

Recommendations for basic vaccination against hepatitis B.

Hepatitis is an inflammation of the liver commonly known as jaundice because it can cause a yellowing of the skin and the whites of the eyes. There are different types of hepatitis, which can be caused by toxins or viruses. At present, it is only possible to vaccinate against two forms of viral hepatitis: hepatitis A and hepatitis B.

Hepatitis B vaccination protects against serious complications.

→ The **hepatitis B virus** is transmitted through the blood or secretions of an infected person. The virus is so infectious (10 times more than HIV) that a minimal amount of blood (through a wound or contact with a contaminated needle or tattooing and piercing instruments) is sufficient to cause an infection. The risk of hepatitis B is also very high for those who are in regular contact with an infected person, even if there is no wound. Sometimes it is impossible to say how a person has become infected. Most often, hepatitis B is transmitted through unprotected sex, as the virus is also present in semen and vaginal secretions. For this reason, 80% of cases are young adults between the age of 15 and 40 years.

Hepatitis B causes tiredness, fever, abdominal pain, sometimes jaundice, dark urine and light-coloured stools. This acute infection, which can go unnoticed, lasts for several months. Before widespread vaccination, hepatitis B was responsible for 2,000 to 3,000 acute infections per year in Switzerland. These were mostly benign, although there were some 200 to 250 hospitalisations and about a dozen deaths per year. The main risk with hepatitis B is that it can become chronic. This risk is very high (up to 90%) in infants whose mothers have chronic hepatitis B. In healthy adults, about 1 in every 10–20 persons does not succeed in eliminating the virus and remains infectious for the rest of his or her life and risks developing serious life-threatening complications (progressive liver destruction, cirrhosis, cancer). Certain treatments, which have to be continued over several months, can provide a cure for some of the patients, but others may require a liver transplant. It is estimated that in Switzerland the complications associated with chronic hepatitis B are responsible for between 40 and 80 deaths a year.

→ The **hepatitis A virus** is spread through foodstuffs, especially in countries where hygiene is insufficient. In Switzerland, the risk of contracting hepatitis A is minimal, unless in direct contact with an infected person, the virus being excreted in the stools. Hepatitis A is mostly benign if the disease is contracted in childhood, although there can also be serious complications. In adults, hepatitis A causes loss of appetite, nausea, jaundice, fever and extreme tiredness, which can last for weeks or months. In contrast to hepatitis B, there is no risk that hepatitis A becomes chronic. In very rare cases, however, hepatitis A can take on an aggressive form, making a liver transplant necessary.

Not vaccinating against hepatitis B means increased risk.

Before the introduction of widespread vaccination, 1 in every 20–40 persons living in Switzerland had been infected with the hepatitis B virus. Through vaccination, the risk of being infected is reduced by about 95%. However, for a non-vaccinated person the risk of contracting hepatitis B remains very high, because the number of infected persons in Switzerland (approximately 20,000 persons, i.e. 1 in 350 inhabitants) has not yet declined.

Vaccines against hepatitis.

At present, it is only possible to vaccinate against hepatitis A and B. The hepatitis B vaccines contain only the outer envelope of the virus, which is produced by genetic engineering on yeast or cell cultures in the laboratory. The hepatitis A vaccines contain the killed virus. Both vaccines contain preservatives and stabilisers and an “adjuvant” which strengthens the reaction of the immune system. There are vaccines against hepatitis B and hepatitis A, and a combined vaccine against both. The hepatitis B vaccination can also be combined with the infant vaccination against diphtheria, tetanus, whooping cough and polio. Vaccines that do not contain mercury are available.

The hepatitis B vaccination requires several (two to four) doses at intervals of 6 to 12 months, depending on age and the chosen vaccination plan. After a complete vaccination schedule, 95% of the vaccinated children or adolescents are protected for many years, probably for life. If the vaccination is given after the age of 20–25 years, it is somewhat less effective. Since the widespread introduction of adolescent vaccination in Switzerland in 1998, acute infections in 15- to 19-year-olds have been reduced by 84%. Between 1999 and 2003, no case of hepatitis B was reported in vaccinated adolescents.

What is the ideal age for the hepatitis B vaccination?

Vaccination against hepatitis B is recommended at the latest between the age of 11 and 15 years. In fact, 80% of infections occur between the age of 15 and 40 years and the vaccination should be completed before the first sexual contacts. Hepatitis B vaccination can be given at any time before puberty: at birth (essential if the mother is infected), in infants (in combination with other infant vaccines) or combined with the hepatitis A vaccine for those travelling to regions where there is a high risk of hepatitis A. The vaccination against hepatitis B is also recommended for adults who are at increased risk of:

- 1) becoming infected (close contact with an infected person, persons who work in the health and security sectors or as social workers, persons who frequently change partners, drug users, persons who often take holidays in countries where hepatitis B is common or stay for several weeks in such countries);
- 2) suffering complications.

Side effects of the hepatitis B vaccination.

The hepatitis B vaccination is generally well tolerated. In one in ten persons, a local reaction (redness, pain, swelling) occurs at the injection site. Less often, the vaccination is followed by headache, tiredness or fever. All these reactions disappear after 1–3 days. A serious allergic reaction to an ingredient of the vaccine is extremely rare (1–2 cases per million doses of the vaccine). Worldwide, more than 550 million people have been vaccinated without complications. Sometimes, health problems become apparent within days or weeks after a vaccination, raising fears that the vaccination might be responsible for them. For example in France, many studies were carried out between 1996 and 2004 to respond to the fear that hepatitis B vaccination may be associated with autoimmune diseases. These studies showed absolutely no connection between hepatitis B vaccination and autoimmune diseases (e.g. multiple sclerosis). The hepatitis B vaccination is therefore recommended worldwide.

When must the hepatitis B vaccination not be given?

In the case of mild illness, the vaccination can be postponed for one to two weeks. Hepatitis B vaccination is contraindicated in the case of serious allergy to one of the ingredients of the vaccine or a severe allergic reaction following an earlier vaccination. If you have any particular questions, do not hesitate to ask your doctor who will be pleased to help you.

Doctor's Stamp

Cost of the hepatitis B vaccination.

The hepatitis B vaccination is considered to be so important by the health authorities that its cost is covered by the basic health insurance up until the age of 16 years. If an increased risk of infection results from a person's occupation, the cost is covered by the employer. As there is little risk of hepatitis A in Switzerland, the hepatitis A or combined A and B vaccination are intended especially for travellers, who have to bear the cost themselves.

Your doctor recommends the hepatitis B vaccination.

Talk to your doctor about the hepatitis B vaccination (together with or without the hepatitis A vaccination). He/she will be pleased to answer your questions.

This document was drawn up by the Federal Commission for Immunization.

Status of the information: June 2006



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