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Public Health England

North West London
Health Protection Team

Factsheet: Measles

What is Measles?
Measles is an acute infection caused by the measles virus.

Who catches measles?
Measles has become uncommon in the UK because many children have been immunised.
It is usually a childhood infection, most common in children of 1-4 years of age who have not been immunised. However, you can catch measles at any age. Epidemics often coincide with school terms when there is much more close contact between children.

How do you catch measles?
Measles is caught through direct contact with an infected person or through the air when he or she coughs or sneezes.

How infectious is measles?
Very, if an individual has either not been vaccinated or become immune through natural infection and they live in the same household as someone with measles there is a 90% chance that they will develop measles themselves. Measles is most infectious before the rash appears and only trivial contact may be sufficient for the virus to spread.

What is measles like?
Symptoms usually develop 9-11 days after becoming infected and last up to 14 days from the first signs to the end of the rash.
The first stage of measles includes irritability, a runny nose, conjunctivitis (red eyes), a hacking cough and an increasing fever that comes and goes. The fever peaks at around 40.6ºC (105ºF). These symptoms may last up to 8 days.
The rash starts from day 4 and lasts 4-7 days. It usually starts on the forehead and spreads downwards over the face, neck and body. You can see flat red or brown blotches which can flow into each other.
There can also be diarrhoea, vomiting and abdominal pain.

How serious is measles?
One million children die from measles world-wide each year. Complications from the disease are more severe and more likely in infants under 12 months, in children who are poorly nourished, those with weakened immune systems and children with vitamin A deficiency. In the UK in 1997, there were 4168 notified cases although some of these will have been due to other infections which produce a measles-like rash.

Even in the UK, complications are quite common. They include a severe cough and breathing difficulties (croup), ear infections, viral and bacterial lung infections (pneumonia), and eye infections (conjunctivitis). Most are caused by secondary bacterial infections which can be treated with antibiotics.

The most serious problems involve the nervous system. Inflammation of the brain (acute encephalitis) occurs 2-6 days after the rash has appeared. Less than 1 in 1000 measles cases is affected in this way, but 25% of those are left with brain damage.

Sub acute sclerosing pan-encephalomyelitis (SSPE) is the most severe complication of measles but is very rare, occurring in less than 1 in 100,000 cases of measles. It usually occurs years after the initial illness and is a slowly progressive brain infection. SSPE starts with intellectual impairment and deteriorates to seizures and eventually death.

Measles infection during pregnancy can result in the loss or early birth of the baby.

Can you prevent measles?

Immunisation programmes are essential to prevent measles and there is a highly effective vaccine available. This is part of the measles-mumps-rubella (MMR) immunisation with a first dose at 12-15 months and a second dose usually given from 3 to 3 and half years onwards. If missed, immunisation can be given at any age. Definite past infection will protect against future infection. Pregnant women or those with weakened immune systems should not be immunised.

More information on MMR immunisation can be found at **http://www.nhs.uk/Conditions/vaccinations/Pages/mmr-vaccine.aspx**.

How soon should a child be back at school after measles?

Measles is most infectious from 4 days before the appearance of the rash until 4 days afterwards. It is recommended that a child should be kept off school for 4 days after the onset of the rash.
A oral fluid test to confirm or refute the diagnosis may be suggested.

How can you treat someone with measles?

There is no specific treatment for measles although if secondary complications occur they may be treated with antibiotics. The patient should drink lots of clear fluid to replace body water lost through the fever.

Paracetamol can be used to reduce the fever. Aspirin should NOT be given to children as its use is associated with Reye's Syndrome (a severe neurological disorder).
If parents/carers become concerned about the development of complications, they should consult their doctor.

Further information on measles is available at:
http://www.nhs.uk/conditions/measles/Pages/Introduction.aspx