Measles, Mumps and Rubella

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**Measles**

**Causative Agent**
Measles is caused by a virus called Measles virus.

**Mode of Transmission**
As one of the most communicable infectious diseases, measles is transmitted airborne by droplet spread or by direct contact with nasal or throat secretions of infected individuals. A patient can get infected by another from 4 days before to 4 days after rash appears. Incubation usually lasts from 7 to 18 days, or even 21 days.

**Clinical Features**
First presented with fever, cough, running nose, red eyes and white spots inside the mouth, one will have red blotchy skin rash 3 to 7 days after onset, starting from the face to the rest of the body. Skin rash usually lasts 4 to 7 days, or even up to 3 weeks, causing brownish spots and sometimes fine skin peeling. In severe cases, the respiratory system, digestive tract and brain can also get infected and lead to serious consequences, sometimes fatal.

Measles infection during pregnancy can cause adverse outcomes, including pregnancy loss, preterm birth, and low birth weight, but there is no evidence to suggest an increased risk of congenital defects by measles. If mothers have measles shortly before pregnancy, the neonates are at increased risk of subacute sclerosing panencephalitis, which is a very rare but fatal disease of the central nervous system, in later life.

**Treatment**
If infected, avoid contact with non-immune individuals, especially pregnant women with a weakened immune system and infants below one year of age. In the absence of specific treatment for measles, drugs may be prescribed for symptom relief, such as antibiotics for bacterial complications.

**Mumps**

**Causative Agent**
Mumps is caused by the Mumps virus. It affects the salivary glands and nerve tissues sometimes.

**Mode of Transmission**
Mumps is spread by way of droplet and direct contact with the saliva of the infected. Mumps can be transmitted from the infected to non-immune individuals from 2 days before overt swelling of salivary glands to 5 days after swelling. The incubation period lasts 12 to 25 days, usually 18 days.

**Clinical Features**
All ages are susceptible to mumps, and are more common in children over one year of age. Mumps is characterised by painful swelling of the salivary glands, usually at the cheeks. Other possible complications include deafness, infection of the brain, pancreas, testicles or ovaries.

**Treatment**
No specific treatment is now available. Drugs may be prescribed to reduce discomfort.
Rubella

Causative Agent
Also known as “German Measles”, rubella is caused by rubella virus.

Mode of Transmission
The transmission route of rubella is via contact with nasal and throat secretions of the infected individuals through droplet spread or direct contact. It is a highly contagious, and can be passed to others from one week before to one week after onset of rash. Incubation lasts 12 to 23 days, usually 14 days.

Clinical Features
Patients usually show symptoms of diffuse rash, fever, headache, malaise, lymph node enlargement, upper respiratory symptoms and conjunctivitis. The rash usually lasts about 3 days, but it may be absent in some patients. Arthralgia or arthritis is more common in adult women with rubella. Rubella can also cause anomalies in developing foetuses. Characterised by deafness, cataract, heart malformations, mental retardation, etc., congenital rubella syndrome may be diagnosed in infants born to women who got infected during the first 3 months of pregnancy.

Treatment
No specific treatment is now available. Drugs may be prescribed to reduce discomfort.

Prevention
Maintain Good Personal Hygiene
- Perform hand hygiene frequently
- Cover the mouth and nose with tissue paper while sneezing or coughing. Dispose of soiled tissues into a lidded rubbish bin, then wash your hands thoroughly
- If you develop fever, rash or respiratory symptoms, wear a surgical mask, refrain from work or school, avoid crowded places and seek medical attention promptly
- To prevent infection of non-immune individuals, stay home till 4 days from when the rash first appears if infected
- Regularly clean and disinfect frequently touched surfaces with 1:99 diluted household bleach. For metallic surface, disinfect with 70% alcohol
- Use absorbent disposable towels to remove obvious contaminants, such as respiratory secretions, then disinfect the surface and nearby areas with 1:49 diluted household bleach, leave for 15 to 30 minutes, rinse with water and keep dry. For metallic surface, disinfect with 70% alcohol
- Maintain good indoor ventilation
- Children under one year of age, or non-immune pregnant women should not travel to areas with outbreaks or high incidences

Measles, Mumps and Rubella (MMR) Vaccine
MMR vaccine is covered in the Hong Kong Childhood Immunisation Programme. Women who are at childbearing age and are not yet immunised should receive MMR before pregnancy for foetus protection. It takes about 2 weeks after vaccination for the immunity to develop. People of normal health can enjoy long term, even lifelong protection after vaccination. One dose of MMR vaccine is 93% effective, two doses 97%. Please consult your doctor about MMR vaccination if you are not sure about your immunisation status.
When to Receive Vaccination

All children should receive two doses of MMR, i.e. the first dose at one year of age and the second one at 18 months. MMR can be given together with other live vaccines or 4 weeks after receiving live vaccines.

Individuals with the Following Conditions Should Not Receive MMR Vaccine or Receive at a Later Time

- A history of serious allergic reaction to a previous MMR vaccination
- A known history of severe allergy to gelatin or certain antibiotics
- With cancer, on long term corticosteroids or immunodeficiency
- Pregnancy*
- On blood transfusion, other blood products or immunoglobulin within the past 11 months
- Has received other live vaccines in the past 4 weeks

*Women should avoid pregnancy for 3 months after vaccination by taking appropriate contraceptive measures.

Common Side Effects

- Soreness, redness or swelling at the injection site
- Fever
- Rash

Rare Side Effects

- Transient swelling of salivary glands
- Swelling of lymph glands (in the head or neck)
- Testicular infection
- Encephalitis
- Meningitis

Frequently Asked Questions

1. How long does it take for immunity to develop after vaccination?

   It takes about 14 days after the first dose of vaccination. The vaccine gives a 80 to 95% protection.

2. Can pregnant women receive MMR vaccine?

   Pregnant women should NOT receive the MMR vaccine.

3. Can women planning for pregnancy receive MMR vaccine?

   Women should not be pregnant for 3 months after vaccination.

4. How many doses of MMR vaccine are needed?

   Adults should also receive two doses of MMR vaccine, and the second dose should be given 28 days after the first dose.

5. What are the common side effects of MMR vaccine?

   There may be fever, and soreness, redness or swelling at the injection site.

6. Can individuals with food or drug allergy receive MMR vaccine?

   Those who are allergic to proteins should NOT receive MMR vaccine, for the protein inside the vaccine may trigger allergic reactions.
麻疹、流行性腮腺炎及德国麻疹

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查詢或預約，歡迎聯絡我們

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麻疹
病原體
麻疹是由麻疹病毒感染所致。

傳播途徑
麻疹可透過空氣中的飛沫或直接接觸患者的鼻喉分泌物而傳播。麻疹是一種高傳染性的疾病。患者從出疹前4天至出疹後4天內把病傳染給別人。潛伏期一般為7至18天，更可長達21天。

病徵
受感染的人初時會發燒、咳嗽、流鼻水、眼紅及口腔內出現白點。3至7天後皮膚會出現紅斑，通常會由面部擴散到全身，維持4至7天，亦可能長達3星期，留下褐色斑痕或出現脫皮。病重者的呼吸系統、消化道及腦部會受影響，引致嚴重後果甚至死亡。

懷孕期間感染麻疹可能導致不良影響，包括流產、早產及嬰兒出生時體重過輕等，然而並無證據顯示會增加嬰兒出現先天性缺陷的風險。此外，如孕婦於生產前後的短時間內感染麻疹，其受感染的初生嬰兒日後患「亞急性硬化性全腦炎」（一種非常罕見但可致命的神經系統疾病）的風險較高。

治療
麻疹患者應避免與未有免疫力人士的接觸，尤其是抵抗力弱的孕婦及未滿1歲的兒童。雖然現時未有特定療法，但可處方藥物紓緩病徵，如有細菌感染可服食抗生素治療。

麻疹、流行性腮腺炎及德國麻疹 家庭醫學及基層醫療中心

流行性腮腺炎
病原體
是由流行性腮腺炎病毒感染所致，有時會影響唾腺，有時亦會影響神經組織。

傳播途徑
流行性腮腺炎可經直接接觸患者的唾液或飛沫傳播。患者在唾腺明顯腫脹之前2日及之後5日期間傳染予未有免疫力的人。潛伏期由12至25天不等，通常為18天。

病徵
患者不限年齡，但以1歲以上的小童最為普遍。病徵包括唾腺腫痛，通常集中在兩頰，間中或出現失聰或腦部、胰臟、睾丸或卵巢受感染等併發症。

治療
現時並無特定的療法，可以處方藥物紓緩不適。
德國麻疹

病原體
德國麻疹又名「風疹」，是由風疹病毒感染所致。

傳播途徑
德國麻疹是透過接觸患者的鼻咽分泌物而傳播，所以接觸飛沫或直接與患者接觸均可能被感染。德國麻疹傳染性極高，患者在出疹前一星期至出疹後一星期均會傳染給別人。潛伏期由12至23天不等，通常為期14天。

病徵
患者常見的病徵包括全身出疹、發燒、頭痛、不適、淋巴結腫大、上呼吸道症狀及結膜炎。出疹的情況通常維持約3天，但有些患者可能並無這個病徵。感染上德國麻疹的成年女性，通常會出現關節痛或關節炎。德國麻疹可令成長中的胎兒出現異常情況。孕婦如果在懷孕首3個月感染德國麻疹，所誕下的嬰兒或會患上先天性德國麻疹綜合症，導致失聰、白內障、心臟畸形及智力發展遲緩等問題。

治療
現時並無特別的治療方法，但可處方藥物紓緩不適。

預防方法
保持良好的個人及環境衛生

- 經常保持雙手清潔
- 打噴嚏或咳嗽時應用紙巾掩蓋口鼻，把用過的紙巾棄置於有蓋垃圾箱內，然後徹底清潔雙手
- 若有發燒、出疹或呼吸道病徵，應戴上外科口罩，不應上班或上學，避免前往人多擠逼的地方，及盡早向醫生求診
- 在出疹後的4天內應留在家中休息，避免傳染給無免疫力的人
- 使用1比99稀釋家用漂白水定期清潔和消毒經常接觸的表面，金屬表面則可用70%酒精清潔消毒
- 用吸水力強的即棄抹巾清理可見的污物，例如呼吸道分泌物，再用1比49稀釋家用漂白水消毒被污染的地方及鄰近各處，待15至30分鐘後，用水清洗並抹乾。金屬表面則可用70%酒精清潔消毒
- 保持室內空氣流通
- 一歲以下兒童及對麻疹、流行性腮腺炎及德國麻疹沒有免疫力的孕婦，不應前往出現麻疹、流行性腮腺炎及德國麻疹爆發或高發病率的地方
接種麻疹、流行性腮腺炎及德國麻疹（MMR）混合疫苗

香港兒童免疫接種計劃已包括MMR混合疫苗。處於生育年齡而從沒有接受過疫苗注射的婦女，亦應接受注射，以減低懷孕時胎兒受德國麻疹感染的風險，以保障下一代的健康。接種疫苗後身體約需兩星期產生免疫力。健康人士接種MMR混合疫苗後一般可獲長期，甚至終生保護。接種一劑MMR混合疫苗，預防效果可達93%，接種兩劑疫苗後預防效果更可達97%。如對麻疹、流行性腮腺炎及德國麻疹免疫力存有疑問，應先諮詢醫生的意見。

接種時間

小童應該接種兩劑MMR混合疫苗。第一劑應在小童年滿一歲時接種，第二劑則在18個月大時接種。MMR混合疫苗可與其他活性疫苗一起接種，或相隔四星期接種。

不宜接種或須押後接種的人士

- 接受MMR混合疫苗後曾有嚴重的過敏反應
- 對明膠（Gelatin）或某些抗生素曾有嚴重的過敏反應
- 患有癌病、長期服用類固醇、患有免疫系統疾病
- 孕婦*
- 最近十一個月內曾接受輸血或其他血液產品或免疫球蛋白
- 在過去四星期内曾接種活菌疫苗（Live Vaccine）

*婦女在注射疫苗後三個月內不宜懷孕，因此需要採取妥善的避孕措施。

常見副作用

- 接種處出現痛楚、紅腫
- 發燒
- 出疹

罕見副作用

- 短暫性的腮腺腫脹
- 淋巴腺（頭部或頸部）腫脹
- 睾丸炎
- 腦炎
- 腦膜炎

常見問題

1. 注射後多久可產生抗體有保護作用？

   注射第一劑疫苗後約14天開始可產生抗體，約有80至95%之保護作用。

2. 懷孕婦女可否接種此疫苗？

   懷孕婦女不能接種此疫苗。

3. 準備懷孕婦女能接種此疫苗嗎？

   接種此疫苗三個月後才可懷孕。

4. MMR疫苗需要注射多少針？

   成年人需注射兩針，注射第一針後28日可注射第二針。

5. 注射MMR後常見副作用？

   可能會出現發燒或注射部位紅腫或痛。

6. 食物或藥物敏感者能注射嗎？

   對蛋白敏感者不能注射此疫苗，因疫苗有蛋白成分，會引起敏感反應。