The Swedish vaccination program

GENERAL SECTION FOR ALL CHILDREN

All children in Sweden are entitled to vaccination against nine serious diseases through the child and school health services. Some children are also offered vaccination against hepatitis B, tuberculosis, influenza and pneumococcus infection (see separate leaflet).

<table>
<thead>
<tr>
<th>Age</th>
<th>Grade</th>
<th>Vaccination against</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 months</td>
<td></td>
<td>diphtheria, tetanus, whooping cough, polio, Hib, pneumococcus</td>
</tr>
<tr>
<td>5 months</td>
<td></td>
<td>diphtheria, tetanus, whooping cough, polio, Hib, pneumococcus</td>
</tr>
<tr>
<td>12 months</td>
<td></td>
<td>diphtheria, tetanus, whooping cough, polio, Hib, pneumococcus</td>
</tr>
<tr>
<td>18 months</td>
<td></td>
<td>measles, mumps and rubella</td>
</tr>
<tr>
<td>5–6 years</td>
<td>1–2</td>
<td>diphtheria, tetanus, whooping cough and polio</td>
</tr>
<tr>
<td>6–8 years</td>
<td>1–2</td>
<td>measles, mumps and rubella</td>
</tr>
<tr>
<td>14–16 years</td>
<td>8–9</td>
<td>diphtheria, tetanus and whooping cough</td>
</tr>
</tbody>
</table>

Children born up to and including 2001 follow a different schedule from the age of 5 or 6.

<table>
<thead>
<tr>
<th>Age</th>
<th>Grade</th>
<th>Vaccination against</th>
</tr>
</thead>
<tbody>
<tr>
<td>5–6 years</td>
<td></td>
<td>polio</td>
</tr>
<tr>
<td>10 years</td>
<td>4</td>
<td>diphtheria, tetanus and whooping cough</td>
</tr>
<tr>
<td>12 years</td>
<td>6</td>
<td>measles, mumps and rubella</td>
</tr>
</tbody>
</table>

What is vaccination?
Vaccination means that parts of an infectious agent that cause a disease are supplied to the body, or all of the infectious agent in weakened form. This amount is not enough to make you ill, but it is enough to build up a protection. If you are subsequently exposed to an infection, the body’s immune system has already been activated and can neutralize the infectious agent before the disease breaks out. Vaccination is performed via injection with a syringe.

The benefits of vaccination are protection against diseases and their consequences. The disadvantages are the discomfort of the actual vaccination and the risk of side effects. No medical procedure is completely risk-free. Nevertheless, the National Board of Health and is of the opinion that the risks of disease are much greater than the risks of vaccination.

There are no demands for obligatory vaccination; on the contrary it is up to you as a parent to decide whether your child should be vaccinated or not. Be sure to keep track of your child’s vaccination through the BVC card or in some other convenient way.

What protection does the vaccination give?
The vaccination does not guarantee everyone vaccinated will be protected. Children that are not protected by the vaccine are still largely protected by the fact that nearly all children in Sweden are vaccinated. Any possible infection is quickly stopped since the majority of children have functioning protection.

The vaccinations at the age of 3 and 5 months against diphtheria, tetanus, whooping cough, polio, Hib infection and pneumococcus infections provide basic protection. The next vaccination at the age of 12 months is a booster dose that extends the protection effect. Further booster doses of vaccine against polio, diphtheria, tetanus and whooping coughs are given later on. However, no further vaccination against Hib or pneumococcus is needed.

A dose of the combined vaccine against measles, mumps and rubella provides a good protection. A second dose is administered at a later date by schools, partly to cover the children who didn’t develop protection after the first vaccination, and partly to ensure long-lasting protection.

Which diseases are included in the program?

**DIPHTHERIA** is a highly contagious and serious throat infection that can cause choking among children. The diphtheria bacteria secrete a toxin that can cause life-threatening injuries in for example the heart, kidneys and nervous system.

**TETANUS** is caused by a bacterium that is found in soil and can infect wounds. This bacterium produces a powerful toxin that causes severe convulsions and respiratory paralysis, often with a fatal outcome. The disease is not contagious and therefore can’t be transmitted between humans.
**Whopping Cough** is a highly contagious respiratory infection with severe coughing attacks that can last for several months and result in complications such as pneumonia. For infants, the disease can be very difficult and even life-threatening.

**Polio** is a viral disease that spreads through sewage and polluted water. Once upon a time, even in Sweden there were many people that died or suffered paralysis or permanent disability because of polio. Polio now only exists in a few countries in Africa and Asia.

**Hib** is a bacterium that can cause serious and fast progressing infections, especially among children under five. The risk of a fatal outcome in meningitis and blood poisoning is five to ten percent and survivors can develop permanent disabilities such as deafness or spasm attacks.

**Pneumococci** are bacteria that can cause milder infections such as ear infection and sinusitis, but they also cause very serious and sometimes fatal diseases like blood poisoning and meningitis. There is a risk of complications, such as impaired hearing or various forms of brain damage. The vaccine offers protection against seven of the pneumococcal types most common among small children, which is equivalent to a protection of about 70 percent.

**Measles** is a highly contagious and often difficult viral disease with high fever, cough and rash. Measles can lead to complications such as meningitis, ear infections or bronchitis. There is no treatment for the illness and deaths occur among unvaccinated children.

**Mumps** is a contagious viral disease affecting the salivary glands and central nervous system. One common complication is meningitis, which can cause permanent hearing damage or deafness. Boys who become ill after puberty may be affected by testicular inflammation, which in rare occasions can lead to sterility.

**Rubella** is normally a good-natured viral disease in children and adults, but if a pregnant woman becomes ill, there is danger of serious damage to the brain, heart, sight and hearing of the fetus.

**Which vaccines are included in the program?**
- Against diphtheria, tetanus, whooping cough, polio and Hib infection various combination vaccines are given.
- A vaccine against measles, mumps and rubella is given as a combination vaccine.
- Against pneumococcal infection, a single vaccine is given.

Combination vaccines function just as well as single vaccines, and there is no evidence that it would be beneficial to split the vaccinations. Contact your child health centre or school health service for information about which vaccines are used there.

**What adverse effects may occur?**
The vast majority of children have no or only minor adverse effects from vaccinations. Possible adverse effects are usually over within a few days. In case of doubt or if the child is not feeling well, you should contact the child health centre, school health service or public healthcare.

**Vaccination against diphtheria, tetanus, whooping cough, polio, Hib and pneumococcus**

**Common** (seen in at least 1 out of 100 vaccinated): redness, swelling and tenderness at the injection site, mild fever, diarrhea, vomiting.

**Unusual or rare (infants):** inconsolable crying for several hours, fever of 39°C or above, severe swelling/flush, febrile convulsions, limpness and paleness, nettle-rash.

**Unusual or rare (older children):** fever of 39°C or above, severe swelling/flush, nettle-rash, allergic reactions.

**Vaccination against measles, mumps and rubella**

**Common** (seen in at least 1 out of 100 vaccinated): redness, swelling and tenderness at the injection site. A reaction that is similar to a weakened copy of the diseases. The children are not contagious and the symptoms usually disappear within a few days. After the second dose of the vaccine this reaction is less common.

**Unusual or rare:** temporary mild joint pain, fever, febrile convulsions, allergic reactions.

**To bear in mind before a trip abroad**
Before a trip abroad some of the vaccinations can be given earlier and other vaccines may be advisable. Consult your child health centre or a vaccination consultancy.

**Do you want to know more?**
Contact your child health centre or school health service if your child has started school.

**Important!**

**Before the vaccination** – Tell us if your child is allergic or has reacted abnormally to previous vaccinations.

**After the vaccination** – Contact the child health centre or the school health service if you notice anything unusual about your child within the immediate period.