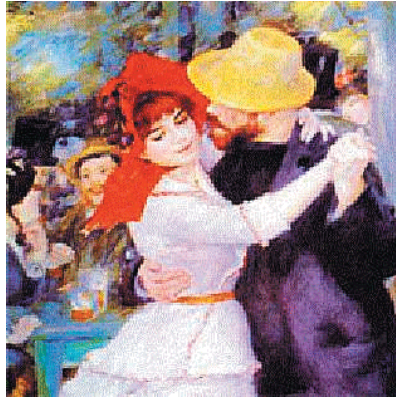


# Sexually transmitted diseases



## The most important facts about venereal diseases

### General

Sexually transmissible diseases or venereal diseases (STDs) belong to the group „infectious diseases“. These include more than 20 diseases caused by bacteria, viruses, fungi or parasites. The common factor with STDs is that they are transmitted in the main during sexual intercourse. There are, however, differences in the degree of infectiousness of the causative agents, the course of the disease and possible therapeutic or preventive measures.

The classical, venereal diseases (syphilis, gonorrhoea etc.) have lost their horror image, since they have become curable with antibiotics. For a long time now there has also been a protective vaccination available against hepatitis B, a further serious, sexually transmissible disease. The most feared STD today is AIDS, since neither a curative drug nor a protective vaccination are available.

World-wide an estimated 330 million people per year are affected by a venereal disease. The most widespread are trichomonas with 120 million, followed by chlamydia at 50 million and gonorrhoea at 25 million affected persons. The number of HIV infected persons is estimated today at 42 million.

Infection with an STD occurs primarily during sexual intercourse through the direct

contact of infected body fluids (such as seminal and vaginal fluid) with the mucous membranes. Most venereal diseases, especially herpes infections, can also be transmitted via oral sex, kissing or petting (again via direct contact with infected body fluids). An infection can also be transmitted from the mother to the unborn or new-born child. Some venereal diseases (hepatitis B, AIDS and syphilis) can also be transmitted via the blood, by infected blood preserves and blood products or by the exchange of syringes between drug addicts. With some pathogens an indirect infection via towels, toilet articles and so on is also possible, though very rare. Infection via drops (e.g. coughing, sneezing) is not possible. In the course of everyday social contacts (household, workplace, travel etc.) infection with an STD can be excluded, provided normal rules of hygiene are observed.

The majority of STDs (most important exceptions: hepatitis B and AIDS) manifest themselves initially at the place of entry, i.e. penis, vagina and labia (lips of the vulva). The anus and buccal cavity (mouth) may also be affected. Some STDs are simply unpleasant, while others are dangerous: if they remain untreated, they can spread throughout the whole body and may, in some instances, cause irreparable damage such as infertility, brain damage or

blindness. The most dangerous STD, the HIV infection, leads – as far as we know today – after 12 years on average to the terminal stage, AIDS, which ends in death.

## The most important venereal diseases

### *Syphilis (lues, hard chancre)*

Syphilis is caused by spiral-shaped bacteria (*Treponema pallidum*). The course of the disease can be split into four stages: in stage I, about three weeks after the infection there appears a hard, painless nodule at the site of the infection (generally the penis or the vagina). The most closely situated lymph nodes start to swell. Generally the ulcer heals even without treatment. If not treated, however, after about six weeks the disease proceeds to stage II, when the bacteria spread throughout the whole body, and cause skin eruptions, fever and swelling of the lymph nodes. These manifestations disappear for a time, but then recur repeatedly for years. If this stage is also not treated, then after several years the internal organs become affected, especially the nervous system, e.g. in stage III the spinal medulla (disturbances of gait) and in stage IV the brain (dementia).

Identification of the infection is performed by examination under the microscope or via the syphilis test in the blood, which provides reliable results about 3 weeks after infection. Treatment with antibiotics (e.g. penicillin) in the early stages leads to a complete cure. The damage in the later stages (III and IV) cannot, however, be reversed, even when the bacteria are eliminated with antibiotics. In pregnancy syphilis can cause severe damage to the unborn child.

### *Gonorrhoea (clap)*

Gonorrhoea is also caused by bacteria (*Neisseria gonorrhoea*). Two to seven days following the infection a yellowish green purulent discharges from the penis and vagina. There is also pain on urinating. In some rare instances the woman may not have these symptoms. If the disease is not treated, this can lead in the man to an infection of the prostate, the vas deferens and the epididymis. In the woman the womb, the oviducts and the ovaries can

be affected to such an extent that it can lead to infertility. In the later stages of gonorrhoea the bacteria spread throughout the whole body, in particular to the joints and the region of the liver (*Perihepatitis acuta*). Identification of a gonorrhoeal infection takes place via examination under the microscope and culturing of the discharge. Gonorrhoea can be cured with antibiotics. A great problem in this respect is the sex tourism in the Far East: the prostitutes there often use antibiotics to protect from venereal diseases. In this way antibiotic-resistant strains of bacteria develop, that are then brought „home“ by the sex tourists.

### *Ulcus molle (soft ulcer)*

*Ulcus molle* is caused by bacteria (*Haemophilus ducreyi*), and is a rare disease in central Europe, though it occurs frequently in tropical developing countries. Two to six days following the infection soft, painful and somewhat diffuse ulceration occurs at the site of the infection. The lymph nodes in the area of the groin may become very swollen. Diagnosis is by microscopic examinations of the ulcers to detect the bacteria. The disease can be cured with antibiotics.

### *Veneral lymph node inflammation (Lymphogranuloma inguinale)*

Lymphogranuloma inguinale is caused by particular strains of *Chlamydia trachomatis*, and is very rare in central Europe. At least 14 days following infection small discrete nodules appear in the genital area, which may lead to the formation of ulcers. These scarcely painful nodules heal spontaneously within 10–14 days, and are often not noticed. It is not until the swelling of the lymph nodes in the inguinal region (up to fist size) that the patient is prompted to consult a doctor. Problems arise, above all, when lymph nodes rupture externally (fistulae) or internal lymph nodes are affected. Diagnosis takes place via direct demonstration of the causative agent at the site of infection or by means of blood tests. The disease can be cured, in the initial stage, by means of antibiotics.

### *Infection with Chlamydia*

Infections with *Chlamydia* are very widespread in Europe and are caused by bacteria

(Chlamydia trachomatis). They lead to very uncomfortable urethral infections, causing severe itching and a burning sensation when urinating. In the male the prostate and the epididymis may be affected and, in women, the vagina, the womb, the fallopian tubes and the ovaries, which can lead to infertility and fallopian tube pregnancies. The course of the infection is often unproblematic, and can be cured with antibiotics. Transmission to the new-born child is frequent, and leads to conjunctivitis and pneumonia.

### *AIDS*

AIDS (acquired immune deficiency syndrome) is the final stage of an infection with HIV (human immunodeficiency virus). Up to the present two virus types (HIV 1+2), with numerous subgroups, have been identified. The period between infection and the eruption of the disease comprises, on average about twelve years. During this time infected persons can, without themselves being aware of the infection, transmit the virus to other persons. Simultaneously existing classical venereal diseases (especially syphilis and *Ulcus molle*) increase the susceptibility to an infection with the AIDS virus. Identification of an HIV infection takes place by means of a blood examination (HIV test). The disease is up to now still incurable, and is finally fatal. If the infection is recognized at an early stage and given appropriate medical care it is possible to delay the outbreak of the disease and to improve the quality of life of affected persons considerably. At present there is no protective vaccine available.

### *Hepatitis (infectious jaundice)*

There are various hepatitis viruses, of which the hepatitis B virus (HBV) and, to a lesser extent, the hepatitis C virus (HCV) are sexually transmissible. The course of the disease varies considerably. The infection may proceed without complications, or it can lead to a severe acute inflammation of the liver (hepatitis), which in some cases can prove fatal. In the majority of cases the infection develops into chronic inflammation of the liver, which can lead to cirrhosis or liver cancer.

The problem with hepatitis B/C is that some persons remain lifelong carriers without themselves becoming ill, and can infect others. In addition to sexual intercourse the hepatitis B/C viruses can be transmitted via blood transfusions, syringe sharing in drug addicts, and sometimes even by direct contact with body fluids where appropriate hygienic measures are neglected.

In third-world countries hepatitis B is widespread among the general population while in Europe, it is mainly the injecting drug addicts and medical service personnel that are affected. At present hepatitis B is the only STD for which there is a reliable protective vaccination.

### *Herpes genitalis*

Herpes genitalis is a widespread virus infection that is closely related to herpes labialis (fever blisters on the lips). Three to seven days after infection small, intensely itchy or painful blisters appear in the genital region, which contain an infectious fluid. In addition lymph node swelling and general febrile conditions may occur. The virus can be detected directly in the blister liquid or, indirectly, via blood tests. Despite treatment with a drug that kills the virus (Aciclovir) the virus can survive in the nerve cells and, years later lead to a new attack that is, however, generally milder in its course. In infected pregnant women the herpes virus can be transmitted during the birth to the new-born child, and can cause serious disorders (e.g. encephalitis).

### *Genital warts (Condylomata acuminata)*

Approximately four weeks after an infection the genital warts grow, often in cauliflower fashion, in the genital area. They are caused by viruses (human papilloma viruses = HPV), and can be removed by surgery (laser, liquid nitrogen, electrocoagulation or with the scalpel). Papilloma viruses can be transferred during the birth to the new-born child. Some papilloma viruses are suspected of causing cancer of the cervix.

### *Trichomonas*

Trichomonas is a widespread monocellular parasite that infests the urethra and the va-

gina. The infection manifests itself as a watery discharge and itching. The diagnosis takes place via determination of the causative agent under the microscope. This world-wide most frequently occurring, though harmless, infectious disease is cured with special drugs (e.g. metronidazole).

#### *Fungal infections*

The yeast fungus (*Candida albicans*) is very widespread and the most frequent carrier of sexually transmitted fungal infections. This, in itself harmless, infection (inflammation of the vagina or glans) can, however, lead to unpleasant discomfort such as severe itching and a burning sensation. A woman experiences in addition, a vaginal discharge. Fungal infections can be successfully treated by means of special medication (antimycotics) and appropriate hygienic measures.

#### *Crab louse*

Crab lice are small insects that infest the pubic hair. They can be seen with the naked eye, as can their eggs (nits) which attach themselves to the hairs. Intense itching is the most important symptom. This harmless venereal disease is treated with a special emulsion.

### **What to do if you are affected by a venereal disease?**

If you suspect that you have become infected with a venereal disease, you should immediately consult a doctor in whom you can confide. In addition to your family doctor this could be a dermatologist, a gynaecologist, urologist or a specialist in internal medicine. The attempt to „cure“ a venereal disease yourself is problematical – perhaps even dangerous – since this could later complicate the diagnosis of the doctor, and the infection might remain undetected.

Most venereal diseases can be cured with appropriate medical treatment. Exceptions are the viral STDs such as, for example, herpes infections, hepatitis B/C and AIDS. Even in HIV infections, however, modern drugs improve the life expectancy and, above all, the quality of life of the patient. However, only those patients who become aware of their HIV

## A review of the most important sexually tr

Disease	Causative agent
<b>Syphilis</b>	bacteria (Treponem
<b>Gonorrhoea</b>	bacteria (Neisseria
<b>Ulcus molle</b>	bacteria (Haemoph
<b>Lymphogranuloma inguinale</b>	bacteria (some strain Chlamydia trachom
<b>Chlamydia infections</b>	bacteria (Chlamydia
<b>HIV infection/AIDS</b>	viruses (HIV 1/2)
<b>Hepatitis B/C</b>	viruses (HBV/HCV)
<b>Herpes genitalis</b>	viruses (Herpes sim
<b>Genital warts</b>	viruses (Papillomav
<b>Trichomoniasis</b>	parasites (Trichomo
<b>Fungal infections</b>	yeasts (primarily <i>Ca</i> <i>cans</i> )
<b>Crab lice</b>	insects (Phthirus pu
<b>Scabies</b>	acarid ( <i>Sarcoptes so</i>

## Transmissible diseases

	<b>Time between infection and affection</b>	<b>Treatment</b>	<b>Remarks</b>
( <i>T. pallidum</i> )	3 weeks	antibiotics	complete cure with timely treatment
(gonorrhoeae)	several days	antibiotics	complete cure with timely treatment
( <i>S. ducreyi</i> )	several days	antibiotics	complete cure with timely treatment
(syphilis)	several days	antibiotics	complete cure with timely treatment
( <i>C. trachomatis</i> )	several days	antibiotics	complete cure with timely treatment
	without treatment circa 12 years	antiretroviral preparations	not curable, virus remains in the body; life prolonging and palliative treatment possible
	several weeks sometimes longer	symptomatic, antiviral preparations	generally spontaneous healing; virus can remain in the body (increased risk of liver cancer); prophylactic vaccination v. HBV possible
(herpes simplex virus 2)	several days	symptomatic	partial cure; virus may remain in the body
(HPV)	4 weeks	surgical	cure possible; increased risk of cervical cancer
( <i>C. trachomatis</i> )	several days	antiparasitic agents	complete cure possible
( <i>Candida albicans</i> )	several days	antimycotic agents	complete cure possible
( <i>S. trypomastix</i> )	several days	antiparasitic agents	complete cure possible
( <i>S. trypomastix</i> )	often several weeks	antiparasitic agents	complete cure possible

## What protections are available against venereal diseases?

Since infection with venereal diseases occurs almost exclusively via sexual intercourse, protective measures must begin here. Some venereal diseases are visible externally, though generally one does not recognize that the partner is suffering from such a disease.

### *Faithfulness*

In a faithful sexual relationship between two healthy partners an infection with a venereal disease is virtually excluded.

### *Careful choice of partners*

A new sexual relationship brings with it, in principle, the danger of infection with a venereal disease. Only when the partner is not infected can an infection be excluded. For this reason it is particularly important to choose the partner very carefully. Possible risks should be clarified by means of frank discussions with the partner. How was the former life of the future partner. How can we protect ourselves? Hiding the truth only favours the pathogenic agents.

### *HIV test*

Since AIDS is incurable it is advisable today to have an HIV test performed, so as to exclude an undetected infection in the past.

### *No casual sexual contacts*

Since not all venereal diseases are curable and may in certain circumstances, prove

fatal (AIDS, hepatitis B/C), or could result in infertility, it is advisable to refrain from casual contacts (especially when travelling). A single sexual contact may suffice for infection with a venereal disease. The frequent change of partners increases the risk of coming upon an infected partner.

### *Condoms*

In contacts outside a firm relationship the risk of infection with a venereal disease can be reduced, though not excluded, by the use of condoms. In view of the fatal disease AIDS there is an important residual risk of the order of several per cent. Young people in particular have, naturally, little or no experience with condoms, so that the danger of errors in use is high.

### *Drug abstinence*

Drugs and alcohol cloud one's feeling for reality, obscure one's sense of responsibility, and weaken one's powers of judgement and self control, thus leading to careless and unprotected sexual contacts. Especially in the case of AIDS drug abstinence assumes great importance.

### *Vaccination against hepatitis B*

Should you belong to a risk group for hepatitis B (e.g. medical staff, dialysis patients, intravenous drug addicts or someone staying a long period in a developing country), vaccination against hepatitis B is advisable.

infection at early date can profit from this. It is, therefore, worthwhile in the presence of another venereal disease, always to have an HIV test performed. Talk to your doctor about it.

If you are suffering from a venereal disease you should – in order to protect your partner – refrain from sexual contacts until the disease is cured and can no longer infect your partner. Your doctor will tell you when there is longer danger of infection. You should inform your earlier and/or present partner(s) about your venereal disease. At least one of these is suffering from the same disease (otherwise you couldn't have caught it), and you or they might have passed on the infection to others. These partners should also consult a doctor and, where necessary, receive treatment.

In Switzerland there is an Epidemics Law, and this also applies to sexually transmissible diseases. Patients suffering from a „classical“ venereal disease (e.g. syphilis or gonorrhoea) must consult a doctor for treatment. In addition the doctor must see to it that patients inform their sexual partner, and that they also

receive treatment. If the patient or a contact person does not consult a doctor for examination or submit to treatment (or breaks off the treatment prematurely), the doctor is obliged to report the patient, by name, to health authorities.

Many people have inhibitions, and are reluctant to talk about venereal diseases. It is important, however, to have confidence in your doctor and to be perfectly frank with him; he will then treat you competently, confidentially and without prejudice.

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La danse à Bougival (detail)

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