Meningococcal infection is caused by a bacterium that exists in many forms known as serogroups (A, B, C, Y, W-135). The infection is transmitted through direct contact with nose and throat secretions of infected persons. In the province of Quebec, there was a strong increase in the number of serogroup C meningococcal infections in the province of Quebec. A massive vaccination campaign was launched among young people between the ages of 2 months and 20 years to offset the circulation of this bacterium among the population.

VACCINATION: AN EFFECTIVE MEANS OF PREVENTION
The vaccine is administered at the age of 12 months and offers a protection rate of 97% against the disease. However, this vaccine does not protect against the infections caused by other meningococcal serogroups (A, B, Y, W-135).

POSSIBLE EFFECTS
In most cases, the vaccine does not provoke a reaction. Inflammation (redness, pain and swelling) may occur at the injection site in the 72 hours following the administration of the vaccine (in 10 to 40% of infants and young children). The symptoms of fever, drowsiness and irritability are more common in children under 5 years.

PNEUMOCOCCUS
Pneumococcus is a bacterium that is located in the respiratory tract of a large number of people. The bacterium is transmitted from one person to another through direct contact with respiratory secretions. It may lead to many types of serious diseases such as bacteremia (blood infection), meningitis (infection of the lining of the brain) and pneumonia (lung infection). Pneumococcus is one of the common causes of ear and sinus infections among children.

AN EVER-PRESENT RISK
Because many people carry this bacterium in their respiratory tract, everyone is susceptible of developing a pneumococcal infection. The frequency of serious pneumococcal infections is greater among children under the age of 2 years and among persons suffering from chronic illnesses or particular medical conditions. The death rate among children under the age of 13 years is 2% but reaches 6% in cases of meningitis and climbs to 44% if there is a blood infection, even if antibiotics are administered.

Among children who attend daycare centres, the risks of developing an invasive pneumococcal infection is 3 times higher than for children who stay at home.

VACCINATION: AN EFFECTIVE MEANS OF PREVENTION
The vaccine against pneumococcus is very safe and protects against the most common types of pneumococcus observed among children under the age of 5 years. The effectiveness of the conjugate vaccine against the infections caused by pneumococcal bacterium is over 90% among young children in good health.

POSSIBLE EFFECTS
A local reaction (pain, redness or swelling) may occur at the injection site. The vaccine may also bring on a light fever and other reactions like: irritability, changes in appetite or sleeping habits, vomiting, diarrhea and redness of the skin.

Severe allergic reactions are exceptional.

INFLUENZA
Influenza is a highly contagious disease that strikes especially between December and April. It is characterized by sudden fever (more than 39°C), dry cough, muscular pain and a strong feeling of general malaise that lasts several days.

AN EVER-PRESENT RISK
Influenza can have serious consequences such as pneumonia, hospitalization and death. Every year in Quebec, between 1,000 and 1,500 persons die from influenza or its complications. Influenza particularly affects children and it has been observed that children under the age of 2 years carry a high risk of being hospitalized.

VACCINATION: AN EFFECTIVE MEANS OF PREVENTION
The vaccine against influenza is safe and remains the most effective way to prevent or slow down the disease and its complications. Vaccination prevents infection among 60% to 90% of persons in good health who are immunized during the flu season. Vaccination is required each fall because the viral content is adapted each year to the types of viruses in circulation. Moreover, the vaccine does not protect against other viruses that cause respiratory infections (e.g. colds).

POSSIBLE EFFECTS
A light fever and a local reaction (sensitivity, redness or swelling) may occur at the injection site.

In rare cases, in the 24 hours following vaccination, a child may have red eyes, sore throat, coughing, difficulty breathing or swelling of the face that is known as Oculorespiratory Syndrome (ORS). Generally, these manifestations are benign and disappear on their own within 48 hours.

Severe allergic reactions are exceptional.

In the event of a significant or unusual reaction after vaccination or if you have any concerns, please do not hesitate to contact your local Care Centre or INFO-SANTÉ SERVICE.

Sources :
Protocole d’immunisation du Québec, 6e édition, 2013 MSSS
Prévention et contrôle des infections dans les services de garde à l’enfance – guide d’intervention, 2008, MSSS

North Shore Department of Public Health
HEPATITIS B is a serious disease caused by the toxin of a bacterium characterized by serious and potentially fatal swelling of the brain and mental retardation. The disease is transmitted to the brain and mental retardation. Death occurs in 1 case out of 1,000), which could lead to permanent damage (1 case out of 1,000) or by a pulmonary infection (in 1 to 5% of cases). Moreover, tetanus is caused by a bacterium that is present in the environment and enters the body through a deep cut caused by a bite, a nail, etc. Thus the risk of developing this disease is still present.

If even the number of HBV chronic carriers is unknown among preschool aged children, we are led to believe that it is very low in Quebec. Screening and vaccination programs are the reason for this low number. However, some situations such as bites breaking the skin, accidental exposure to blood, accidental sharing of tooth brushes and daily contact are causes for concern among daycare professionals.

VACCINATION: AN EFFECTIVE MEANS OF PREVENTION
Vaccination against diphtheria, tetanus, poliomyelitis, Haemophilus influenzae type b and hepatitis B starts at the age of 2 months and requires many doses to ensure a protection rate of over 95%. The vaccine against pertussis offers a protection rate of over 85% after three doses. When the vaccine does not work off the disease, it reduces the severity of the disease and the frequency of complications.

POSSIBLE EFFECTS
A child may experience fever, irritability, diarrhea, loss of appetite, vomiting, coughing or nasal discharge. Allergic reactions are exceptional.

VACCINE AGAINST MEASLES, MUMPS, RUBELLA AND VARICELLA (MMR-VAR)
MEASLES is a highly contagious viral disease that is transmitted by contact with nose and throat secretions of an infected person. This infection is often followed by an ear infection (in 5 to 9% of cases), a bronchitis (in 1 to 5% of cases) or a pneumonia. Complications arising from measles may include encephalitis (1 case out of 1,000), which could lead to permanent damage to the brain and mental retardation. Death occurs in 1 case out of 3,000.

MUMPS is a viral disease that causes fever, headache and infection of the salivary glands located close to the jaw (parotid glands). Complications are rare and may lead to deafness, an infection of the testicles or ovaries and to meningitis (in 10 to 30% of cases).

RUBELLA is a viral disease that is transmitted by contact with nose and throat secretions of an infected person and is characterized by a skin rash. When a pregnant woman develops this disease, it may lead to the unborn child to develop an infection causing deafness, cataracts, cardiac malformations or mental retardation.

VARICELLA is a viral disease that causes fever and numerous skin lesions (blisters) that crust over and cause considerable itching. Every year in Canada, varicella is responsible for 1,000 hospitalizations and approximately ten deaths. Complications include ear infections, pneumonia, skin infections, serious Group A streptococcal infections (flesh-eating disease) and encephalitis.

AN EVER-PRESENT RISK
In Canada, diseases that can be prevented through vaccination, like measles, mumps and rubella are still present in other areas of the world. Travelers can carry these diseases and spread them from one country to another. Vaccination is a well-proven method of preventing these diseases from spreading too quickly.