CORONAVIRUS FACT SHEET

The coronavirus receives its name from the halo or crown (corona) that is seen when the virus is viewed by an electron microscope. This morphology is actually attributed to the glycoproteins the virus uses to attach to the host cell. Coronaviruses also have an enveloped structure with a positive sense RNA genome. In humans coronaviruses infect cells of the upper respiratory and gastrointestinal tract and are responsible for about one third of all common colds. Other coronaviruses are also serious agricultural threats because they are known to infect cattle, pigs, birds, dogs, cats and rodents.

The most publicized type of coronavirus is the virus that causes Severe Acute Respiratory Syndrome or SARS. The virus that causes SARS is known as SARS-CoV. This virus first appeared in Southern China in November of 2002 and was recognized as a global threat in March of 2003. During that time, SARS spread worldwide infecting at least 8,098 people and killing 774 people, according to the World Health Organization (WHO). By late July 2003, no new cases had been reported and WHO declared the global outbreak to be over. Presently it is unclear whether and, if so, under what conditions a SARS-CoV outbreak might re-occur in the future. An important lesson of SARS is that future emerging viruses might arise from any virus group, for example prior to SARS, coronaviruses had not been associated with any serious human disease.

Transmission
Coronaviruses including SARS-CoV are spread by close person to person contact most commonly during the winter months. The virus is most frequently spread by respiratory droplets produced when someone infected coughs or sneezes. The droplets containing the virus can be propelled generally up to three feet and can land onto the mouth, nose or eyes of people nearby. The infectious droplets can also land on objects and surfaces where someone can then pick them up and touch his/her mouth, nose or eye(s).

Symptoms
The symptoms of most coronaviruses are similar to those of a common cold, including sneezing, stuffy or runny nose, sore throat, coughing, watery eyes, mild headache and mild body aches. In the case of SARS, most patients develop a high fever that is sometimes associated with chills, headache, body aches and a general feeling of discomfort. After two to seven days, SARS patients may develop a dry, nonproductive cough which can lead to low oxygen levels in the blood. Most patients with SARS develop pneumonia.

Prevention
The best way to prevent infection is by taking simple precautions that can apply to many infectious diseases, such as frequent hand washing with soap and water or use of an alcohol based hand rub. Avoid touching your eyes, nose and mouth with unclean hands and encourage others to cover their nose and mouth with a tissue when coughing or sneezing.

Treatment
The Centers for Disease Control (CDC) recommends that patients with SARS receive the same treatment that would be used for a patient with any serious community-acquired pneumonia. Testing is being conducted to determine if antiviral drugs or vaccines would be an effective treatment or prevention option.

Sources:
CDC Frequently Asked Questions about SARS: http://www.cdc.gov/ncidod/sars/faq.htm