

## Vaccinate yourself

Vaccinations against HB (hepatitis B) have become a standard in Poland already. This is good news, since preventive measures are always the cheapest. It's better to prevent than to treat, especially since the cost of vaccines is low, yet the benefits are not to be overestimated. As recently as in 1993, Poland had one of the highest HB (hepatitis B) incidence rates. 1994 started the era of mass vaccinations, thus the percentage of HB incidences dropped by 7: from 35 to 5 disease incidences. This is why it's worth to vaccinate yourself before having a surgery.

## Who should have a vaccination?

Well, everyone who has not been vaccinated yet or anyone who hasn't suffered from HB. If you don't remember whether you've had a vaccination against HB, have a HBs antibody titer done. This test is seven times cheaper than the vaccination, which may turn out to be needles.

The quantity results of HBs antibody titers are classified as follows:

- negative – you should vaccinate yourself
- positive, lower than 10 UI/ml – low immunity; you should have a booster shot or go through a complete cycle of 3 vaccination shots and then have a HBs antibody titer done one month after the last shot
- positive, higher than 10 UI/ml – you're immune to HBV (hepatitis B virus). In some exceptional cases, when the result is equal to 10 UI/ml, or lower than 100 UI/ml and the patient belongs to the high-risk group, it's advisable to have a booster shot.

## Who doesn't have to vaccinate themselves?

- most children born between 1996 and 2006 have been vaccinated in the first 24 hours of their lives. More than 95% of children and teenagers (0-10 years old) are immune to HBV.
- patients who have been vaccinated earlier
- patients who have suffered from HB
- HBs Ag positive patients
- patients suffering from chronic hepatitis B.

## Vaccination schema

- three shots schema: 0, 1, 6 – you have a vaccination now, a month after that and six months after the first shot. You become maximum immune after 7 months (one month after the last shot).
- rarely used four shots schema: 0, 1, 2, 12 – you have a vaccination now, a month after that, two months after the first shot and 12 months after the first

## Summary vaccination schema

This schema is for patients not immune to HBV who

- are planning to go to a country where the risk of HBV infection is high
- need to undergo unplanned medical procedures.

This vaccination is suitable for patients of 15 years of age and older. After 21 days a "short term viral response" occurs. It needs to be consolidated during the 12th month after the first shot.

## When to re-vaccinate?

No patient needs to have a booster shot earlier than 15 years after the vaccination. In case of patients who had HBs Ag after the vaccination there's no need for booster shots, even if the current antibodies level is lower than 10 UI or the antibodies are gone.

## Contraindications

There're no typical contraindications. Vaccination is not possible in very few cases. Women planning to become pregnant should vaccinate themselves before getting pregnant. If they didn't do it, the vaccination is possible during the second half of pregnancy, in exceptional cases. At the same time patients need to remember there's been too little research and no vaccinations during pregnancy are recommended. The HBs Ag test is not required before the vaccination. If a person is HBs Ag positive and nonetheless they're vaccinated, nothing wrong healthwise happens. HB vaccination contraindications are: acute illnesses, especially when the temperature goes over 38.5 degrees.

The following are not contraindications: breastfeeding, infections with other hepatotropic viruses (including HPV), interferon and ribavirin treatments (when the temperature keeps below 38.5 degrees), antibiotics treatment, asthma, convulsions, stable neurological diseases or prematurity.

## When the mother is HBs Ag positive

96% of children vaccinated in the first 12 hours after birth, become immune to HBV. If, together with the vaccine, a specific immunoglobuline is administered into distal body parts (0,06 ml/kg of body weight), the operation of the vaccination is greater by ca 2%.

## Complications

Rarely occur:

- undesirable local immunoreaction, exactly like can be observed after intramuscular placebo injection
- headaches
- slightly raised body temperature
- gastric disorders
- allergic reactions (1 in 600 000 dosages).

## **Specific immunoglobulines against HBV**

They can be obtained from an antitoxin from donors with high HBs Ag levels (at least 1 to 100 000). They've been used in passive preventive measures since 1978. It's most commonly used in post exposure cases (for example medical staff), newborns of HBs Ag positive mothers (especially those with HBe Ag). The immunoglobuline should be administered as soon as possible, not later than 72 hours after the exposure.

In Poland we have two immunoglobuline specimens registered:

- intramuscular shots: Gamma antyHBs (a 15% solution of human immunoglobulines, a 200µm. phial for newborns or a 1000 µm. phial for adults;
- intravenous shots: Hepactect – a 10% immunoglobuline solution, autoimmunity label 50 µm./ml in 2ml ampules for newborns and 10ml ampules for adults.

If a person exposed to HBV hadn't been vaccinated, they should receive a vaccination together with the HBs immunoglobuline.

Based on: [www.wzw.pl](http://www.wzw.pl)