding of the virus and the healing time of the lesions. It may also reduce pain.

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Lidocaine (Xylocaine) ointment may be needed in some cases. If there is pain when urinating, sitting in a bathtub of warm water while urinating can often provide some relief. Caution is advised, as heat may increase the inflammation of the lesions. Cold compresses should be applied to painful lesions for relief.

The lesions can become much worse if they are infected with bacteria. Medication prescribed by the physician will be required for the treatment of infected lesions.

If a person thinks that he or she may have herpes, then that person should see a doctor. There are several reasons for this recommendation. Self-diagnosing can be dangerous. There are other diseases such as candidiasis, molluscum contagiosum, and dermatitis which can cause genital ulceration or blisters similar to those caused by herpes. The treatment of the other diseases would be different and may even be simple. It is not uncommon for someone to wait many months, believing they have herpes, before they finally consult a doctor. It is also not uncommon for that someone to be informed by the doctor that they do not have herpes but instead only a simple dermatitis (skin rash). It is easy to understand that this is a great mental relief to that person because psychological effects and problems such as impotence, guilt, divorce, depression, and suicide are known to be associated with some cases of herpes infections. If that person actually does have herpes, the doctor can not only confirm the infection but the doctor can also give specific information on the care of the lesions.

The Herpes Resource Center in Palo Alto, California sponsors over 50 HELP groups (Herpetics Engaged in Living Productively). These groups assist those that request assistance with herpes. They provide information about research, prevention, and treatment of herpes. Send a stamped, self-addressed envelope to: Herpes Resource Center, Box 100, Palo Alto, Ca. 94302. A newsletter about herpes is also available. Named "The Helper", it can be ordered for a small fee at the same address.

Relief from herpes is on the horizon. Advances are continually being made. Stay away from those so-called "herpes cures". Discuss with the doctor your concerns about herpes. You will find that such discussions will greatly aid not only in your understanding of herpes but also in coping with the disease. Remember, herpes is NOT the plague that the media has declared it to be. The problems of herpes are infrequent, can be controlled, and are unlikely to be a threat to your life.

There are promising attempts to produce a vaccine against herpes. Successful immunization with a herpes vaccine would provide protection against herpes just as polio vaccine provides protection against polio. There are reports that a herpes vaccine is also effective in those who currently have herpes infections. If the early reports of success are confirmed, a herpes vaccine will be available within 2 to 5 years.
The lesions of genital herpes on the penis.
The lesions of genital herpes on the vagina.
The lesions of genital herpes on the vagina.

The lesions of genital herpes around the vagina.
The lesions of herpes simplex on the lower lip.

Skin lesions in an infant due to herpes.
NONSPECIFIC URETHRITIS (NSU)

This sexually transmitted disease is also referred to as nongonococcal urethritis (NGU) and postgonococcal urethritis (PGU). Often in the medical profession, if there is uncertainty as to what something is, it names the disease for what it is not. So it is with the case of NSU. This is a urethritis with many of the symptoms of gonorrhea in which a gonococcal infection cannot be found. Postgonococcal urethritis (PGU), and nongonococcal urethritis (NGU) are probably the same disease. PGU occurs in about 40% of patients 14-21 days after penicillin treatment for gonorrhea. It is felt that both gonorrhea and PGU are acquired simultaneously in patients who later develop PGU. Because penicillin is ineffective in PGU, the symptoms of PGU are seen after treatment and resolution of gonorrhea. NSU (NGU, PGU) is two to three times more common than the estimated two million cases of gonorrhea reported each year.

Many infectious agents have been proposed as the cause of NSU. It appears that only two agents are usually responsible. They are Chlamydia trachomatis and Ureaplasma urealyticum (also known as T-strain Mycoplasma). Chlamydia trachomatis is also the organism involved in Lymphogranuloma Venereum and has been implicated in Reiter's syndrome (both are discussed elsewhere in this manual). The evidence supporting these two agents as causing NSU is not as strong for Ureaplasma urealyticum as it is for Chlamydia trachomatis. In 15% of NSU cases, neither agent can be isolated. Ureaplasma urealyticum has been found in some men without evidence of urethritis.

The incubation period of NSU is 2-3 weeks. The symptoms are the same as gonorrhea. It is difficult, if not impossible, to separate NSU and gonorrhea on the basis of symptoms alone, but a general pattern is:

**GONORRHEA**

- **Incubation:** 2 to 7 days.
- **Dysuria:** Moderate to severe.
- **Discharge:** A profuse yellowish to greenish discharge.

**NONSPECIFIC URETHRITIS**

- **Incubation:** 2 to 3 weeks.
- **Dysuria:** Mild
- **Discharge:** A white watery discharge mostly resent in the morning on arising.

The symptoms of NSU can be mimicked by irritation or allergies to deodorants, creams, soaps, etc. Chemical or physical irritation of the urethra can also cause NSU symptoms. A culture is the only definite way to establish the diagnosis of chlamydia caused NSU. Usually the diagnosis of NSU is made by exclusion. The following findings favor a diagnosis of NSU: (1)- A gram stain (described in the section on gonorrhea) that is negative. (2)- A culture which is negative for gonorrhea (also explained in the section on gonorrhea). (3)- No other disease such as syphilis, herpes, prostatitis, or trichomomas is present.

**CHLAMYDIA, CERVICITIS, PID, AND WOMEN:**

Women usually do not have recognizable symptoms of NSU. They often are suspected of having NSU only after the male partner has been found to have the infection. NSU due to Chlamydia trachomatis can cause cervicitis in women who can then transmit it to the baby at the time of delivery. In the baby, this may lead to inclusion conjunctivitis (an eye infection) or pneumonia. Women with NSU can also develop pelvic inflammatory disease (PID) as a complication just as they can develop PID as a complication of gonorrhea. The cervicitis usually has a mucopurulent discharge in the cervix opening (the cervical os). Often the woman will have few in any symptoms of cervicitis. The most common symptom, if present, is a vaginal discharge. Chlamydia is one of the most common causes of PID. PID due to chlamydia is probably more likely to result in sterility than is PID due to gonorrhea. This is because the symptoms of chlamydia caused PID are often milder and therefore the infection may be present longer before treatment. There may be only a minimum amount of pain and/or vaginal discharge which can go unnoticed by many women. The extra time of delay in the treatment of chlamydia caused PID compared to the time lapse in the treatment of gonorrhea caused PID may result in more damage occurring with chlamydia. In PID, sterility results from the infection causing damage and closing of the fallopian tube.

Although expensive, it is probably wise for sexually active women to have cultures performed for chlamydia at least once a year. This is even more important if future pregnancies are desired. Culturing for chlamydia
in the office is currently not a routine procedure and is expensive. A culture for Ureaplasma urealyticum (T-Mycoplasma) can be done routinely in the physician's office with the proper culture medium. However, most physician's offices are not equipped to perform such tests and most reliable and Ureaplasma urealyticum is less expensive, and detecting these organisms new rapid antigen tests for chlamydia. It is not less and results chlamydia in the VENEREUM and on PID in the section on PID in the section.

Both organisms, Ureaplasma urealyticum and Chlamydia trachomatis, are most commonly felt to be the cause of NSU. They are responsive to the antibiotic tetracycline. The treatment of NSU requires taking tetracycline for 1 to 2 weeks. Recurrences are possible and a second course of tetracycline may be required. If there is probable resistance to tetracycline, a different antibiotic such as erythromycin will be prescribed. It is important to take all the antibiotics as prescribed and it is equally important that sexual partners are also treated. In difficult cases with no apparent improvement with antibiotics, reinfection must be considered before testing for chemical or foreign body irritation, inflammation, or scarring as a cause. Such tests, which are expensive and require a specialist.
SCABIES

Scabies is caused by a small mite named Sarcoptes scabiei (the "itch mite"). Transmission is due to close contact with an infected person. Sexual contact is also capable of transmitting the infection, but this is due to close contact and not necessarily sexual intercourse. The organism does not live for long periods on such articles. Transmission by articles such as clothing is possible but the organism does not live for long periods. The new mites are then able to lay eggs of their own in about 2 weeks. The female then burrows under the skin and lays her eggs. The female mite can lay 2 to 3 eggs each day or two. The incubation period of scabies is about one month for the initial infection. In reinfections, shortly after transmission, the initial infection, the incubation period is a matter of a day or two.

The male scabies mite impregnates the female mite and then dies. The female mite lays her eggs. The female mite lives for 1 to 2 months and the newly hatched mites then move into the skin and the newly hatched mites cause intermittent itching which can be very agitating. The itching is often found to be worse at night. The itching is often found to be worse at night. The mite and its burrows cause red bumps and inflammation of the skin. (2) Apply lindane lotion or cream and is similar to the medicated cream. (3) At the end of the second 24 hour period wash the lindane off completely with a shower or bath and allow it to dry. (4) Retreatment is usually not necessary. Directions for the treatment of scabies, apply crotamiton again and leave it on for another 24 hours. (3) At the end of the second 24 hour period wash the crotamiton off completely by bathing or showering.

Common sense precautions include no contact with persons known to have scabies until they have been treated. Certainly do not share clothing, linen, or sleep with infected persons. Clean clothing should be worn. Personal hygiene involves wearing clean clothing, frequent hand washing, bathing, and hair washing.

The treatment of scabies is with 1% Lindane (Kwell, Scabene) lotion or cream and is similar to the medicated cream. (3) At the end of the second 24 hour period wash the crotamiton off completely by bathing or showering.
Microscopic appearance of the scabies mite, Sarcoptes scabiei.

An itchy skin rash on the hands caused by scabies.
PEDICULOSIS PUBIS

Pediculosis pubis is also known as crabs, lice, and pubic lice. Pubic lice (Pthirus pubis) are very small flea-like parasites. The lice do not burrow under the skin like the scabies mites, but remain among the pubic hairs. They feed on blood and live for only about 1 month. The female produces 5 to 10 eggs a day which are attached to the hairs and appear as small white nits on the hairs. These nits may be mistaken for flakes or dandruff. The eggs hatch in about 8 days.

The most common symptom of having lice is intense itching which begins within 2 weeks of infection. Transmission is through contact with an infested person during sex or even by touching contaminated clothing, linen, and other such articles. Sexual contact is not essential to transmit pediculosis. Pubic lice can live only 24 to 48 hours off the human body. The eggs of lice will not survive longer than one month in clothing or bed linen.

Head lice (Pediculus humanus capitis) and body lice (Pediculus humanus corporis) are different from pubic lice (Pthirus pubis). Head and body lice are more commonly transmitted through clothing and other articles, but transmission also occurs with close contact. Although possible, it is very rare to find pubic lice on other areas of the body or to find head lice in the pubic area. In children, the only likely site for pubic lice to be found is on the eyelashes.

The diagnosis of pubic lice is suggested by the history and the symptom of itching. The diagnosis is confirmed by identifying the lice, which may require the aid of a magnifying glass, or identifying the nits attached to the hairs.

The treatment of pediculosis with 1% lindane (Kwell, Scabene) lotion, cream, or shampoo is very effective, but instructions must be followed carefully. Prolonged and/or improper use of lindane will result in skin irritation or toxic symptoms. Do not use lindane near the eyes or on mucous membranes. Available without a prescription, A-200 Pyrinate, R & C Shampoo, Rid liquid, Cuprex, and Triple X Pediculicide are effective also in the treatment of pediculosis. Prioform lotion available by prescription is used for the treatment of head lice.

The lice and their eggs must be destroyed. Everyone (room mates, sexual contacts, etc.) should be treated so as not to reinfest each other. Clothing, towels, and bed linen should be dry cleaned or machine washed with soap and hot water and dried using the hot cycle.

TREATMENT OF PEDICULOSIS PUBIS: (1) Prior to use of the medication, take a warm bath with soap and water followed by thorough drying. (2) 1% lindane Lotion and Cream—apply to infested hair areas and leave medication on for 12 hours before washing it off. (3) 1% lindane Shampoo—shampoo the infested area for 4 to 5 minutes and then rinse it off. (4) The previous is done for the number of times prescribed by the physician. (5) After the hair is dry, the remaining nits can be removed with a fine tooth comb or with tweezers. (6) Repeat treatment is usually not necessary. If living lice are found in the pubic area after one week, a repeat treatment must be done.
Pediculosis pubis.
Microscopic appearance of the crab louse, Phthirus pubis.

Pediculosis pubis
Pubic hair infested with lice.
VAGINITIS

Gardnerella, Trichomoniasis, Candidiasis

Vaginitis is an infection or inflammation of the vagina. The infection or inflammation may remain confined to the vagina or it may progress to involve other sites such as occurs in pelvic inflammatory disease (PID). Women with vaginitis may have vaginal itching, redness, tenderness, and an aching or a burning pain occurring with or without urination. Also, women with vaginitis may experience discharge from the vagina with discharge that may be white, yellow, or darker in color. The discharge may be watery or it may be thick in consistency. Bad smelling odors may be present. Pain during sexual intercourse may also be present. The physician will inquire about these characteristics of vaginitis. The physician will also perform a pelvic examination. The characteristics of the discharge as well as the results of the examination and tests are helpful in identifying the cause of the vaginitis. One should not "freshen up" with extensive vaginal cleansing or douching prior to an examination by a physician for STDs or vaginitis because this can make it extremely difficult for the physician to make a diagnosis.

There are many causes of vaginitis (various bacteria, Trichomonas, Candida, chemicals, etc.) and while vaginitis may be due to sexually transmitted diseases, vaginitis may not necessarily be originally contacted by sexual activity. In fact, some of the organisms causing vaginitis are normally found in the vagina. This should be made known to those in relationships that can be strained by such diseases, but it should not be allowed as an excuse for those who are known to be sexually active. Sexual partners must be treated in many instances of vaginitis. The character of the discharge may aid in differentiating the presumed cause of vaginitis. Confirmation depends on the results of the various tests. Test for gonorrhea, syphilis, and other STDs should probably also be obtained in those with vaginitis. Estimates of the causes of vaginitis are:

- Gardnerella vaginalis 30%
- Candida albicans 25%
- Trichomonas vaginalis 15%
- Other Causes 30%

GARDNERELLA

Gardnerella vaginalis may very well be the most common organism involved in "nonspecific vaginitis". Nonspecific vaginitis is a term that has been used as a catch-all diagnosis. Nonspecific vaginitis is actually undiagnosed vaginitis. With a thorough evaluation, a cause of nonspecific vaginitis can usually be found.

Gardnerella vaginalis (also known as Haemophilus vaginalis or Corynbacterium vaginale) is responsible for about 35% of cases of vaginitis. The organism is usually sexual transmitted. A clue to the presence of the organism may be discharge that is usually frothy and may have a fishy odor. Treatment is usually with metronidazole (Flagyl) or ampicillin, and both partners should be treated at the same time. The treatment will aid the physician to make a diagnosis.

The discharge produced by this organism may be frothy or it may be a thin gray paste-like discharge that tends to stick to the vaginal walls. The discharge is usually malodorous and a fishy odor after sexual intercourse is a common complaint. The discharge and symptoms frequently are similar to that of candida and trichomonas vaginitis.

Microscopic examination of the discharge will aid in arriving at a presumptive diagnosis of gardnerella. A clue to the presence of gardnerella is a fishy odor after potassium hydroxide is added to a sample of the discharge. Cultures are not routinely needed as the culture may be positive in those without symptoms.

The treatment of Gardnerella vaginalis is with metronidazole (Flagyl) or ampicillin, and both partners should be treated at the same time.

TRICHOMONIASIS

Trichomoniasis is also referred to as Tric or Trichomonal vaginitis. This infection is caused by a one celled organism known as Trichomonas vaginalis. The organism is easily recognized under the microscope because of four anterior hair-like attachments (each called a flagella) which move back and forth enabling the organism to move. When viewing the organism under the microscope, the moving flagella is easily seen.

The incubation period is approximately three to twenty-one days (usually seven days). Symptoms in the female may consist of a frothy white, yellow, brown, bloody, or green discharge from the vagina. The discharge does not have to be, but is often foul smelling. There may be itching and also pain and redness of the vagina and genital area. The organism may also enter the urethra and
bladder producing symptoms of a urinary tract infection (burning on urination, urinating frequently, and strong urge to urinate). Pain during sexual intercourse is occasionally present. Males may also have a slight clear discharge, itching, and pain. Both the infected males and females may have trichomoniasis without any symptoms. The effects of prolonged infections with trichomonas are not known, but investigators express caution concerning potential complications.

Microscopic examination of the discharge or of the urine will usually reveal the presence of the organism in those individuals with trichomoniasis infected. Metronidazole (Flagyl) is taken orally and is the usual medication used in the treatment of trichomoniasis. The person with trichomoniasis and their sexual partner should both be treated at the same time if the partner is not treated concurrently, treatment is probably useless as reinfection will occur through sexual contacts. Condoms are effective in preventing infection. Pregnant women or nursing mothers, should not be used. In such instances, local vaginal care is necessary to deal with the infection. Treatment of females are also effective. Liquid drops are sometimes used but are not routinely needed.

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acquired). For vaginal candida infections such medications as miconazole, clotrimazole, and nystatin are commonly used for at least two weeks. Recurrent vaginal candida infections are not uncommon and may be difficult to eliminate. Avoiding the predisposing factors will greatly aid in preventing candida vaginitis.

OTHER CAUSES OF VAGINITIS

Infections with E. coli, gonorrhea, Streptococcus faecalis, chlamydia, mycoplasma, pinworms, ureaplasma, genital herpes, scabies, condylomata acuminata (genital warts), and tinea (fungus) can all cause vaginitis.

Chemical irritation and allergens are also a cause of vaginitis. Such things as soaps, bath oils, perfumes, sanitary pads, deodorants, douching agents, excessive douching, feminine hygiene sprays, laundry detergent residue in clothing, contraceptives (vaginal creams, foams, and gels), underclothing fabrics, and tight clothing all can cause vaginitis due to irritation. Foreign objects such as forgotten or lost vaginal tampons, intrauterine devices, and various objects that may be used in sexual activities (including saliva) have been known to cause vaginitis. Prolonged periods of wearing wet swimsuits or in hot tubs can also cause vaginitis.

Postmenopausal women can have atrophic vaginitis which is due to a decrease in the amount of female hormone (estrogen) present.

Cancer, psoriasis and excessive moisture are all capable of causing vaginitis.
CHLAMYDIA

Chlamydia is the most common cause of sexually transmitted diseases in the United States. It is now seen as an epidemic in the U.S., where 3 to 4 million people have a chlamydia infection each year.

Chlamydiae are a large group of microorganisms which have some characteristics of both viruses and bacteria. They are obligate intracellular parasites (like viruses, they must live inside cells).

There are two species of chlamydia:

1. Chlamydia psittaci
   - This species does not cause a sexually transmitted disease but is included here to provide further information on chlamydia. C. psittaci causes psittacosis (parrot fever) or ornithosis. It infects many types of birds and can also be transmitted to monkeys, mice, rabbits, and guinea pigs. When transmitted to humans, it produces an acute pneumonitis (lung infection) and also effects in various body sites. The person may have only flu-like symptoms or there may be serious pneumonia symptoms. The infection is transmitted by inhalation of the infection from the contaminated environment of the birds. Human to human transmission is rare.

2. Chlamydia trachomatis
   - This species can occur in infants or sexually transmitted in adults and is responsible for a large number of diseases, sequelae, and complications.

   A. Eye (Conjunctivitis)
      - Trachoma: This eye infection is a major cause of blindness. Children usually have redness, sensitivity, itching, and a discharge from eye to eye by contaminated items (fingers, eye cosmetics, towels, etc.). Treatment is with tetracycline.
      - Inclusion Conjunctivitis: This eye infection is primarily a venereal infection which reaches the eye via spread from the genital tract. This occurs if contaminated fingers or objects touch the eyes or if the eyes contact the infected genital material. Infants are infected at the time of birth during passage through the vagina. The infection is also called ophthalmia neonatorum, which is a general term for any infection of the eyes of infants. Ophthalmia neonatorum is also caused by herpes simplex virus type II, Neisseria gonorrhoeae, and other bacteria. The eye symptoms of inclusion conjunctivitis are usually redness, discomfort, and a discharge from the eyes. Treatment is with tetracycline or erythromycin. 1% tetracycline drops in oil is also used.

   B. Lung (Pneumonitis)
      - The infant infected with chlamydia at birth during passage through the vagina may develop chlamydial pneumonitis. Symptoms begin in the second or third week of life. The infant will have a cough, rapid breathing, and no fever.

   C. Genitourinary Tract
      - Lymphogranuloma Venereum: See the section on LGV.
      - Urethritis: See the section on NONSPECIFIC URETHRITIS.
      - Vaginitis: Chlamydia can be found listed as one of the causes of vaginitis in the section on VAGINITIS. It can also be found in the same section. Chlamydia is implicated as a cause of Reiter's syndrome. See section on REITER'S SYNDROME.
      - Epididymitis: This is an infection in the scrotum. The infection causes scrotal swelling and pain. Many of the men will also have a discharge from the urethra. In most men under the age of 35 with epididymitis, the cause is Chlamydia trachomatis.
      - Mucopurulent Cervicitis: See the section on NONSPECIFIC URETHRITIS.
      - Salpingitis and PID: See the section on NONSPECIFIC URETHRITIS and the section on GONORRHEA.
      - Perihepatitis: See Gonococcal Perihepatitis in the section on GONORRHEA.

Untreated chlamydia infections can lead to pelvic inflammatory disease (PID), infertility, epididymitis, perihepatitis, and lymphogranuloma venereum (LGV). This can result in ectopic pregnancy, sterility, and cervical dysplasia (abnormal cells on the cervix; abnormal pap smear).

Chlamydia is usually treated with the antibiotic tetracycline. Erythromycin is used for children and pregnant women.
LYMPHOGRANULOMA VENEREUM (LGV)

Lymphogranuloma Venereum (LGV) is also known as Durand-Nicolas-Favre disease (after those describing the disease in 1913). Other names by which the disease is known are lymphogranuloma inguinale, climatic bubo, poradenitis, lymphopathia venereum, and tropical bubo. LGV is found worldwide but the majority of cases are in Asia, South America, and Africa. There are 600 to 1000 cases reported annually in the United States.

LGV is caused by the bacterium Chlamydia trachomatis, which is found in the genitourinary tract of many animals but can also cause infections in humans. From the primary infection, the organism (Chlamydia) goes to nearby inguinal lymph nodes. The period from healing of the primary lesion to the onset of lymph node symptoms is usually between 5 to 21 days. The inguinal lymph nodes enlarge to form a tender mass (LGV is not the only cause of inguinal lymph node swelling). The enlarged inguinal lymph nodes may be present on both sides or only one side. These lymph nodes develop abscesses which may rupture through the skin or even rupture into surrounding tissue and blood vessels. Drainage of a thick yellowish pus will continue for several weeks until finally healing and leaving scars. Generally, a person is infectious (contagious) for as long as draining of the lesion continues. Once positive, it remains positive for life even after treatment.

LGV infections produce lifetime immunity and therefore reinfection will not occur. Once you have the disease, you cannot get it again. Still, adequate treatment is absolutely necessary. Treatment is with tetracycline or sulfonamides. The healing and resolution of the lymph nodes may mean that the disease is cured, but the lymph nodes may remain enlarged for years. The lymph nodes may enlarge again in the next several years as the virus in the lymph nodes (and possibly adjacent areas) can spread to the genitalia. No vaccines are available to prevent LGV. Urinary or rectal infections, ulcers, or any form of prolonged infections of the lymph nodes with LGV will always be known to have been caused by Chlamydia.

Chlamydia is one of the most common causes of epididymitis, cervicitis, pelvic inflammatory disease, and scarring. Less than 10% of persons with LGV will develop these serious problems. Cancer has been known to develop at sites of infection with LGV. This is because the primary lesion, the organism (Chlamydia) goes to nearby inguinal lymph nodes. The period from healing of the primary lesion to the onset of lymph node symptoms is usually between 5 to 21 days. The inguinal lymph nodes enlarge to form a tender mass (LGV is not the only cause of inguinal lymph node swelling). The enlarged inguinal lymph nodes may be present on both sides or only one side. These lymph nodes develop abscesses which may rupture through the skin or even rupture into surrounding tissue and blood vessels. Drainage of a thick yellowish pus will continue for several weeks until finally healing and leaving scars. Generally, a person is infectious (contagious) for as long as draining of the lesion continues. Once positive, it remains positive for life even after treatment.

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nodes after about a month does not seem to be changed by treatment. Treatment only prevents rectal strictures and other complications. It does not decrease lymph node pain and fever. Abscessed lymph nodes must be drained with a needle and syringe.

Inguinal lymph node swelling in LGV.

The small soft ulcer on the penis in early penile LGV.
The small soft ulcer on the penis in early penile LGV.

Vaginal (genital) swelling in a woman with chronic lymphogranuloma venereum (LGV).
MOLLUSCUM CONTAGIOSUM

Molluscum Contagiosum is a virus (poxvirus) infection limited to the skin and mucous membranes. It is seen mostly in children where it is nonsexually transmitted by direct contact usually during play. In children the lesions are usually seen on the face, arms, chest, and legs as these are the common areas of direct contact. In older persons, sexual transmission is frequently responsible for the lesions which tend to be on the genital area. Autoinoculation is also possible by scratching and exposing the contents of the lesions to the hands.

The lesions of molluscum contagiosum are waxy, smooth, firm nodules or papules with each having a depression (umbilication) in the center. The lesions begin very small and grow slowly to around 5 millimeters in size. Squeezing a lesion causes the release of a milky white substance containing the poxvirus. There are usually many lesions in the affected area. The lesions may be mistaken for blisters or for herpes in those that are unfamiliar with their appearance.

The treatment of molluscum contagiosum is electrodesiccation or curettage (expression and removal of the contents) of each nodule. Eventual resolution of the lesions without scarring will occur without treatment. Each lesion probably remains for about 2 months. Lesions may be present for up to 3 years. Autoinoculation may result in the continued appearance of new lesions while older lesions are resolving.

The lesions of molluscum contagiosum on the penis. Note the indentation in the center of each lesion.
CHANCROID

Chancroid is not a STD of great numbers. In previous years there has been from 700 to 1000 cases reported. This number has been diminishing, but it still seems to rank low among the other STDs. Recent outbreaks of chancroid have been reported more commonly than gonorrhea or syphilis. In other countries chancroid may be rated much closer to the top of the list. Chancroid is caused by a bacteria named Hemophilus ducreyi. Chancroid is more common in men than it is in women.

The incubation period of chancroid is 2 to 8 days. After the incubation period, a painful red papule appears at the site where the bacteria entered the body. This papule progresses to a pustule which ruptures to produce an ulcer. The ulcer is usually found on the genitals although it may be found on other areas such as the fingers. The ulcer may be one or several in number, may be superficial or deep, may contain pus, and may rarely be indurated. The ulcer enlarges, becomes irregular and painful with a ragged appearing edge. The ulcer of chancroid is not as hard, has a bad odor, has an edge that isn’t as smooth, is painful, and oozes pus. The ulcer of chancroid differs from the ulcer of syphilis in that the syphilis ulcer is harder, has a bad odor, has a smooth edge, is not painful, and oozes pus. Enlarged and tender lymph glands will develop in about half of untreated individuals. Many individuals will develop an infection of the involved lymph glands. If this occurs, the lymph glands will become painful, large, and hard five to eight days after the ulcer appears. The lymph glands will subsequently merge and form one large pus-filled mass. This mass may later rupture out of the skin, releasing drainage of pus and leaving a large open area. The pus is contagious and the open area may become infected with other bacteria. Lack of cleanliness is felt to also contribute to the prevalence of chancroid.

Diagnostic problems with chancroid include difficulty in culturing the agent responsible for the disease and the possible confusion of the lesion of chancroid with the lesions of syphilis, herpes, or lymphogranuloma venereum. Because chancroid may be confused with other STDs, the person must have studies not only for chancroid, but also studies for the possibility of syphilis, herpes, lymphogranuloma venereum, and granuloma inguinale. The diagnosis of chancroid is commonly based on the elimination of the other possible STDs, the appearance of the lesions, and the response to treatment. The stains and cultures are not as easily obtained in those with chancroid as they are in those with gonorrhea.

The treatment of chancroid involves the use of antibiotics both orally and topically. The pus-filled masses should not be cut into for drainage, but if needed it should be drained with a needle and syringe. The application of cool water-soaked cloths several times daily is then followed with medication containing iodochlorhydroxyquin. Frequent reexamination by the physician is necessary.

The sore (ulcer) of chancroid on the penis.
Chancroid with severe and late changes.

Inguinal lymph node swelling and penile sore in a man with chancroid.
GRANULOMA INGUINALE

Granuloma Inguinale is caused by rod-shaped bacteria known as Donovania granulomatis or Calymmatobacterium granulomatis. This disease is also known as Donovanosis and as granuloma venereum. The incubation period is usually three days to one week. It can rarely be up to six months. There are less than 100 cases each year in the United States. Most cases are seen in men.

Sexual intercourse is felt to be involved in the transmission of this disease, but poor personal hygiene is also implicated. Sexual intercourse is not highly infective, and it is not known how many lymph glands, bones, and other organs can be involved in the disease. The disease is limited to the skin and lymph glands, being usually confined to the genital and anal regions. The lesion varies in size, shape, and appearance. The lesion may be a small nodule or cyst. It may progress to a small ulcer. Usually, the lesion is a small papule on the site at which the bacteria entered the body. The papule then ulcerates causing raised masses of red tissue. The red tissue is relatively painless but bleeds easily when manipulated. This may progress to a very large ulcerated area involving all the genital, anal, thigh, and lower abdominal regions. The lesions of granuloma inguinale can cause extensive damage with deformity and dysfunction of the genitals. Blockage and destruction of lymph glands and lymph channels can result in extensive and destructive swelling of the genitals and surrounding region. There have been cases of distant lesions involving the bones, joints, and other organs.

Other STDs such as herpes, syphilis, chancroid, and LGV can be confused with or even coexist with granuloma inguinale. In suspected cases of granuloma inguinale, all of these STDs must be excluded. The diagnosis of granuloma inguinale is suggested by the appearance of the lesions. The diagnosis can be established by finding items known as Donovan bodies on microscopic examination of samples from the lesions.

The treatment of granuloma inguinale with tetracycline will usually halt the disease process at its current stage of progression. Treatment may be needed for four or more weeks because treatment should be continued until the Donovan bodies are no longer found on microscopic examination and until the skin lesions heal. The longer one waits for treatment, the greater the possibility of resistance to treatment.
The lesions of granuloma inguinale in the male.

The lesions of granuloma inguinale in the female.
CONDYLOMATA ACUMINATA

Condylomata acuminata is the name of the venereal wart which is caused by a human papilloma virus. There are 1 million new cases each year. The predominant mode of transmission is by sexual contact. The chance of transmission by sexual contact with an infected person is greater than 60%. The incubation period of condylomata acuminata is usually 2 to 3 months but may be only 2 weeks or up to 2 years.

The common warts found on the hands or face and neck, the plantar warts found on the feet, and the venereal warts found on the genital region are all probably caused by the same virus or at least a closely related virus. The warts tend to differ in appearance depending on their location and on the presence or absence of moisture. When found on relatively hard and dry areas such as the distal part of the penis, the warts are small and hard much like they appear on the fingers or on normal skin. In soft, moist areas such as the inguinal folds and the perianal area, they appear soft and cauliflower-like. They do not bleed easily and are painless. Condylomata acuminata should not be confused with condylomata lata (see Syphilis).

The treatment of condylomata acuminata is varied and difficult. Before treatment, the person with condylomata acuminata should be evaluated for the possible presence of other STDs. Keeping the area clean and dry will be helpful in the treatment of the warts. The warts can become infected with bacteria and require antibiotics for treatment. They may be frozen and destroyed with liquid nitrogen or burned off with an electrical needle. They may be treated with surgical removal of the warts. With most of the treatments it is possible for the warts to reappear and require retreatment. Podophyllin (25% podophyllin in compound tincture of benzoin) is usually the first treatment used on external venereal warts. Podophyllin is useful and is applied directly onto the wart. Multiple applications of podophyllin will eventually destroy the wart, but it must be applied carefully because podophyllin is toxic. The use of podophyllin on a large area of the vulva, the perianal area, or the vagina may result in absorption of the drug and cause dizziness and symptoms of nerve toxicity. Podophyllin can also cause intense itching if applied onto an area in large amounts or if it is allowed to remain on the lesions for prolonged periods. Therefore, the podophyllin that is required and the length of time that it should be allowed to remain on the lesions can be difficult to judge. Generally, the podophyllin should be washed off with soap and water 2-3 hours after application. After 7 days and the wart is expected to be at least half the original size at the end of the seventh day. The person should have regular check-ups about every 6 weeks for the next year and decide which treatments are necessary. If the person has complications, a Pap smear is required to monitor the condition of the warts, and Pap smears should be done every 6 weeks. Venereal warts on the vagina.
condylomata acuminata
Venereal warts on the penis.

condylomata acuminata
Venereal warts on the anus.
REITER'S SYNDROME

Reiter's syndrome is named after the German physician, Hans Reiter, who spent many years studying the disease. In 1916, he described a patient with conjunctivitis, arthritis, and urethritis. These three findings became known as the classic triad of Reiter's syndrome. Conjunctivitis is an infection or irritation of the eyes which causes an inflammation and burning sensation of the eyes. There may also be drainage from the eyes. Arthritis may be seen in any joint of the body, and swelling on a joint is a common symptom of Reiter's syndrome. The joints most commonly involved are the knees, hands, and feet. Most of those with Reiter's will recover without joint deformities, but some may be left with joint deformities.

Many cases of Reiter's syndrome begin after an episode of diarrhea or sexual contact. In other cases, Reiter's syndrome may not be transmitted. These two forms of Reiter's syndrome are cystitis, prostatitis, and urethral strictures.

The two forms of Reiter's syndrome primarily refer (1) DYSENTERIC FORM and (2) VENEREAL FORM.

The two forms refer to the mode of onset and not necessarily to the type of disease. The disease itself in either form is the same. The disease itself in either form is the same.

Many cases of Reiter's syndrome begin after an episode of diarrhea or sexual contact. In other cases, Reiter's syndrome may not be transmitted. These two forms of Reiter's syndrome are cystitis, prostatitis, and urethral strictures. Reiter's syndrome may not really be a sexually transmitted disease, but sexual contact may be one of the ways to trigger the onset of the disease in susceptible persons.

The history and the physical examination must be used for diagnosis of this disease. Arthritis due to Reiter's syndrome usually affects the joints of the hands, knees, ankles, feet, and toes. Arthritis due to Reiter's syndrome usually affects the joints of the hands, knees, ankles, feet, and toes.

The complete triad of Reiter's syndrome (conjunctivitis, arthritis, and urethritis) is not always present. One, two, or all three symptoms may be present. Other characteristics of the disease that may also be present are:

(A) CIRCINATE BALANITIS --- In uncircumcised individuals, this lesion appears as small moist ulcerated areas which progress to papules with clear centers and scaly borders. In circumcised individuals this lesion appears much like the dermatitis (keratoderma blennorrhagica) of the skin, hands, and feet.

(B) KERATODERMIA BLENNORRHAGICA --- This consists of small redden areas which are generally yellowish and may to form large thickenings on the skin. These usually heal within a few weeks.

(C) MOUTH ULCERS --- Other symptoms such as fever, malaise, and iritis (a type of eye inflammation)

The organism responsible for Reiter's syndrome has not been proven. Chlamydia and Mycoplasma organisms are implicated in the disease. There are not any blood tests, stains, or cultures that can be used to diagnose Reiter's syndrome. Arthritis due to Reiter's syndrome is not an alternative to Reiter's syndrome. The three findings as the classic triad of Reiter's syndrome (conjunctivitis, arthritis, and urethritis) is not always present. One, two, or all three symptoms may be present. Other characteristics of the disease that may also be present are:

Claw hand deformities are usually milder in recurrences or Reiter's syndrome than in the initial episode. Urethritis may be only a mild irritation of the urinary tract or it may consist of intense burning on urination and a urethral discharge. Other possible complications of Reiter's syndrome are cystitis, prostatitis, and urethral strictures.

5% of the general population have the HLA-B27 antigen. It is found much more often in those with Reiter's syndrome than in the general population. Up to 80% of persons with Reiter's are positive for HLA-B27 while only 5% of the general population are positive for HLA-B27. HLA-B27 is an inherited (immune system) blood test, known as HLA-B27 antigen, that links a genetic predisposition to Reiter's syndrome. HLA-B27, an inherited immune system blood test, known as HLA-B27 antigen, that links a genetic predisposition to Reiter's syndrome. HLA-B27, an inherited immune system blood test, known as HLA-B27 antigen, that links a genetic predisposition to Reiter's syndrome. HLA-B27, an inherited immune system blood test, known as HLA-B27 antigen, that links a genetic predisposition to Reiter's syndrome.
feet but this must not be complete bed rest as such inactivity will promote muscle wasting and contractures. Physical therapy should be used to help those with Reiter's syndrome. Heat to involved areas and professionally prescribed exercises will aid in the relief of pain, the prevention of muscle contractures, and the maintenance of muscles. Antibiotics may be needed if other infections are present.
ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

Worldwide, more than 1 million adults and 500,000 children have developed AIDS since 1981. In the 1990’s, a 10 fold increase is expected. In the United States, estimates are that there are over 1 million individuals infected with the AIDS virus that do not have symptoms. It is projected that AIDS will develop in 54 percent of these infected individuals within 10 years of the initial infection.

Anyone can get AIDS although it is not easy or simple to "catch", but unless dealing with high risk groups, many feel that continued unchecked transmission can drastically increase the chances of becoming infected. The seriousness of AIDS has been underestimated in the past, but many health officials and the general public now demand a strong and definite program against AIDS.

Although casual contact is not required to transmit AIDS, the general public has almost reached the level of hysteria where any fear or anxiety about AIDS will die, any intelligent person should have a definite program against AIDS. However, the uninformed and unreasonable fear of AIDS may only increase as the public discovers that AIDS has been found in almost every part of the world.

Also, those which are contracting AIDS are not as those who are not, gaining a better understanding of the risks and dangers, a person can use that knowledge to lessen their anxiety and risks. They can then gain a better understanding of AIDS and of its risks and current high risk groups are expected to increase. By gaining a better understanding of AIDS, a person can use that knowledge to lessen their anxiety and risks. They can then take preventive steps to protect themselves and to decrease the chance of acquiring AIDS.

AIDS was first reported in the United States in 1981. This illness involves a failure of the immune system, thereby leaving the body vulnerable to opportunistic infections and illnesses. AIDS is transmitted when infected blood, semen, vaginal secretions, or other body fluids comes into contact with another person's body fluids particularly through the mouth, anus during sexual contact, or through broken skin. It is probable that prolonged or intimate contact is required to transmit the virus.

The incubation period of AIDS is not definitely known, but there are suggestions that a range of from 4 months to 2 years (maybe up to 5 years) may pass between the time of exposure and the development of symptoms.

The cause of AIDS is a human retrovirus known as HIV (Human Immunodeficiency Virus). The virus has also been referred to as HTLV-III (Human T-cell Leukemia Virus Type III), LAV (Lymphadenopathy-Associated Virus, and ARV (AIDS-Related Virus). In someone infected with HIV, the virus has been found in many of the body fluids such as saliva, tears, and semen. The virus is sensitive to heat and chemicals which kill it. The transmission of the AIDS virus can be prevented by use of (a) alcohol, (b) heat, (c) ammonium chloride, (d) detergents, (e) detergents, (f) common disinfectants, and (g) swimming pools and spas. How HIV can be transmitted is shown in the chart below.

The incubation period of AIDS is not definitely known, but there are suggestions that a range of from 4 months to 2 years (maybe up to 5 years) may pass between the time of exposure and the development of symptoms.
Nonspecific symptoms such as flu-like symptoms, fever, fatigue (tiredness), persistent diarrhea, abdominal cramps, rashes, malaise, persistent cough, shortness of breath, loss of appetite, weight loss, night sweats, and lymph node swelling may be present. These nonspecific symptoms can occur in common illnesses such as a cold or influenza. With AIDS, however, these symptoms will continue for months or years, and may be more severe, prior to the development of unusual illnesses such as Kaposi's sarcoma or Pneumocystis carinii pneumonia. Other symptoms sometimes seen with AIDS are seizures, problems with coordination, and "thinking" problems.

The majority of those who died of AIDS were found to have Kaposi's sarcoma, Pneumocystis carinii pneumonia, or Pneumocystis carinii pneumonia. Some of the persons with AIDS have many unusual illnesses. Pneumocystis carinii pneumonia is not new diseases but they are now seen more frequently due to their occurrence in those with AIDS.

Kaposi's sarcoma is a rare, noncancerous skin growth resembling a bruise which enlarges and also spreads to internal organs. Previously, Kaposi's sarcoma was primarily found in elderly men in the Mediterranean region, which is in contrast to the high frequency of Kaposi's sarcoma in AIDS.

Pneumocystis carinii is a fungus that primarily affects the lung, causes pneumonia. This infection has previously been found only in those who were very ill, as with cancer, or in those who were on medications which suppressed the immune system. The symptoms are the same as those found in a severe pneumonia (fever, cough, and shortness of breath).

Other opportunistic infections and diseases reported in persons with AIDS include: Nocardiosis, Cytomegalovirus, Cryptococcus neoformans, Histoplasma capsulatum, Aspergillosis, Mycobacterium avium-intracellularare, Candida albicans, Cryptosporidium, Toxoplasma gondii, and Herpes simplex.

AIDS-Related Complex (ARC) is a spectrum of illnesses relating to AIDS, but these persons do not have AIDS. It consists of such symptoms as weight loss, viral infections, fever, and nonspecific symptoms. The category of AIDS-Related Complex may be eliminated in the future and simply be categorized as AIDS or HIV infection.

Most of the persons with AIDS have been found in New York, San Francisco, Miami, and Los Angeles but many other states and countries are reporting increasing numbers of persons with AIDS. Presently there is no cure for AIDS and the disease is fatal. Most patients with AIDS die within ten years. From June 1, 1981 through September 1992, there were 242,146 reported cases of AIDS. 160,372 of those reported cases have died. The death rate is at least 60% and may be over 70%. More than 85% of patients diagnosed before 1986 have died. The number of cases reported each 6 month period has been increasing. During 1988 an average of 88 cases of AIDS were reported each day.

Most of the persons with AIDS are homosexual or bisexual males with multiple sexual partners. AIDS has been reported in heterosexual males and females that are not IV drug users, Haitians, or members of the gay community. AIDS is also diagnosed in some children of AIDS patients. There are also persons categorized as "heterosexual transmission" who are felt to be at high risk for AIDS. It is felt that heterosexual transmission to men is by contact with infected homosexual or bisexual men or by contact with infected women. It is felt that heterosexual transmission to women is by contact with infected homosexual or bisexual men or by contact with infected women. It is felt that heterosexual transmission to women is by contact with infected homosexual or bisexual men or by contact with infected women.
AIDS virus because the skin of the rectum is thin and can be easily broken providing an entry site into the body. Still, it must be remembered that all genital sexual contact can transmit the AIDS virus. The skin of the vagina and penis is thicker but it also can develop small breaks during sexual contact. The infected genital secretions can then enter into the bloodstream through these breaks in the skin. AIDS can be spread from man to man, man to woman, woman to man, or woman to woman. Vaginal intercourse, not just anal sex as many of the public believe, can transmit the AIDS virus. Frequent sexual contact with someone with the AIDS virus increases the risk of transmission, but long term repeated sexual contact is necessary for the infection to occur.

AIDS is transmitted through the blood. It is the blood that is infectious. The reason is that the AIDS virus has almost been eliminated as a source of contamination in the blood supply. AIDS can be spread from man to man, man to woman, woman to man, or woman to woman. Vaginal intercourse, not just anal sex as many of the public believe, can transmit the AIDS virus. Frequent sexual contact with someone with the AIDS virus increases the risk of transmission, but long term repeated sexual contact is necessary for the infection to occur.

Individuals with hemophilia have acquired AIDS in much the same manner as those acquiring it through blood transfusions. Hemophilia is an illness in which the person lacks a factor that causes the blood to clot. Therefore, those with hemophilia will bleed easily and may bleed into their joints. The same precautions given to follow in dealing with those with AIDS should also be observed in dealing with those with hemophilia. There is a tremendous possible exposure to thousands of donors who have had hemophilia. Blood transfusions to those with hemophilia have caused AIDS. Direct contact with the blood, stool, and secretions (such as saliva and semen) of those with AIDS should be avoided. This includes articles such as toothbrushes and silverware that may be contaminated by those with AIDS. Certainly kissing, sexual contact and other intimate contact with persons known to have AIDS must be avoided. Not only those with definite AIDS, but also those with an increased risk of AIDS should not donate blood. Those who are sexual partners of persons with AIDS or of persons that are IV drug abusers are at risk for developing AIDS. A person must now consider sex with a partner as the same as having sex with everyone that the partner has had sex with in the past 5 to 10 years. Also infants of mothers with AIDS are at risk for developing AIDS. In general, routine non-sexual contact does not transmit the disease. Do not donate blood if you (a) have symptoms and signs of AIDS, (b) are a homosexual or bisexual male with multiple sexual partners of someone with AIDS or of persons that have an increased risk for AIDS, (c) are a sexual partner of someone with AIDS or of persons that have an increased risk for AIDS, (d) are a sexual partner of an immigrant from a country with a high incidence of AIDS, (e) are a sexual partner of a married man or woman who has had sexual relations with someone who is a sexual partner of someone with AIDS or of persons that have an increased risk for AIDS, (f) have had sexual relations with persons known to have AIDS, (g) are an abuser of IV drugs presently or in the past. Not sharing items that could become contaminated with blood such as toothbrushes and razors. Studies have demonstrated that the use of condoms with nonoxynol-9 included are

PRECAUTIONS

Currently, most of the same precautions used with hepatitis B should be observed in dealing with those with AIDS. Direct contact with the blood, stool, and secretions (such as saliva and semen) of those with AIDS should be avoided. This includes articles such as toothbrushes and silverware that may be contaminated by those with AIDS. Certainly kissing, sexual contact and other intimate contact with persons known to have AIDS must be avoided. Not only those with definite AIDS, but also those with an increased risk of AIDS should not donate blood. Those who are sexual partners of persons with AIDS or of persons that are IV drug abusers are at risk for developing AIDS. A person must now consider sex with a partner as the same as having sex with everyone that the partner has had sex with in the past 5 to 10 years. Also infants of mothers with AIDS are at risk for developing AIDS. In general, routine non-sexual contact does not transmit the disease. Do not donate blood if you (a) have symptoms and signs of AIDS, (b) are a homosexual or bisexual male with multiple sexual partners of someone with AIDS or of persons that have an increased risk for AIDS, (c) are a sexual partner of someone with AIDS or of persons that have an increased risk for AIDS, (d) are a sexual partner of an immigrant from a country with a high incidence of AIDS, (e) are a sexual partner of a married man or woman who has had sexual relations with someone who is a sexual partner of someone with AIDS or of persons that have an increased risk for AIDS, (f) have had sexual relations with persons known to have AIDS, (g) are an abuser of IV drugs presently or in the past. Not sharing items that could become contaminated with blood such as toothbrushes and razors. Studies have demonstrated that the use of condoms with nonoxynol-9 included are

TREATMENT:

There is no known cure for AIDS. Currently, the person may be treated successfully for the first infection or illness but still remain vulnerable to other infections or illnesses. Generally, treatment is varied and experimental due to the lack of sufficient information on AIDS. Some of the drugs used are pentamidine, thymosin, interferon, cancer chemotherapy, and other antibiotics. Currently, promising drugs are ddC, ddI (didanosine), 3TC, D4T, and
progress. Realistically, a vaccine, if successful, may not be available for many years. But researchers have done the seemingly impossible before when faced with potential devastating crises.

While it is not a cure, the drug zidovudine (AZT; azidothymidine) has been approved for use in AIDS. Its trade name is Retrovir. In a study of the drug, AIDS patients with pneumocystis carinii pneumonia treated with zidovudine gained weight, stamina, and had increased resistance to opportunistic infections. There were fewer deaths and a lower incidence of disease in the group that received zidovudine than in the group that did not receive zidovudine. Zidovudine improves neurologic and immunologic function, and reduces the severity of opportunistic infections. Some side effects are not currently known. They may include itching, headache, rash, nausea, anemia, and decrease in the white blood cells. Treatment with zidovudine may cost up to $10,000 a year. The estimated average cost of medical care for an AIDS patient is $10,000 to $140,000 excluding social costs, medications, and outpatient care.

Potent combinations of these drugs currently hold the promise that HIV can be eradicated. Studies have shown that protease inhibitors ritonavir and indinavir (Crixivan). Those blood donors with positive tests will not be accepted for blood donations. Currently only about 3% of AIDS patients contracted the disorder from blood products or blood transfusions. This test decreases but does not eliminate the chance, which is already very low, of AIDS being transmitted by blood transfusions. The blood supply is still not totally safe because the AIDS blood test may still be negative up to 6 months after contracting the virus. That infected person's blood could be accepted for blood donation. However, it must be emphasized that the risk is very small, but not zero.

AIDS AND THE AIDS BLOOD TEST

The cause of AIDS is the Human Immunodeficiency Virus (HIV). HIV will produce antibodies in the person who has the virus. The AIDS blood test will detect these antibodies. Technically, the blood test is called the Immunosorbent Assay (ELISA) and is referred to by this name. It is estimated that 10 million Americans have the HIV antibodies in their blood. This indicates that they have been exposed to HIV but may not have developed the AIDS virus. The antibodies that are produced are just as likely to be able to travel through a person’s blood as those with AIDS. This is compounded by the fact that many of them are not aware that they have the virus. Therefore, many have not developed AIDS but still may develop the disease.

The AIDS blood test could be positive as early as 2 to 3 months after infection (rarely) but it is usually positive by 6 months after infection. Some feel that the test may be positive after only 4 to 6 weeks after infection but currently a more reasonable time period is 6 months.

The AIDS test is used mainly to screen blood donors. Those blood donors with positive tests will not be accepted for blood donations. Currently only about 3% of AIDS patients contracted the disorder from blood products or blood transfusions. This test decreases but does not eliminate the chance, which is already very low, of AIDS being transmitted by blood transfusions. The blood supply is still not totally safe because the AIDS blood test may still be negative up to 6 months after contracting the virus. That infected person's blood could be accepted for blood donation. However, it must be emphasized that the risk is very small, but not zero.

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current estimated risk of developing AIDS if the AIDS blood test is positive (HIV infection) is 30% to 50%.

Individuals with a positive AIDS antibody blood test should not donate blood, sperm, tissue, or body organs. They should limit sexual contact and also inform their sexual partners so that appropriate measures can be taken to prevent the transmission of the virus (such as condoms which may be of use). Anal intercourse and/or oral-anal sexual contact (abused), needle sharing, exchange of body fluids (semen, saliva, blood), such as by open-mouthed or “French” kissing and oral sex, should be avoided. Women with a positive test or a woman with a sexual partner with a positive test should be aware of the fact that some infants have developed AIDS from their infected mothers. Pregnant women infected with the AIDS virus have a 30%-60% chance of transmitting it to their baby. Women who are positive for the AIDS virus (a positive AIDS blood test) should not become pregnant. It is advisable for those with a positive AIDS blood test to maintain a healthy diet, exercise, and reduce stress-related items.

Routine day to day activities in the community usually need not be changed. Casual kissing, shaking hands, and casual contact such as hugging have not been shown to spread the virus. Therefore, such contact at school, work, etc need not be changed.

It is inevitable that some of those persons discovering that they are antibody positive will not be able to cope with such knowledge. They may not comprehend what the positive test means and what the positive test does not mean. Worry, adjustment problems, depression, and other psychiatric disorders may result. Such persons must have available to them support groups and, if needed, psychiatric counseling.

If you have a positive AIDS blood test, you should see a doctor for follow-up medical evaluations and additional tests. It is important to be honest with the doctor concerning any possible exposures you may have had to the AIDS virus. Your doctor will decide which additional tests are needed but generally the following tests are helpful:

1. A repeat of the ELISA AIDS blood test.
2. Western blot testing. This is a blood test for HIV antibodies that is more specific (but not absolutely specific) if it is positive for the AIDS virus.
3. A complete blood count, including an absolute lymph count and platelet count.
4. Gamma globulin levels and serum protein electrophoresis.
5. Hepatitis B blood tests.
6. CD4+ T cells count.
7. Routine blood chemistries (sodium, liver enzymes, potassium, etc.) including gamma globulin levels.
8. Tests for other sexually transmitted diseases (VDRL, gonorrhea culture, etc.).
10. Skin tests such as trichophyton, candida, and specific tests (e.g. viral culture)

Some of the testing is based on the results of previous tests and the availability of the tests. Specialized laboratories may be able to perform additional procedures upon request.

It is inevitable that some of those persons who may have been infected, as a result of contact with someone having a positive blood test, may also test positive for AIDS antibodies. Your doctor will decide if additional testing is needed but generally those who are regular “needle-sharing” drug users, and those who have been contaminated with blood such as through transfusions, may need testing.

If you have a positive AIDS blood test, you should be aware of the following:

1. The blood test is primarily a test to screen blood that is donated for blood transfusions.
2. The blood test is NOT a test to determine if a person has AIDS.
3. The blood test does not indicate that a person has AIDS.
4. The blood test does not indicate that a person will develop AIDS.
5. A positive test does not definitely indicate that the virus is in the blood.
6. In a person with a positive test, there is potential for transmitting the virus to others. For public health reasons persons with a positive test are considered to be infectious.

Since these guidelines for a positive test result may change in the future, you should obtain the latest AIDS testing information available at the various testing sites.

THE INFORMATION ON AIDS IS CONSTANTLY BEING ADDED TO AND CHANGED DAILY. IT IS HIGHLY PROBABLE THAT SOME OF THE INFORMATION ON AIDS PRESENTED IN THIS MANUAL IS ALREADY OUTDATED. STILL, THIS INFORMATION SHOULD BE HELPFUL.
The dark skin lesions of Kaposi’s sarcoma, one of the illnesses that occurs in AIDS.
OTHER STDs

Other diseases can be considered STDs due to their occasional transmission by sexual activity. Shigellosis and amebiasis are caused by bacteria (Shigella and Entamoeba) found in and transmitted by the stools or bowel excretions of someone that has either illness. The increase of orogenital sexual activity makes transmission through sexual contact more likely and more common. Hepatitis B has also been found to be transmitted by sexual contact due to the virus being found in the semen and vaginal secretions (this is not the only way by which hepatitis is transmitted).

Homosexual men are at high risk not only for the common sexually transmitted diseases, but they are at a much higher risk than the general population for the uncommon sexually transmitted diseases discussed in this section.

SHIGELLOSIS

This is an infection with the bacteria Shigella (of which there are several species). The symptoms are due to inflammation in the intestines caused by the bacteria. Diarrhea with blood, mucus, and pus is common. Stomach cramps, fever, and chills may also be present. A common method of transmission is by close personal contact with contaminated hands. Transmission by contaminated food and water is also common. Venereal transmission is possible.

AMEBIASIS

This infection is due to the organism Entamoeba histolytica. Amebiasis may produce abdominal pains and diarrhea with blood and mucus. The organism may also invade other body organs such as the liver and lungs. Transmission is usually by contaminated food and water. Venereal transmission is possible.

HEPATITIS B

Hepatitis is an inflammation of the liver which impairs the normal function of the liver. This liver inflammation is due to a specific virus. The impaired liver function results in dark colored urine, light colored stools, a yellowish tint to the skin and eyes, muscle and joint aches, fever, and generalized malaise. Transmission is mainly by sexual contact or contaminated needles used in IV drug abuse.

CYTOMEGALOVIRUS (CMV)

This is a virus of the herpes group. This virus can cause an asymptomatic infection, an encephalitis in infants, or it can cause mononucleosis-like symptoms. Most people develop antibodies to cytomegalovirus after an asymptomatic or mild infection during childhood or early adulthood. About 65% of the United States population have antibodies to CMV indicating a previous infection with CMV. It rarely causes symptoms or problems in children, but can result in severe problems in newborn infants. Most children usually acquire CMV from other children or from parents during close contact. One of the main concerns about CMV is infection during pregnancy. In pregnant women that become infected with CMV, up to 10% of the babies born will have abnormalities such as deafness and/or mental retardation. Pregnant women with children in daycare have an increased chance of contracting CMV from their children who have contracted CMV from other children in daycare. Transmission requires close contact. Transmission is possible by blood transfusions, kissing and sexual contact. The virus has been found in blood, saliva, stool, urine, semen, women breast milk, and cervical (vaginal) secretions. In adults, transmission is mainly by sexual contact. Currently, there is no treatment for CMV. In closing, it should be noted that 90% of pregnant women that have CMV during pregnancy will have normal babies.
GROUP B STREPTOCOCCUS

This infection does not commonly cause disease in humans. Approximately 5% of normal individuals have group B streptococcus in their throat. These streptococci are increasingly being found in the male and female genital tracts. They have also been increasingly found to be a cause of infant infections.

GIARDIASIS

Giardiasis currently leads the list of intestinal parasites in the United States. Infection with this organism (Giardia lamblia) can result in abdominal pains and abdominal distension with diarrhea. This organism is transmitted in food and water that has been contaminated with infected stool. Due to orogenital sexual activities, the venereal transmission of Giardia is increasingly being seen. Those found to have Giardia with or without symptoms should be treated.

CAMPYLOBACTER

Campylobacter fetus (formerly known as Vibrio fetus) is now recognized as the commonest cause of bacterial diarrhea. (NOTE: Campylobacter fetus consists of subspecies known as jejuni, coli, and fetus). The usual route of transmission is by oral ingestion of contaminated food and water or by contact with the feces of infected humans or animals. Campylobacter can also transmit the infection if found in their feces. These animals include chickens, turkeys, wild birds, wild animals, pigs, horses, goats, cattle, sheep, rats, monkeys, puppies, and kittens. Venereal transmission is probable among homosexual males and those engaging in orogenital sexual activities. The incubation period is 2 to 11 days. Symptoms generally consist of fever (100-104 F), cramping abdominal pain, nausea, vomiting, diarrhea, and occasionally confusion. Sometimes, there will be muscle and joint aches. Half of those with diarrhea due to Campylobacter will have blood in their stool. The symptoms can resemble appendicitis or inflammatory bowel disease. Most infections are mild and usually no treatment is needed in these mild cases. Other cases may require hospitalization with the administration of fluids and antibiotics. Death from fluid volume depletion (dehydration) and shock have occurred.
(Appendix A)

MEDICATIONS

When given medication for a sexually transmitted disease by the physician, be sure and take it exactly as directed. This usually means that ALL the medication must be taken and only as scheduled. Instructions may be given to take the medication before, with, or after meals. Be sure to adhere to the directions. Do not skip or take more of the medication than directed. Skipping the medication or discontinuing it before completion can result in the STD not being cured or even recurring in a more severe form. Taking more of the medication than directed can result in increased side effects. If a dose is missed, do not double the dose unless specifically approved by the physician. Usually it is proper to just take the missed dose at the time it is remembered and to then continue as before with the same spacing between doses. Learn the names of all medications that are prescribed for you. Do not give the medication to others and also never take the medication of others. Do not take medications that have been left over from a previous treatment. Such old medication has not been re-tested for strength and may be inactive. Do not save unused medications unless specifically approved by the physician. Usually it is proper to just throw the unused medication away. The urine test for sugar may be falsely altered by ampicillin. Do not save unused medications unless specifically approved by the physician. Do not take medications that have been left over from a previous treatment. Such old medication has not been re-tested for strength and may be inactive. Do not save unused medications unless specifically approved by the physician. Usually it is proper to just throw the unused medication away. The urine test for sugar may be falsely altered by ampicillin.

Generally, all medications will cause side effects if used. A reaction with breathing and heart abnormalities. If there is any unusual or allergic reaction to any medication, please consult with your physician and desensitization may be tried. The physician will discuss and decide the options that are available. Inform the physician if you are taking any other medications. Some of the allergic symptoms to be aware of are nausea, vomiting, diarrhea, a skin rash, wheezing, breathing difficulty, and itching.

Medication side effects are the unwanted effects to the medication that is being taken. Some hay fever medications is an example. It is very rare that a person taking a medication will have no side effects. Only a few of those not allergic to penicillin is an example. Usually the side effects are minor and can be tolerated. With more troublesome side effects, the need of the medication and the availability of alternative medications must be weighed against the discomforts and side effects of the medication that is to be taken. If you notice a problem while taking a medication, ask the pharmacist or physician if this could be due to the medication and what should be done about it.

There are numerous antibiotics used to treat infections in some women due to alteration of the normal vaginal bacteria. Many women are well aware that they will develop a vaginal "yeast" infection when they take antibiotics. The instructions and precautions listed in this manual do not include all the possible instructions and precautions for each medication.

GENERAL NAME (Brand name or Trade name)

PENDICILLIN (Bicillin, Crysticillin, Pfizerpen): Persons with a previous allergic reaction to this medication (in actuality, this applies to any medication that has caused a previous reaction). Penicillin should be taken on an empty stomach to insure that all of it is absorbed into the bloodstream. Penicillin should be taken one hour before meals or two hours after meals. Dicloxacillin and cloxacillin are types of penicillin. Also see ampicillin and amoxicillin.

AMPCILLIN (Amcill, Pfizerpen-A, Polycillin): Do not take if you are allergic to penicillin. A high percentage of persons with infectious mononucleosis will develop a skin rash if given ampicillin. The urine test for sugar may be falsely altered by ampicillin. Take ampicillin one hour before meals or two hours after meals.

AMOICILLIN (Amoxil, Larotid, Polymox): see Ampicillin.
CEPHALOSPORIN: Do not take if you are allergic to any one of the cephalosporins. There is some evidence of partial cross-allergenicity of the cephalosporins and the penicillins. In other words, some people allergic to penicillin will also be allergic to cephalosporins. Notify your doctor if diarrhea develops while taking cephalosporins. Use with caution if there is a history of gastrointestinal disease or colitis. GENERIC NAME (Brand name or Trade name): CEFACLOR (Ceclor); CEFADROXIL (Duricef, Ultracel); CEFAZOLIN (Ancef, Kefzol); CEFIXIME (Suprax); CEFOTAXIME (Claforan); CEFOTAXIM (Mefoxin); CEFTRIAXONE (Rocephin); CEFUROXIME (Zinacef); CEPHALEXIN (Keflex); CEPHALOTHIN (Keflin, Seffin); CEPHAPIRIN (Cefadyl); CEPHRADINE (Anspor, Velosef).

TETRACYCLINE (Achromycin, Tetracycl): Tetracycline should not be taken by persons with impaired kidney or liver functions. It should not be taken during pregnancy and is harmful to infants and young children particularly those less than eight years of age. While taking tetracycline, exaggerated sunburn reactions and skin rashes can develop with exposure to direct sunlight or ultraviolet light. Antacids, dairy products (milk), iron pills, vitamins with minerals, and some foods can interfere with the absorption of tetracycline. The medication should be taken one hour before meals or two hours after meals.

DOXYCYCLINE (Vibramycin, Vibra Tabs): see Tetracycline.

MINOCYCLINE (Minocin): see Tetracycline.

CLOTRIMAZOLE (Lotrimin, Gyne-Lotrimin, Mycelex): Do not use in the eyes. Caution in pregnancy. Stop using clotrimazole if irritation or sensitivity develops.

ERYTHROMYCIN (EES, E-Mycin, ERYC, Pediamycin, Pfizer-E): Caution in persons with liver impairment. Safety in pregnancy is not established. Erythromycin will appear in breast milk. Some types of erythromycin may be taken without regard to meals, but usually erythromycin should be taken one hour before meals or two hours after meals.

LINDANE (Kwell, Scabene): Keep out of the eyes. Lindane can cause skin irritation with excessive use. Do not take internally. Caution in infants, children, pregnancy, and nursing mothers.

METRONIDAZOLE (Flagyl, Metric-21, Metryl, Protostat, Satric, SK- Metronidazole): Effective against Trichomoniasis, Amebiasis, Giardiasis, and Gardnerella vaginalis. Do not use in pregnancy or nursing mothers. DO NOT drink alcohol containing beverages while taking this medication as it will cause stomach pains, nausea, and vomiting. Metronidazole has been shown to be associated with tumors in mice and rats. Caution with liver diseases.

MICONAZOLE (Monistat 7): Stop using if irritation or sensitization occurs. Caution in the first three months of pregnancy. Keep out of the eyes.

NYSTATIN (Candex, Mycostatin): Stop using if irritation or sensitization occurs. Keep out of the eyes.

PODOPHYLLIN: Should not be left on for more than two hours. Should be applied only onto affected areas. Contraindicated in pregnancy. Can be toxic to nerves. Refer to the discussion in the section on Condylomata acuminata for more information on podophyllin.

PROBENECID (Benemid): Do not use in those with uric acid kidney stones. Probenecid can exacerbate gout. Do not use in children under two years of age.

SPECTINOMYCIN (Trobicin): One of the medications that can be used to treat gonorrhea that is resistant to penicillin. It is not recommended for the treatment of pharyngeal gonorrhea. It is not effective in syphilis.

TRIMETHOPRIM-SULFAMETHOXAZOLE (Bactrim, Septra): Do not use if allergic to sulfa drugs. It is not for use in infants less than two months of age, nursing mothers, or in pregnancy. Adequate fluid intake is needed with this medication.

INDOMETHACIN (Indocin): This medication should not be taken by those allergic to aspirin, by those with a history of stomach and/or intestinal problems such as ulcers, by nursing mothers, or by children 14 years of age or younger. Do not take aspirin or alcohol containing beverages with this medication. Indomethacin should be taken immediately after meals, with meals, or with antacids.

Pharmaceutical Company Name: (Trade Names of company's products.)

Burroughs Welcome Co.: (Zovirax, Septra, Retrovir.)

Wyeth Laboratories.: (Wycillin, Bicillin.)

E.R.Squibb & Sons, Inc.: (Crysticillin, Mycostatin, Velosef.)

Parke-Davis.: (Amcill, ERYC.)

Bristol Laboratories.: (Polycillin, Polymox, Cefadyl, Ultracef.)

Lederle Laboratories.: (Achromycin, Minocin, Suprax.)

Pfizer Laboratories.: (Vibramycin, Vibra Tabs, Tetracyn, Zithromax, Pfizer-E, Pfizerpen, Permapen, Li-Ban Spray, RID Liquid.)

Schering Corporation.: (Lotrimin, Gyne-Lotrimin, Emko.)

Miles Pharmaceuticals.: (Mycelex, Candex, Cipro.)

Abbott Pharmaceuticals, Inc.: (EES.)

Ross Laboratories.: (Pediamycin.)

Upjohn Company.: (Trobin, E-Mycin.)

Reed & Carnrick.: (Kwell, R & C Spray, R & C Shampoo.)

Stiefel Laboratories, Inc.: (Scabene.)

Ortho Pharmaceutical Corporation.: (Monistat 7, Conceprol, Delfen, Gynol II, Intercept, Ortho-Cream, Protostat.)

Merck Sharp & Dohme.: (Benemid, Indocin, Mefoxin.)

Norcliff Thayer, Inc.: (A-200 Pyrinate.)

Purdue Frederick Company.: (Betadine, Prioderm.)

Roche Laboratories.: (Bactrim, Larotid, Rocephin.)

Beecham Laboratories.: (Amoxil, Cuprex.)

Youngs Drug Products Corporation.: (Triple X, Koromex, Trojan.)

Astra Pharmaceutical Products, Inc.: (Xylocaine.)

Thompson Medical Company, Inc.: (Encare.)

VLI Corporation.: (Today vaginal sponge)

Whitehall Laboratories, Inc.: (Semicid.)

Schmid Products Company.: (Ramses, Fourex, Sheik, Excita.)
Warner-Lambert Company.: (Lifestyles.)

Searle and Co.: (Flagyl.)

Hoechst-Roussel Pharmaceuticals, Inc.: (Claooran.)

Glaxo, Inc.: (Seffin, Zipacnef.)

Eli Lilly and Company.: (Ceclor, Kefzol, Keflin.)

Smith Kline & French Co.: (Ancef, Anspor, SK-Metronidazole.)

Dista Products Company.: (Keflex.)

The Fielding Company.: (Metric-21.)

Lemmon Company.: (Metryl.)

Savage Laboratories.: (Satic.)

McNeil Phamaceutical.: (Floxin.)

CONDOMS (Contraceptives)
   Excita, Foure, Lifestyles, Ramses, Sheik, Trojan.

CONTRACEPTIVE PREPARATIONS (Spermicides)
   Conceptrol contraceptive (cream, gel, foam), Delfen contraceptive foam, Emko Because contraceptive foam,
   Encare contraceptive suppositories, Gynol II contraceptive jelly, Intercept contraceptive inserts,
   Koromex contraceptive (cream, crystal-clear gel, foam, jelly), Ortho-Cream contraceptive cream,
   Ramses contraceptive jelly, Semicid contraceptive suppositories, Today vaginal sponge.
DEFINITIONS and ABBREVIATIONS

ABORTION --- A miscarriage. Giving birth or the termination of pregnancy before the stage of viability. A spontaneous abortion occurs from natural causes. An induced abortion occurs due to a specific intervention.

ABSCESS --- The collection of pus at a specific site as in an infection resulting in a tooth abscess.

AIDS --- Acquired Immunodeficiency Syndrome.

ANAL --- see Anus.

ANOREXIA --- A lack of appetite or a loss of appetite for food.

ANUS --- The opening on the body (rectal area) by which feces is normally excreted.

APPG --- Aqueous procaine penicillin G.

ASYMPTOMATIC --- Not having any symptoms or awareness of an illness, infection, or disease.

AUTOINOCULATION --- The transfer of an infection (organism, bacteria) from one's own body to another part of the body.

BACTERIA --- One celled organisms which exists in numerous forms and have many characteristic biochemical properties. The Streptococcus bacterium is an example.

CERVICITIS --- Inflammation or infection of the cervix (the lower end of the uterus).

CERVIX --- The lower part of the uterus which opens into the vagina.

CESAREAN SECTION --- The delivery of the baby by surgery. cutting into the abdomen and removing the baby through this opening instead of allowing the baby to come out through the vagina. Also referred to as a C-Section.

CHANCRE --- The ulcerated sore of syphilis.

CMRNG --- Chromosomally mediated resistant Neisseria gonorrhoeae.

CMV --- Cytomegalovirus.

CONDON --- A covering placed over the penis prior to sexual intercourse to prevent infection and pregnancy. A contraceptive.

CONJUNCTIVITIS --- An inflammation or infection of the membrane of the eye.

CONTACTS --- Those persons who have been near enough to an infection to have the possibility of developing that infection.

CONTAGIOUS --- An infection or illness that is capable of being transmitted to others.

CONTRACEPTIVES --- Agents that decrease the chance of pregnancy. Condom, IUD, foams, gels, diaphragm, etc.

CSF --- Cerebrospinal fluid. This is the fluid located in and around the brain and spinal cord.

CULDOCENTESIS --- Fluid is removed from the pelvis by means of a needle inserted through the posterior vaginal wall.

CYSTITIS --- An infection or inflammation of the bladder.

DIAPHRAGM --- A device that is placed in the vagina and over the cervix to prevent pregnancy. A contraceptive.
DISCHARGE --- A material that is excreted such as pus from a sore or drainage from the penis with gonorrhea infections.

DYSFUNCTION --- Impaired function. To function abnormally.

DYSURIA --- A painful or burning sensation on urinating.

ECTOPIC PREGNANCY --- See Tubal Pregnancy

ENCEPHALITIS --- An infection and/or inflammation of the brain.

EPIDIDYMITIS --- An infection of the tubes in the scrotum that transport sperm. A swelling and tenderness of the scrotum.

FALLOPIAN TUBES --- Ducts in the female that connects the ovaries to the uterus. It is through this duct that the female egg passes to reach the uterus where it is fertilized.

FECES --- Bowel movements. Stool. the body waste that is excreted from the intestine through the anus.

FISTULAS --- An abnormal passage in the body. For example, a small opening from the intestine to the abdominal wall is a fistula which would allow feces to pass to the outside of the body at that site.

FUNGUS --- The classification of organisms that are plant-like, reproduce by means of spores, have a rigid cell wall, and do not have chlorophyll. Examples are yeast, molds, ringworms, and mushrooms.

GENITALS --- Generally referring to the reproductive organs. (a) In the female: vagina, uterus, ovaries, etc. (b) In the male: the penis, prostate, testicles, etc. (c) In this manual genital is used to also include the anus in the male and female.

GROIN --- The region between the abdomen and the thighs.

HCL --- Hydrochloride.

HETEROSEXUAL --- Attraction toward the opposite sex. Sexual relationship between a man and woman.

HOMOSEXUAL --- Attraction toward the same sex. Sexual relationship between a man and a man or between a woman and a woman.

HSV --- Herpes simplex virus.

HTLV-III/LAV --- Human T-cell lymphotropic virus type III/Lymphadenopathy-associated virus.

IM --- Intramuscularly. Into the muscles.

INCONTINENCE --- Loss of control of the excretion of the feces or the urine.

INCUBATION --- The time from acquisition of an infection until symptoms develop. For example, the incubation period of gonorrhea is 2 to 7 days. This means that when a person develops gonorrhea, the actual contraction of the disease occurred 2 to 7 days prior to the onset of symptoms.

INGUINAL --- Relating to the groin region.

IUD --- IntraUterine Device. A device that is placed in the uterus to prevent pregnancy. A contraceptive.

IV --- Intravenously. Into the vein.

LAPAROSCOPY --- A surgical procedure used to look inside and examine the abdominal cavity with a tube-like instrument. The instrument is inserted into the abdomen through a small incision.
LGV --- Lymphogranuloma venereum.

LYMPH NODES --- Also called lymph glands. This is a nodule of specialized tissue to which infection sites drain. Lymph nodes are involved in immunity and the removal of toxic agents such as bacteria and pus from the involved area.

MALAISE --- A vague feeling of illness.

MUCOUS MEMBRANE --- The membrane or covering of certain body areas: The eyes, the nasal passages, inside the mouth, the anus, the penis, the vagina, and the uterus.

NGU --- Nongonococcal urethritis.

NURSING MOTHERS --- Mothers who are breast-feeding their infants. May also be referred to as "lactating" women.

OPPORTUNISTIC DISEASE --- An illness, infection, or disease that usually is not a threat to otherwise healthy people.

OROGENITAL --- Involving contact between the mouth and genitals.

PELVIC INFLAMMATORY DISEASE (PID; Salpingitis) --- An infection of the pelvic area that produces painful inflammation of the pelvic organs and the surrounding structures.

PELVIS (PELVIC) --- Although not exactly correct, the pelvis can be thought of as the lower portion of the abdomen or as the area between both hips.

PENIS --- The male organ for urination and sexual intercourse.

PHARYNGITIS --- An infection or inflammation of the throat (pharynx).

PID --- see Pelvic Inflammatory Disease.

PPNG --- Penicillinase-producing Neisseria gonorrhoeae.

PUBLIC --- The area in the region of the lower part of the abdomen. The area of the external genitals.

RECTUM (RECTAL) --- the last section of the large intestine located just before the anal opening.


SALPINGITIS --- Infection of the fallopian tubes. See Pelvic Inflammatory Disease.

SCROTUM --- The sack of skin in which the male testicles (balls) are located.

SEMEN --- See Sperm.

SPERM --- The male fluid secreted from the penis during sexual intercourse. This fluid results in pregnancy when it comes into contact with the female egg (fertilization) in the uterus. Technically, the male fluid is actually Semen in which there are millions of sperms.

SPERMICIDES (SPERMATOCIDES) --- Chemicals that kill sperm such as contraceptive foams, jellies, creams, tablets, and suppositories.

STD --- Sexually Transmitted Disease.

STOOL --- See Feces.

STRUCTURES --- A narrowing of a passage such as a decrease in the size of the anal opening (anal stricture).
STS --- Serologic Test for Syphilis. Blood tests for syphilis.

TUBAL PREGNANCY --- Ectopic pregnancy. A pregnancy that develops in the fallopian tubes instead of normally developing in the uterus.

URETHRA --- The passage by which urine passes from the bladder to the outside of the body.

URETHRITIS --- Inflammation or infection of the urinary passage (urethra).

UTERUS --- The female organ in which the baby grows during pregnancy. The uterus is located in the lower abdomen at the back of the vagina.

VAGINA (VAGINAL) --- The female passage located just below the urethra. It is the female passage into which the penis is inserted during sexual intercourse. It is the passage through which the baby is delivered at birth.

VD --- Venereal Disease. A disease transmitted by sexual intercourse.

VDRL --- Venereal Disease Research Laboratory. A blood test for detecting syphilis.

VENREAL --- Referring to something due to sexual intercourse.

VIRUS --- An organism that is not visible by the ordinary light microscope and is dependent on nutrients inside the cells that they invade. An example is the herpes virus.
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