**Measles (Rubeola)**

**Symptoms**

In the early stages, symptoms of measles may include high fever, cough, runny nose, conjunctival congestion (redness of the eyes), and eye discharge.

**Progression**

Fever may temporarily subside but then rise again. Around this time, white spots (Koplik spots) may appear in the mouth. Later, a rash may develop on the face and neck.

The rash is reddish, slightly raised, and gradually merges but leaves areas of healthy skin.

Fever eventually subsides, and the rash fades, leaving behind pigmentation.

**Treatment**

There is no specific treatment for measles (rubeola).

**Prevention**

Measles is highly contagious through airborne transmission, making it difficult to prevent its spread through isolation of affected individuals alone due to its high infectivity.

Therefore, vaccination with the measles-containing vaccine is an extremely effective preventive measure.

As a rule, the measles-rubella (MR) combination vaccine is administered.

If an unvaccinated individual comes into contact with a person with measles, receiving the vaccine urgently within 72 hours of exposure may potentially prevent the development of the disease.

**Mode of Transmission**

Measles can be transmitted through droplets, direct contact, and airborne transmission (aerosol transmission).

It is highly contagious, and nearly 100% of individuals without immunity can become infected.

**Incubation Period**

8 to 12 days

**Guidelines for Returning to School or Childcare**

After fever subsides, it is recommended to wait for at least 3 days before returning to school or childcare.

**Rubella (German Measles)**

**Symptoms**

A rash typically appears on the face and neck, spreading to the entire body.

Fever and swollen lymph nodes are common, and symptoms may include chills, fatigue, and conjunctival congestion (redness of the eyes).

Approximately 30% of individuals infected with rubella may remain asymptomatic (have no symptoms).

**Progression**

The rash is typically maculopapular, with minimal tendency to coalesce, and it usually disappears within about 3 days without leaving any pigmentation.

**Important Note**

Preventing infection, especially in pregnant women, is crucial. If a pregnant woman becomes infected with the rubella virus during the early stages of pregnancy, it can lead to congenital rubella syndrome in the fetus, causing low birth weight, cataracts, congenital heart defects, hearing impairment, microcephaly, developmental delays, and more.

**Treatment**

Rubella is usually a mild illness and resolves on its own, but vigilance is necessary for the prevention of congenital rubella syndrome. There is no specific treatment for rubella.

**Prevention**

Vaccination with the rubella-containing vaccine is highly effective in preventing the disease.

**Mode of Transmission**

Rubella is primarily transmitted through respiratory droplets (though contact transmission can also occur).

**Incubation Period**

16 to 18 days

**Guidelines for Returning to School or Childcare**

Returning to school or childcare is generally recommended once the rash has disappeared.

**Chickenpox (Varicella)**

**Symptoms**

A rash typically appears on the face and head, eventually spreading to the entire body.

**Progression**

The rash starts as red papules, then becomes vesicles (blisters), and finally forms scabs. What characterizes chickenpox is the presence of various stages of rash simultaneously. When all the rashes have crusted over, the infected individual is considered non-infectious.

**Treatment**

Chickenpox generally has a good prognosis and often resolves without specific treatment, especially in otherwise healthy children. In cases where there is a risk of severe illness, antiviral medication may be administered. Starting treatment early after the onset of symptoms is expected to improve clinical outcomes.

**Prevention**

Chickenpox is highly contagious through airborne transmission, and preventing its spread through isolation of affected individuals alone is difficult due to its high infectivity. Therefore, vaccination with the chickenpox vaccine is an extremely effective preventive measure.

**Mode of Transmission**

Chickenpox is primarily transmitted through respiratory droplets and airborne transmission. It is highly contagious, and nearly 100% of individuals without immunity can become infected.

**Incubation Period**

14 to 16 days

**Guidelines for Returning to School or Childcare**

Returning to school or childcare is generally recommended when all the chickenpox lesions have crusted over.

**Influenza (Flu)**

**Symptoms**

Sudden high fever that lasts for 3-4 days, accompanied by the following symptoms:

Systemic symptoms: Fatigue, loss of appetite, joint pain, muscle aches, etc.

Respiratory symptoms: Sore throat, runny nose, cough, etc.

**Progression**

Usually, recovery occurs within approximately one week.

**Treatment**

The treatment for influenza primarily involves the use of antiviral drugs, primarily neuraminidase inhibitors. When administered early after the onset of symptoms, these drugs can lead to early symptom improvement.

**Prevention**

Influenza is prevented with inactivated vaccines. Current influenza vaccines do not guarantee absolute protection from influenza, but they are known to have a certain level of effectiveness in preventing the onset of influenza, as well as reducing the severity and risk of death once the disease occurs.

[For children under 13 years old]

Receiving two vaccine doses with an interval of two to four weeks before the start of the influenza season results in a higher increase in antibody levels.

[For adults]

Receiving one vaccine dose before the onset of the influenza season has a certain level of effectiveness in preventing the onset of the disease and reducing the risk of severe illness once it occurs.

**Mode of Transmission**

Influenza is primarily transmitted through respiratory droplets (though contact transmission can also occur).

**Incubation Period**

1 to 4 days

**Guidelines for Returning to School or Childcare**

It is generally recommended that children return to school or childcare after 5 days have passed since the onset of symptoms and after being fever-free for 3 days (for infants and young children).

**Pertussis (Whooping Cough)**

**Symptoms**

The hallmark of pertussis is its distinctive cough, characterized by a series of rapid coughs followed by a high-pitched whooping sound during inhalation. The coughing can be prolonged and paroxysmal, and it may be so severe that it interferes with sleep, sometimes leading to vomiting. Fever is less common. In older children, pertussis may not always be immediately recognized as the cause of prolonged coughing. It can also occur in adolescents and adults, who can act as sources of infection.

In most cases, appropriate antibiotic treatment can suppress bacterial growth, but the cough may persist for an extended period.

**Treatment**

When pertussis is diagnosed, it is typically treated with antibiotics.

**Prevention**

Preventing droplet and contact transmission is crucial, and general preventive measures such as frequent handwashing are important. It's also advisable for individuals with respiratory symptoms, particularly older children and adults, to avoid close contact with infants under 1 year of age.

**Vaccination**

Vaccination with the DPT-IPV (Diphtheria, Pertussis, Tetanus, Inactivated Polio) combination vaccine is commonly used to provide immunity against pertussis.

Please note that the guidelines for returning to school or childcare emphasize the importance of the distinctive cough disappearing or completing the appropriate antibiotic treatment.

**RS virus**

**Symptoms**

RS virus infection primarily affects the respiratory system and can lead to severe symptoms if contracted during infancy. Infants under six months of age, in particular, may experience severe respiratory symptoms, often requiring hospitalization. In adults, it usually manifests as mild cold-like symptoms, such as a runny nose. It's possible to contract the virus multiple times without developing sufficient immunity, but with each subsequent reinfection, the symptoms tend to become less severe.

**Treatment**

There is no specific treatment established for RS virus infection.

**Prevention**

The infection is transmitted through respiratory droplets and contact, so general preventive measures such as frequent handwashing and practicing cough etiquette are essential.

**Route of Transmission**

Respiratory droplets and contact transmission.

**Incubation Period**

4 to 6 days.

**Guidelines for Returning to School or Nursery**

Return to school or nursery is advised when respiratory symptoms have resolved, and overall health is good.

**Mycoplasma Pneumonia**

**Symptoms**

The primary symptom is a cough, which can lead to pneumonia.

**Progression**

Symptoms such as cough, fever, and headache progress slowly. In particular, the cough gradually becomes more severe and can last for several weeks.

**Treatment**

In most cases, Mycoplasma pneumonia can be treated with antibiotics or may resolve on its own if it occurs. In recent years, antibiotic-resistant strains have become more common, leading to prolonged symptoms.

**Prevention**

There is no vaccine available. Since the infection is transmitted through respiratory droplets, it's important to follow general preventive measures such as practicing cough etiquette.

**Route of Transmission**

Respiratory droplet transmission (often seen in family or recurrent infections).

**Incubation Period**

2 to 3 weeks.

**Mumps (Epidemic Parotitis)**

**Symptoms**

The main symptoms include fever and swelling and pain in the salivary glands (parotid, submandibular, and sublingual glands). In some cases, there may be no fever or salivary gland swelling or pain, and approximately 30% of cases are asymptomatic. Asymptomatic cases are more common in infants and decrease with age.

**Progression**

Fever can last for 1 to 6 days. Swelling of the salivary glands typically begins on one side and may take a few days before the other side is affected. Symptoms peak 1 to 3 days after onset and usually disappear within 3 to 7 days. Pain is associated with the swollen area, and it intensifies with salivary secretion.

**Treatment**

There is no specific treatment for mumps, and symptomatic relief measures such as antipyretics, pain relief, and local cooling are used. Recovery usually occurs within 1 to 2 weeks. In Japan, optional vaccination with a live vaccine is available for children aged one year and older.

**Route of Transmission**

Mumps is transmitted through respiratory droplets and contact. Even in asymptomatic cases, the virus can be present in saliva, making infected individuals potential sources of transmission.

**Incubation Period**

16 to 18 days.

**Guidelines for Returning to School or Nursery**

Return to school or nursery is advised after at least 5 days have passed since the swelling of the parotid, submandibular, and sublingual glands became evident, and the overall health is good.

**Roseola (Exanthema Subitum)**

**Symptoms**

About 5 to 10 days after infection, mild symptoms like fever, fatigue, headache, and muscle aches may occur. Subsequently, isolated pale red macules appear on both cheeks, which then merge within 3 to 4 days to form butterfly-shaped erythema. Skin rash on the limbs is described as having a reticular, lace-like, or marbled pattern and can last for 1 to 2 weeks. The overall infection rate is high, with 80-90% of children being affected, but it decreases to around 40% in adults, sometimes leading to unnoticed infections.

**Treatment**

There is no specific treatment.

**Prevention**

No vaccine is available. Infection is transmitted through respiratory droplets, so practicing cough etiquette and proper handwashing are important preventive measures. Infections are most contagious before the rash appears, and after the rash emerges, the risk of transmission diminishes as antibodies are produced, making it challenging to prevent spread solely through isolation. Preventing infection in pregnant women is particularly crucial.

- Over half of pregnant women lack immunity and are at risk of infection.

- If a pregnant woman becomes infected, especially in the early stages of pregnancy when fetal hematopoiesis is active, the virus can pass through the placenta and infect the fetus.

- If the fetus becomes infected, approximately 10% may result in miscarriage or stillbirth, and around 20% may develop severe anemia and hydrops fetalis, a condition characterized by generalized edema.

**Route of Transmission**

Respiratory droplet transmission.

**Incubation Period**

4 to 14 days.

**Guidelines for Returning to School or Nursery**

Return is advisable when the overall health is good.

**Escherichia coli O157 and Enterohemorrhagic E. coli (EHEC) Infection**

**Symptoms**

In some cases, there are no symptoms, but typically, the main symptoms include watery diarrhea, abdominal pain, and bloody stools.

**Treatment**

In the event of infection, treatment involves rehydration, fluid replacement (intravenous fluids), and managing diarrhea and abdominal pain. The use of antibiotics is carefully considered because they can sometimes worsen the symptoms.

**Prevention**

No vaccine is available. Infection is typically spread through oral or contact transmission. It's important to thoroughly cook meat, avoid handling raw food with utensils that have been in contact with raw meat, and practice good hand hygiene.

**Route of Transmission**

Infection can occur through contaminated raw meat, undercooked meat, and food items contaminated with the bacterium. Transmission can also occur through oral and contact routes.

**Incubation Period**

The incubation period for most strains of E. coli is primarily 10 hours to 6 days, while E. coli O157 typically has an incubation period of 3 to 4 days.

**Guidelines for Returning to School**

Return to school or nursery should be determined by a medical professional who confirms that there is no risk of infection.

- Children under 5 years old can return to school if the bacterium is no longer detected in their stools for two consecutive tests, and their overall health is good.

- Children aged 5 and above, when asymptomatic, do not need to refrain from attending school, provided they have established toilet habits.

**Norovirus Infection (Viral Gastroenteritis)**

**Symptoms**

Symptoms include vomiting and diarrhea, and it is the cause of outbreaks of acute gastroenteritis. Norovirus infections are common not only in infants and young children but also in school-age children and adults, and reinfections are not uncommon.

**Progression**

Most cases resolve within 1 to 3 days.

**Treatment**

There is no specific treatment. Management involves rehydration and fluid replacement to address diarrhea and dehydration.

**Prevention**

Vaccine development is underway, but currently, there is no vaccine available. Infection can occur through oral, respiratory (airborne particles), and contact routes, so general preventive measures like thorough handwashing are crucial. Swift and appropriate handling of vomit and other bodily fluids is also essential.

**Route of Transmission**

Infection can occur through oral transmission, airborne transmission (via aerosolized vomit), and contact transmission. Poor sanitation practices can easily lead to outbreaks. Foodborne outbreaks are often caused by food contamination through infected food handlers.

Infected individuals can shed a high amount of virus in their feces and vomit.

**Incubation Period**

The incubation period is typically 12 to 48 hours.

**Guidelines for Returning to School or Nursery**

Return to school or nursery is advised when symptoms such as vomiting and diarrhea have subsided, and the individual can resume their regular diet. It's worth noting that even after returning to school or nursery, the virus may continue to be excreted in feces for more than three weeks.

**Rotavirus Infection (Viral Gastroenteritis)**

**Symptoms**

Symptoms include vomiting and diarrhea, often with pale-colored stools. It is the cause of outbreaks of acute gastroenteritis. Nearly all children are infected by the age of 5.

**Progression**

Severe dehydration and seizures are common, often requiring hospitalization. Most cases resolve within 2 to 7 days.

**Complications**

Although rare, complications may include encephalitis, seizures, and altered consciousness.

**Treatment**

There is no specific treatment. Management involves rehydration, fluid replacement (intravenous fluids), and addressing diarrhea and abdominal pain.

**Prevention**

Because rotavirus is highly contagious, strict adherence to general preventive measures like thorough handwashing is crucial. Proper food handling, including thorough cooking of foods requiring heat treatment, and not handling raw food items with utensils used for cooked foods, is important.

**Route of Transmission**

Infection can occur through oral transmission, contact transmission, and respiratory transmission (through airborne particles). Even a small number of virus particles (10-100) can lead to infection. Despite thorough handwashing, hands and nails may still carry a significant number of viruses.

**Incubation Period**

The incubation period is typically 1 to 3 days.

**Guidelines for Returning to School or Nursery**

Return to school or nursery is advised when symptoms such as vomiting and diarrhea have subsided, and the individual can resume their regular diet. It's important to note that the virus may continue to be excreted in feces for more than three weeks after returning to school or nursery.

**Pool Fever (Pharyngoconjunctival Fever)**

**Symptoms**

Symptoms include high fever, tonsillitis (inflammation of the tonsils), and conjunctivitis (inflammation of the conjunctiva).

**Treatment**

There is no specific treatment, so symptomatic relief measures are applied. In most cases, the condition resolves on its own.

**Prevention**

There is no vaccine available. To prevent the spread of the infection, it's important to follow general preventive measures such as thorough handwashing, especially after using the toilet or changing diapers. Since the virus can be excreted in feces for an extended period even after recovery, it's essential to wash hands with soap and running water after using the toilet or changing diapers. Given the high infectivity of the virus, sharing items like towels is strongly discouraged.

**Route of Transmission**

Infection can occur through respiratory droplets and contact transmission. While infection can occur through inadequately chlorinated pool water, it is more commonly transmitted through contact.

**Incubation Period**

The incubation period is typically 2 to 14 days.

**Guidelines for Returning to School**

Return to school is advised after at least two days have passed since the disappearance of the main symptoms like fever and conjunctival redness.

**Epidemic Conjunctivitis**

**Symptoms**

Symptoms include redness in the eyes and eye discharge. In infants, membranes may sometimes form on the eyes.

**Progression**

After appearing in one eye, it can spread to the other eye.

**Treatment**

There is no specific treatment, so symptomatic relief measures are applied. In most cases, the condition resolves on its own.

**Prevention**

There is no vaccine available. To prevent the spread of the infection, it's important to follow general preventive measures such as thorough handwashing, especially after using the toilet or changing diapers. Given the high infectivity of the virus, sharing items like towels is strongly discouraged.

**Route of Transmission**

Infection can occur through respiratory droplets and contact transmission. Inadequately chlorinated pool water and shared items like towels can also be sources of infection.

**Incubation Period**

The incubation period is typically 2 to 14 days.

**Guidelines for Returning to School**

Return to school is advised after the symptoms of conjunctivitis have disappeared.

**Acute Hemorrhagic Conjunctivitis**

**Symptoms**

Symptoms include severe eye pain, conjunctival redness, subconjunctival hemorrhage (blood under the conjunctiva), eye discharge, corneal opacity, and more.

**Treatment**

There is no specific treatment, so symptomatic relief measures are applied.

**Prevention**

There is no vaccine available. To prevent the spread of the infection, it's important to follow general preventive measures such as thorough handwashing, especially after using the toilet or changing diapers.

**Route of Transmission**

Infection can occur through respiratory droplets and contact transmission.

**Incubation Period**

The incubation period is approximately 24 hours or 2 to 3 days, depending on the type of virus.

**Guidelines for Returning to School**

Return to school is advised when a medical professional confirms there is no risk of infection.

**Acute Urticaria**

**Symptoms**

This condition is commonly observed in children aged 6 months to 2 years. It can also be characterized by the initial infection of Human Herpesvirus 7, but in such cases, it is more common around the age of 2 to 4 years.

**Progression**

After about three days of high fever, there is a subsequent fever drop, and a rash appears. The rash typically disappears after a few days. It is a relatively mild condition that usually resolves on its own.

**Treatment**

There is no vaccine available, and this condition typically resolves naturally, requiring no specific treatment.

**Prevention**

In most cases, the infection occurs during infancy, and it is often identified through fever. The virus is present in respiratory secretions before and after fever onset, making respiratory droplets, nasal discharge, and saliva potentially infectious. Infections often occur through contact with the saliva or secretions of parents, siblings, or caregivers, but there is a potential for infection if an immunologically naive child comes into contact with secretions from an infected child. It's essential to practice general preventive measures, including regular handwashing, especially when a child has a high fever.

**Route of Transmission**

The virus is continuously excreted in the saliva and other secretions of many children and adults. Infection is thought to occur when an infant loses maternal antibodies received through the placenta, typically in the latter half of infancy, and is exposed to the saliva or secretions of parents, siblings, or caregivers.

**Incubation Period**

The incubation period is approximately 9 to 10 days.

**Guidelines for Returning to School**

Since the virus is no longer excreted by the time the diagnosis is made when the fever drops and the rash appears, the guideline for a child who has had this condition to return to school is when they are "fever-free, in a good mood, and in good overall health."

**Head Lice Infestation**

**Symptoms**

Head lice eggs, or nits, are typically found near the base of the hair shaft, appearing as small white dots. They are often mistaken for dandruff, but unlike dandruff, nits are firmly attached and not easily removed when pinched between the fingers. Adult lice are active near the base of the hair.

**Progression**

Both male and female adult lice, as well as their nymphs, feed on the scalp blood multiple times a day. It takes about three to four weeks for itching to develop on the scalp due to daily blood-feeding. Excessive scratching can lead to secondary infections.

**Treatment**

Phenothrin (SmithRin®) shampoo or Phenothrin powder (available over the counter) is commonly used for treatment. In Japan, there are no other effective treatments for head lice infestations. It's important to note that resistance to Phenothrin is observed in some areas, so it may not always be effective.

Daily shampooing and thorough combing with a fine-toothed comb from the roots of the hair to remove lice and nits are essential. Nits can be removed with frequent combing. There is no need to cut the hair short. To prevent reinfection, it's important to treat all individuals with head lice simultaneously, as there is a risk of transmitting lice back and forth between infected individuals.

**Prevention**

To prevent head lice, avoid head-to-head contact between children and use strategies such as separating bedding, taking turns with heads, etc. In shared environments like swimming pools, it's advisable not to share swim caps, combs, towels, or lockers. Staying informed about local outbreaks is essential for prevention.

**Route of Transmission**

Head lice are typically transmitted through direct head-to-head contact. Additionally, they can be transmitted through shared items such as bedding, towels, scarves, hats, swim caps, combs, brushes, hair ties, gym mats, and lockers. In crowded environments like buses, trains, and public facilities like public baths, transmission can also occur.

**Incubation Period**

The incubation period is approximately 10 to 30 days. Nits hatch in about seven days.

**Molluscum Contagiosum**

**Symptoms**

Molluscum contagiosum appears as small, round, and firm bumps, typically ranging from 1 to 5 millimeters (with occasional cases up to about 1 centimeter) in size. They can vary in color from flesh-toned to white or pale pink, and their shiny surface may resemble tiny blisters. In larger nodules, there may be a central dimple. Usually, these bumps occur in clusters, with several to dozens of them gathering in one area. They can be found on various parts of the body, including the limbs and trunk, but they may also appear on the face, neck, genital area, or other locations.

**Progression**

Molluscum contagiosum may cause mild itching, but scratching can lead to the spread of the bumps. Each individual bump can take several months to as long as half a year to resolve naturally.

**Treatment**

There are several treatment options available, including removal using specialized forceps (which can be slightly painful and cause minor bleeding, sometimes requiring the use of local anesthetic tape), topical treatments, oral medications, or cryotherapy. Keeping the skin clean and improving the skin's barrier function with moisturizers is also part of the management. Infants, young children, and individuals with atopic dermatitis are more prone to spreading the infection if they scratch and then touch other areas, which can lead to more extensive molluscum bumps.

**Prevention**

To prevent the spread of molluscum contagiosum, covering the bumps with clothing, bandages, or waterproof band-aids is recommended. It's also crucial to maintain skin hydration, particularly after pool activities, as chlorine exposure can weaken the skin's barrier function. Since it's transmitted through direct skin-to-skin contact (not through pool water), general preventive measures like regular handwashing are important.

**Mode of Transmission**

Molluscum contagiosum is primarily transmitted through direct skin-to-skin contact. While pool water itself is not a common source of infection, sharing towels, pool floats, kickboards, and other personal items can facilitate its transmission.

**Incubation Period**

The incubation period for molluscum contagiosum typically ranges from 2 to 7 weeks.

**Impetigo (Contagious Skin Infection)**

**Symptoms**

Impetigo presents as water-filled blisters, sores, or scabs that can be found on the face, trunk, and limbs, among other areas of the body.

**Progression**

Scratching the affected areas can lead to the development of new lesions on adjacent or distant skin within a few days to up to 10 days.

**Treatment**

Maintaining skin cleanliness is crucial. Daily bathing or showering, along with gentle cleansing of the affected areas using soapy lather and thorough rinsing, is recommended. Keep nails trimmed short to prevent further damage from scratching. If impetigo is widespread or worsening, topical treatments may be required, and in severe cases, oral antibiotics or intravenous antibiotic administration may be necessary. Treating other conditions like insect bites or atopic dermatitis promptly and improving skin barrier function are important, as these areas are prone to bacterial colonization.

**Prevention**

Regular handwashing and general preventive measures are essential since impetigo can also be transmitted through hand-to-hand contact.

**Mode of Transmission**

Impetigo is transmitted through contact with the affected areas, such as scratching or touching the sores and then contacting small wounds (moist dermatitis, insect bite sites). It can lead to outbreaks in group settings.

**Incubation Period**

The incubation period for impetigo typically ranges from 2 to 10 days, with the possibility of a more extended period in some cases.

**Guidelines for Returning to School**

If the affected areas are being treated with topical medications and covered with gauze to prevent oozing, attending school is usually acceptable. However, it's advisable to avoid water play or swimming in the pool until the condition has completely healed. This is because scratching the affected areas may worsen the condition or lead to potential contact with others. Please note that impetigo is not transmitted through pool water.