**Disease Handout**

**Disease name:** Rubella or German measles or 3 day measles

**Etiology:**
- SS RNA virus
- Family: Togavirus

**Virulence factors:**

**Portal of entry:** Mucus membrane through the respiratory tract to blood and then spreads to distant sites. Lymphoid, skin and organs.

Maternal viremia, placental infection and transplacental spread to the fetus

**Attachment**
- Virus attaches to cells of the upper respiratory tract.

**Evade the immune system:**
- Intercellular pathogen

**Tissue destruction:**
- Placental fetal vasculitis with compromise of fetal oxygenation. May inhibit mitosis and cause chromosome breakage

**Mode of Transmission:**
- Spread from person-to-person via airborne transmission or droplets shed from the respiratory secretions of infected persons.
- Rubella usually occurs in the winter and spring and spreads very easily
Reservoir: humans

Signs and Symptoms: Adults the illness is very mild. Low grade fever, upper respiratory symptoms and lymphadenopathy.

A macular rash follow within a day of onset and lasts for 1-3 days.

In the fetus the disease is extremely dangerous particular in the first trimester.

Fetal malformation occurs about 80% of the time if contracted in the first 2 weeks of gestation.

Babies may be born deaf or blind. They may have damaged hearts or unusually small brains. Many are mentally retarded. Miscarriages are also common among women who get rubella while they are pregnant.

Prophylaxes Attenuated rubella vaccine. Routine vaccination is now recommended for infants after the first year of life

Secondary infections Reye’s syndrome. Cause is not known but it has been associated with taking aspirin with chickenpox or Influenza. Mortality rate for Reye’s syndrome is 90% if untreated and 30% if treated. Symptoms include cerebral edema, vomiting, brain disfunction and hepatic disfunction.

History: The last big rubella epidemic was in 1964. As a result of that epidemic about 20,000 babies were born with severe birth defects.