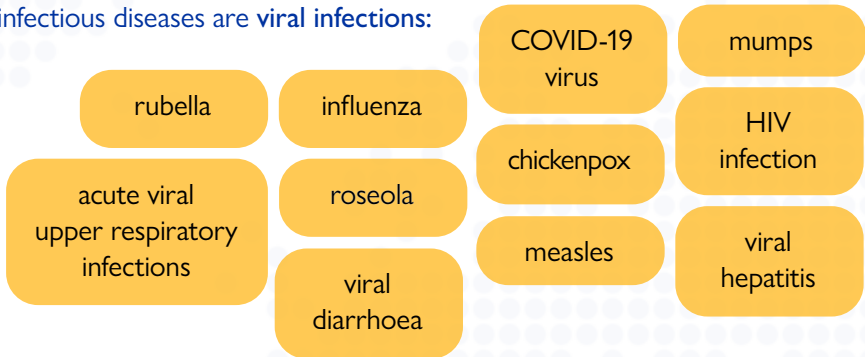


# WHAT IS WORTH KNOWING ABOUT INFECTIONS DISEASES?

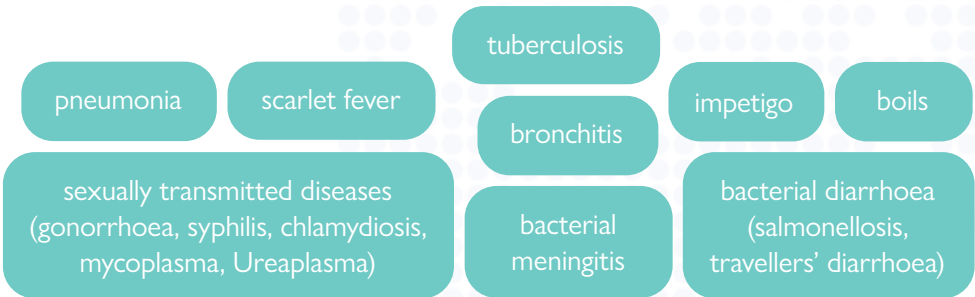


# WHAT ARE THE INFECTIOUS DISEASES:

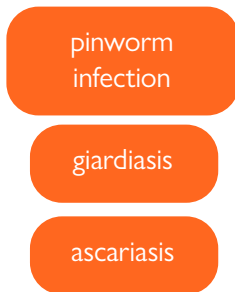
Typical infectious diseases are **viral infections**:



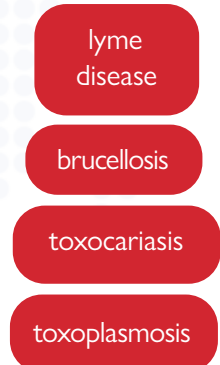
**Bacterial infections:**



Another type of infectious disease is **gastrointestinal worms**:



A separate group is **zoonotic infections**:



# WAYS OF DISEASE

## TRANSMISSION:

### INFECTIOUS DISEASES CAN SPREAD IN A VARIETY OF WAYS:

- » through direct contact from person to person (impetigo, boils, pediculosis, scabies);
- » by inhalation (influenza, COVID-19, scarlet fever, pertussis, tuberculosis, bronchitis, pneumonia);
- » through sexual contact (gonorrhoea, trichomoniasis, syphilis, candidiasis, Ureaplasma, mycoplasma, chlamydiosis, genital herpes, papillomaviruses – HPV, HIV);
- » by injection directly into the body (via the bloodstream, e.g., after using non-sterile drug equipment): hepatitis B and C viruses, HIV;
- » faecal-oral route – so-called ‘dirty hands’ diseases – hepatitis A, travellers’ diarrhoea, salmonellosis, pinworm, roundworm;
- » vertical route – via the placenta from infected mother to child – cytomegalovirus, rubella, hepatitis B, parvovirus B19, HIV, toxoplasmosis, listeriosis, syphilis;
- » by insects that act as carriers (ticks, mosquito-malaria, Zika virus);
- » through shared objects, e.g., drinking from the same cup (TB, influenza, COVID-19, stomatitis) or shared towels (Staphylococcus aureus).

### WHAT TO DO TO AVOID GETTING SICK:

- » Maintain body hygiene – keeping skin and hair clean, brushing teeth, using only your own toiletries (toothbrushes, combs, shavers, cuticle clippers, scissors).
- » Wash your hands during the day, especially after coming home from a walk, from school, after using the toilet, before eating.
- » Take care to choose appropriate clothing, do not overheat.
- » Ventilate the flat several times a day.
- » Food of unknown origin and out-of-date, off-odour, mouldy or with an altered appearance should not be consumed. Wash fruits and vegetables before eating.
- » Take care to be physically active outdoors; even if you have a cold, go for short walks.
- » Take care to get enough sleep – a young person who is occupied with studying needs 8–9 hours of sleep a day.
- » Undergo preventive vaccinations in accordance with the vaccination calendar for children or the recommendations of doctors for adults.

Knowledge of the agents that cause infectious diseases, the routes of infection and the symptoms provides an opportunity for prevention and, if you become ill, necessitate prompt medical attention and treatment.

## YOU GOT SICK, WHAT'S NEXT:

In situations with worrying symptoms, such as fever, diarrhoea, vomiting, headache, abdominal pain or rash, you should visit your GP. Minors, together with their parents, should go to the paediatrician. If these symptoms are severe, go to the ED (Hospital Emergency Department) or, in special situations, call the Ambulance Service (999).

The doctor in the course of treatment may refer us for additional tests, as well as to other specialists. You should trust your doctor regarding the choice of treatment method, and follow the prescribed doses and timing of the prescribed medication. Do not self-medicate with antibiotics in particular. ANTIBIOTICS ARE NOT EFFECTIVE AGAINST VIRUSES. Report any worrying symptoms that occur during treatment to your doctor.

Until the age of 18, you have to go to all doctors with your mum, dad or legal guardian.



## COMMON INFECTION DISEASES:

### A. DIARRHOEA

Diarrhoea can be acute or chronic.

Acute diarrhoea is passing free, loose stool 3 or more times a day. It is often accompanied by vomiting, nausea, abdominal pain and an elevated body temperature.

Treatment of acute diarrhoea is symptomatic. The most important thing is to prevent dehydration, i.e., the loss of excessive fluids. To do this, drink water, light straw tea or a gentle infusion of chamomile or mint. Multi-electrolyte fluids (Gastrolit, Orsalit) are extremely beneficial in preventing dehydration. Drinking fruit juices is not recommended. An easily digestible diet should also be followed. In a fever above 38.5°C, take Paracetamol or another antipyretic. In the case of crampy abdominal pain, it is beneficial to take antispasmodics such as No-Spa.

When to see a doctor? If there are signs of dehydration: significant weakness, pallor; high fever, passing small amounts of urine.

Chronic diarrhoea is the passing of loose stools over a period of more than 2 weeks.

Such a situation requires a medical consultation.

## B. TICK-BORNE DISEASES

Ticks live in the ground zone, in areas that are slightly damp and rich in vegetation (mainly grasses and shrubs). Their activity begins in March or April, when soil temperatures reach 5–7 °C. Mild winters and humid summers favour high reproduction and low mortality of ticks, resulting in an increased rate of dissemination.

**MYTH!** Contrary to many opinions, ticks do not live in trees and do not jump on passing hosts.

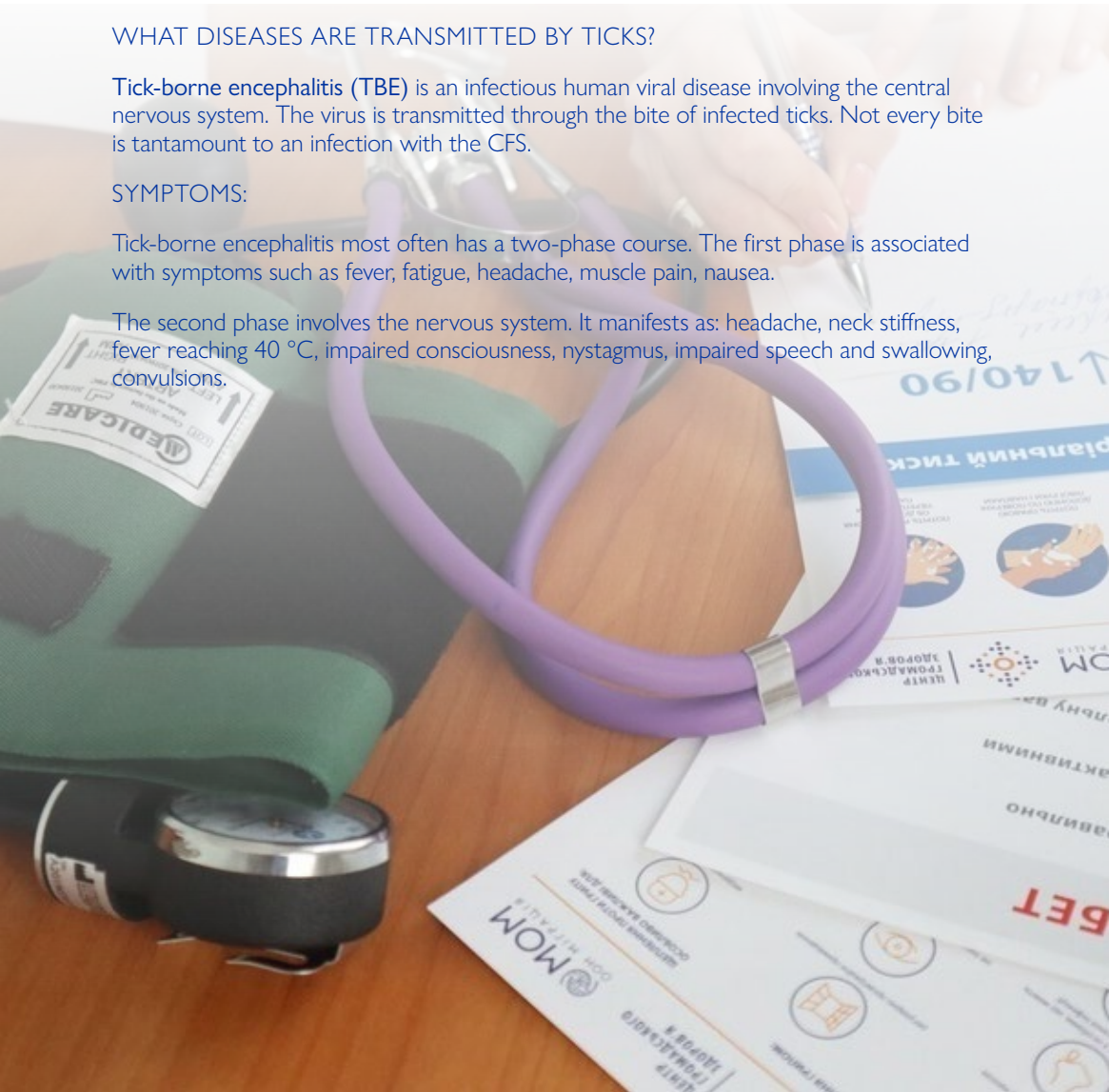
### WHAT DISEASES ARE TRANSMITTED BY TICKS?

**Tick-borne encephalitis (TBE)** is an infectious human viral disease involving the central nervous system. The virus is transmitted through the bite of infected ticks. Not every bite is tantamount to an infection with the CFS.

#### SYMPTOMS:

Tick-borne encephalitis most often has a two-phase course. The first phase is associated with symptoms such as fever, fatigue, headache, muscle pain, nausea.

The second phase involves the nervous system. It manifests as: headache, neck stiffness, fever reaching 40 °C, impaired consciousness, nystagmus, impaired speech and swallowing, convulsions.



## How can infection with the SHE virus be prevented?

The most effective way to prevent tick-borne encephalitis is vaccination. The risk of contracting the STZ virus can be reduced by avoiding tick bites, e.g., by:

- » use of tick repellents,
- » wearing long-sleeved clothing and long-legged trousers,
- » checking for ticks on the skin after outdoor activities and removing ticks as soon as possible with tweezers.

Lyme disease is an infectious disease caused by the bacteria spirochete *Borrelia burgdorferi* transmitted by ticks.

### Symptoms of Lyme disease:

The incubation period of the disease is between 3 and 30 days, but symptoms can take several months or even years to appear. The first symptom in some infected patients is a non-painful, red, round or oval, enlarging migratory erythema. It appears on the skin around the site of the tick bite. Lyme disease is treated with antibiotics and the duration and treatment depends on the stage of the disease.

### What to do after a tick bite?

In most cases, there is no need to report to hospital for tick removal. In the first instance, we should try to remove it at home. For this purpose you will need tweezers or a device for safe tick removal (for example tick traps). With one of these tools, the tick should be grasped as close to the skin as possible and pulled out (without twisting or turning).

It is important **not to use any disinfectants, ointments or creams** in the area of the bite before pulling out the parasite. Such actions irritate the tick, which, by **vomiting, increases the risk of infection.**

The surface of the whole body should be carefully observed and a doctor should be consulted if the above-mentioned symptoms occur.



## C. SEXUALLY TRANSMITTED DISEASES

What is a sexually transmitted disease or STD for short?

It is an infection transmitted from an infected person to a healthy one during sexual activity.

Anyone who has started a sex life can contract a sexually transmitted disease, a single instance of sexual activity can result in infection. Most sexually transmitted diseases can be cured, but treatment should start as soon as possible.

### LIST OF THE MOST COMMON SEXUALLY TRANSMITTED DISEASES:

- » Nonspecific urethritis
- » Syphilis
- » Genital mycosis
- » Genital herpes
- » HIV
- » Viral hepatitis A, B and C
- » Pubic lice and scabies

### HOW DO I KNOW IF I AM INFECTED?

Not everyone infected has symptoms of the disease. Sometimes they do not appear for months or disappear, but this does not mean that the infection is cured.

#### YOU SHOULD SEEK MEDICAL ADVICE IF YOU HAVE NOTICED THE FOLLOWING SYMPTOMS IN YOURSELF:

- » vaginal discharge,
- » urethral discharge in men,
- » a feeling of pain or burning during urination,
- » itching, rashes, pimples or blisters around the genitals or anus,
- » pain and/or bleeding during intercourse,
- » bleeding between periods (this also applies to women using hormonal contraception),
- » bleeding after intercourse,
- » ulceration, erosions, damage to the epithelium on the penis or labia,
- » testicular pain,
- » pain in the pit of the stomach.

#### EVEN IF YOU HAVE NO SYMPTOMS, SEE YOUR DOCTOR, ESPECIALLY IF:

- » you have recently had intercourse (cohabitation) with a new partner without any safeguards,
- » – you or your sexual partners have intercourse without using a condom,
- » – your sexual partner has some symptoms of the disease.

## A visit to the doctor's surgery

During your appointment, your doctor will talk to you about what is worrying you. He or she must also ask you questions about your sex life and any symptoms. You may be uncomfortable, but answer all questions honestly – this will help with the diagnosis. If you don't know why certain questions are asked, just say so.

The medical examination covers all parts of the body, including the genital and anal areas, to look for signs of disease.

## Notification of illness to partner

If you are found to be infected, it is important that your current sexual partner and your most recent partners also get tested and treated. Notify your partner of your illness and, if this is an embarrassing situation for you, your doctor may do so.



# HIV/AIDS

## WHAT IS HIV?

The human immunodeficiency virus (HIV) causes an infection that gradually destroys the body's defence mechanism – the immune system – making it difficult to fight other infections and cancers. The advanced phase of HIV infection, when symptoms are present, is called AIDS (Acquired Immunodeficiency Syndrome).

It can take many years before someone infected with HIV develops AIDS. During this period, the person feels well and may not know they are infected.

## ARE YOU AT RISK OF INFECTION?

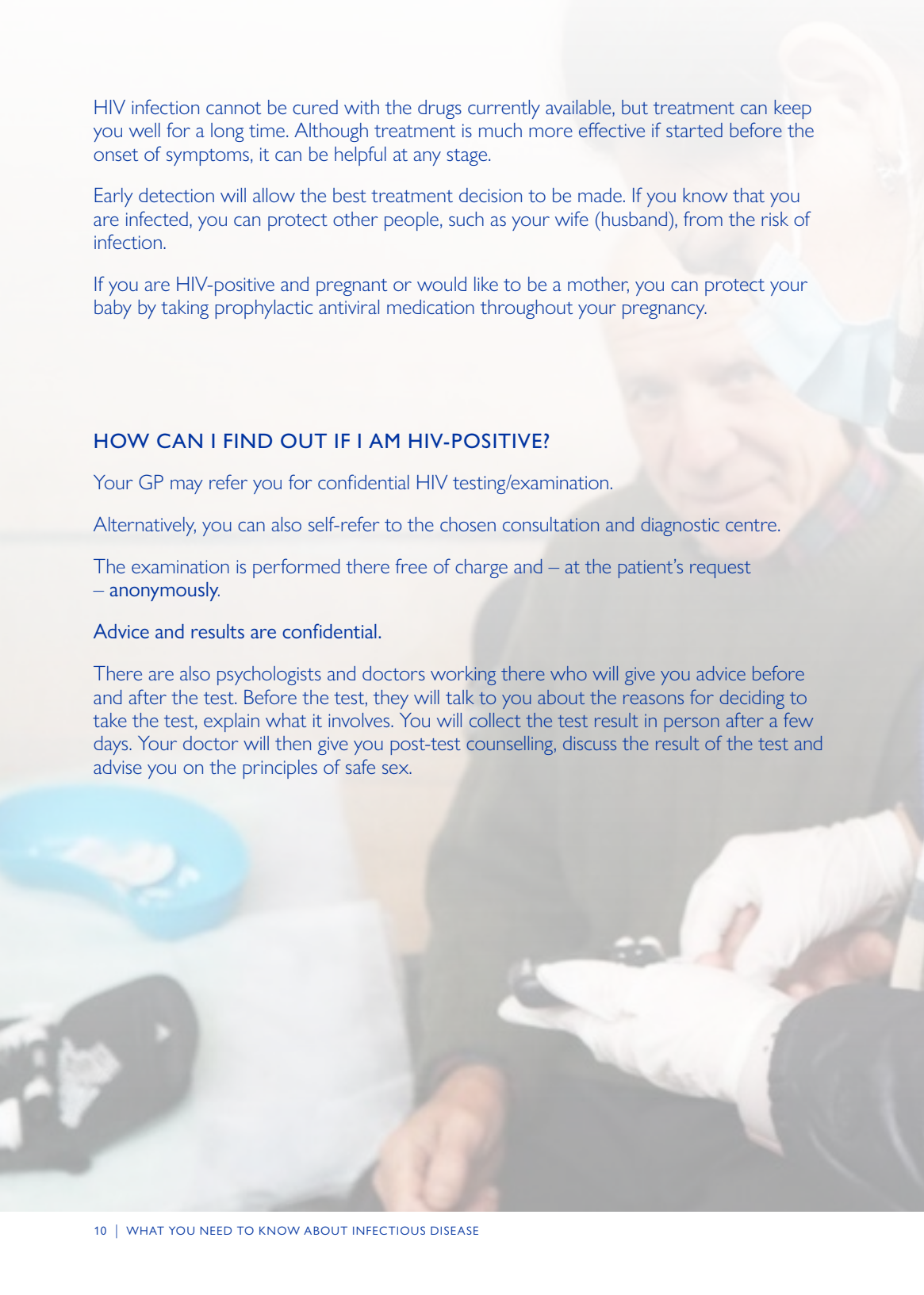
Yes if:

- you have had unprotected sexual contact with an HIV-infected person;
- you used common needles, syringes and other instruments used in intravenous drug use.

The HIV virus can also be transmitted from an infected mother to her yet-to-be-born child (the risk is about 15%), but most often the infection occurs during childbirth. With appropriate prevention during pregnancy, this can be prevented.

You can't get infected with HIV through hugging, kissing, sneezing, coughing, shaking hands, using the same cup or toilet, or by swimming in a pool.

Mosquitoes, ticks, flies and other insects do not transmit HIV.



HIV infection cannot be cured with the drugs currently available, but treatment can keep you well for a long time. Although treatment is much more effective if started before the onset of symptoms, it can be helpful at any stage.

Early detection will allow the best treatment decision to be made. If you know that you are infected, you can protect other people, such as your wife (husband), from the risk of infection.

If you are HIV-positive and pregnant or would like to be a mother, you can protect your baby by taking prophylactic antiviral medication throughout your pregnancy.

## **HOW CAN I FIND OUT IF I AM HIV-POSITIVE?**

Your GP may refer you for confidential HIV testing/examination.

Alternatively, you can also self-refer to the chosen consultation and diagnostic centre.

The examination is performed there free of charge and – at the patient's request – **anonymously**.

**Advice and results are confidential.**

There are also psychologists and doctors working there who will give you advice before and after the test. Before the test, they will talk to you about the reasons for deciding to take the test, explain what it involves. You will collect the test result in person after a few days. Your doctor will then give you post-test counselling, discuss the result of the test and advise you on the principles of safe sex.

# VIRAL HEPATITIS

Viral hepatitis is caused by three types of virus: types A, B and C, which damage the liver. The disease often progresses without any particular symptoms, so it is possible to be ill and not know it (this applies to type B and C viruses).

## HEPATITIS A, A SO-CALLED 'DIRTY HANDS' DISEASE

The viruses are found in the faeces excreted by the patient. Infection occurs via the faecal-oral route.

Symptoms include nausea, vomiting, fever, diarrhoea with abdominal pain, weakness, and jaundice (yellowish colouring of the skin and eyes) is possible.

Symptomatic treatment: hydration, easy-to-digest diet, remaining quiet and lying in bed, administration of antipyretics; in severe cases, a hospital stay is necessary.

Prevention: hand washing after using the toilet, especially when travelling; prophylactic vaccinations.

## HEPATITIS C VIRUS

Infection usually occurs through infected blood or sexual contact.

Most often the infection is asymptomatic, with patients finding out by chance that they are ill.

Treatment of chronic hepatitis B and C is long, fraught with side-effects and not always effective.

## HEPATITIS B VIRUS

The virus is transmitted through infected blood and body fluids during:

- » direct contact with infected blood;
- » intravenous drug and medication administration using unsterilised needles;
- » tattooing with non-sterile needles;
- » the use of personal items such as a toothbrush or razor blade belonging to an infected person;
- » sexual relations.

The course of B virus infection can be asymptomatic for many years, with many people unaware of their infection.

Prevention: preventive vaccinations, sterilisation of medical equipment, use of disposable equipment.

## HEPATITIS D

Acute hepatitis D, or (simply) hepatitis D, is caused by the hepatitis D virus (HAD). Infection occurs through the blood route, the sexual route and through the placenta or during childbirth.

Hepatitis D infection does not occur alone, but only in company with hepatitis B. That is to say, it is possible to be infected with both viruses at the same time, or in a person with an infection of HEPATITIS B, superinfection with hepatitis D occurs.

# GONORRHOEA

Infection occurs through sexual contact.

**Male complaints:** usually after two (up to seven) days, burning or itching on urination and discharge from the urethra.

**Female complaints:** sometimes burning or itching on urination, increased vaginal discharge.

**Treatment:** antibiotics (early treatment as possible is important).

**Remember:** it is essential to examine your partner.

**Attention!** Symptoms in a woman are not as pronounced as in a man, or they may not be there at all.

If left untreated, pelvic organ inflammation can result in infertility or increase the risk of ectopic pregnancy.

A woman with gonorrhoea can infect her baby during natural childbirth.

# SYPHILIS

Infection usually by sexual contact; syphilis can be congenital in the newborn if the mother has active syphilis

**Ailments (male and female):** first symptoms after three to four weeks. A small painless ulcer (disappears on its own after some time) on the genitals, anus or mouth.

If treatment is not followed, often after a further four to eight weeks, a non-itchy rash appears, which also disappears on its own.

Untreated disease continues to develop. It can have a multi-year course with successive symptomatic and asymptomatic periods.

**Treatment:** full recovery with antibiotics.

If you are allergic (sensitised) to penicillin, inform your doctor – a different antibiotic will then be used.

**Remember:** it is essential to examine your partner.

If you've been treated for syphilis once, it doesn't mean you can't get infected again!

**Attention!** The symptoms described can easily be overlooked or may not occur – therefore, in the case of a possible infection, a blood test is recommended after four to six weeks.

# HPV – HUMAN PAPILLOMAVIRUS

The virus is transmitted by sexual contact, through direct contact with lesions on the skin or on mucous membranes.

Infection is mostly asymptomatic.

HPV is the causative agent of cervical and anal cancer in women and oral, pharyngeal, anal and penile cancer in men.

Vaccine prophylaxis is very important in this disease. Vaccines contain recombinant, purified protein, which is part of the HPV virus, and do not contain viral DNA.

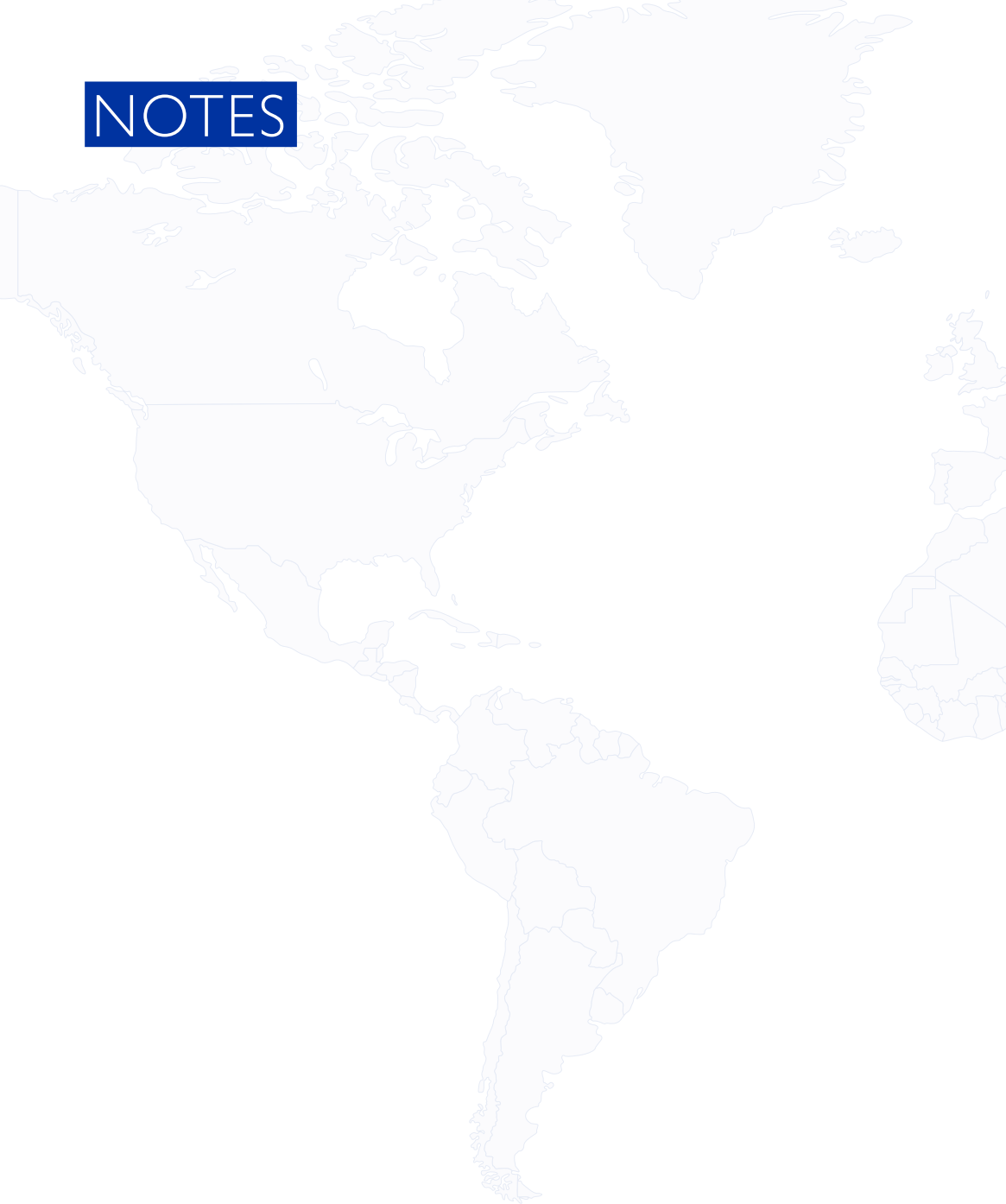
Indications for vaccine administration: prevention of precancerous lesions of the genital organs (cervix, vulva and vagina) and cervical cancer causally linked to specific oncogenic types of human papilloma virus (HPV).

## HPV VACCINATION IS RECOMMENDED FOR:

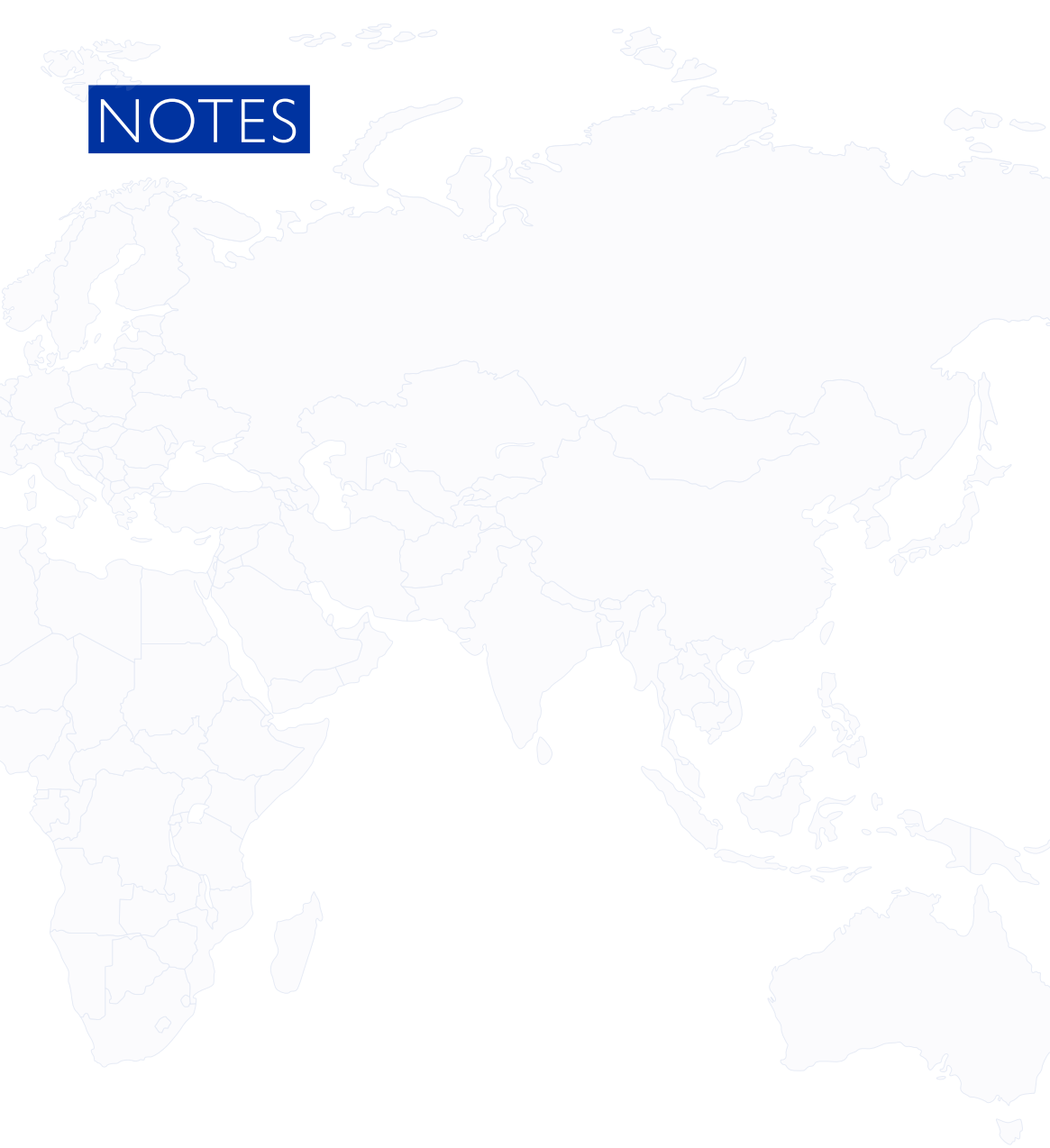
- girls and boys aged 9 years and older, universal HPV vaccination programmes mostly affect adolescent girls and teenagers aged 11–13 years,
- people up to the age of 26 who have not previously been vaccinated,
- persons aged 27–45 years who are not vaccinated and may benefit from vaccination.



# NOTES



# NOTES



## HOW CAN YOU PROTECT YOURSELF FROM SEXUALLY TRANSMITTED DISEASES?

### Fidelity

Fidelity in a relationship significantly reduces the possibility of contracting a sexually transmitted disease.

### Sexual partners

If possible, talk to your partner about their previous sexual contacts. When your partner is healthy and you remain faithful to each other, you can be sure that you will not get infected with a sexually transmitted disease.

### Condoms

Condoms provide 90–95% protection against infection during sexual contact with HIV.

They also reduce the risk of infection with other sexually transmitted diseases.

It is not true that condoms have 'micropores' through which viruses and sperm enter.

Use one condom only once and according to the instructions.

### Abstinence from drugs

Drugs and alcohol alter the sense of reality, reduce responsibility, impair judgement and self-control, and thus lead to unprotected and unthinking sexual contact. Particularly in relation to HIV/AIDS, abstinence from drugs is of paramount importance.