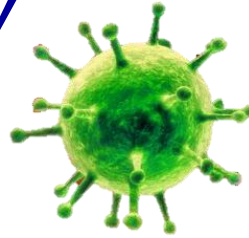




## ***Middle East Respiratory Syndrome (MERS)***



### **General Information**

Coronaviruses are common worldwide. They usually cause colds. However, a novel coronavirus called “Middle East Respiratory Syndrome Coronavirus” (MERS-CoV) has caused severe illness and death in people from several countries.

Middle East Respiratory Syndrome Coronavirus (MERS-CoV) was identified in 2012 in Saudi Arabia. Most people who were infected with MERS-CoV developed severe acute respiratory illness with symptoms of fever, cough, and shortness of breath. About half of them died. A small number of the reported cases had a mild respiratory illness. Investigators are trying to determine the source of MERS-CoV and how it spreads. There are no reported cases in the United States.

Coronaviruses are named for the crown-like spikes on their surface. They are common viruses that most people become infected with in their lifetime. These viruses usually cause mild to moderate upper-respiratory tract illnesses. Coronaviruses may also infect animals. Most of these coronaviruses usually infect only one animal species or, at most, a small number of closely related species. However, SARS coronavirus can infect people and animals, including monkeys, Himalayan palm civets, raccoon dogs, cats, dogs, and rodents. People around the world commonly get infected with human coronaviruses. However, one exception is SARS-CoV. Since 2004, there have not been any known cases of SARS-CoV infection reported anywhere in the world.

### **Transmission**

Most people will get infected with human coronaviruses in their life time. Young children are most likely to get infected. People can have multiple infections in their life time. How human coronaviruses spread has not been studied very much, except for SARS. It is likely that human coronaviruses spread from an infected person to others through:

- Air by coughing and sneezing
- Close personal contact

These viruses may also spread by touching contaminated objects or surfaces and then touching your mouth, nose, or eyes.



In one case, the SARS virus was thought to spread through infected stool that got into the air; people breathed this in and got infected. People usually get infected with human coronaviruses in the fall and winter. However, you can get infected at any time of the year.

### **Symptoms**

Human coronaviruses usually cause mild to moderate upper-respiratory tract illnesses of short duration. Symptoms may include runny nose, cough, sore throat, and fever. These viruses can sometimes cause lower-respiratory tract illnesses, such as pneumonia. This is more common in people with cardiopulmonary disease or compromised immune systems, or the elderly. SARS-CoV can cause severe illness.

### **Diagnosis**

Laboratory tests can be done to confirm whether the illness may be caused by human coronaviruses. However, these tests are not used very often because people usually have mild illness, and testing may be limited to a few specialized laboratories.

Specific laboratory tests may include:

- Virus isolation in cell culture
- Polymerase chain reaction (PCR)
- Serological testing for antibodies

Nose and throat swabs are the best specimens for detecting common human coronaviruses.

Serological testing requires collection of blood specimens.

### **Treatment**

There are no specific treatments for illnesses caused by human coronaviruses. Most people with coronavirus illness will recover on their own; however, some things can be done to relieve your symptoms, such as—

- Pain and fever medications (Caution: Aspirin should not be given to children)
- Using a room humidifier or taking a hot shower to help ease a sore throat and cough.
- Sick people should drink plenty of liquids, and stay home and rest.



**Prevention**

There are currently no vaccines available to protect you against human coronavirus infection.

Hand washing, not touching eyes, nose, or mouth, and avoiding close contact with people who are sick are the best methods of prevention.












**Prevention In Healthcare**

The following are recommendations based on the 2003 SARS outbreak experience:

Facilities should develop a “Respiratory Hygiene Plan” that addresses the following:

- a. Providing masks and hand hygiene products at all ports of entry to health system
- b. Place masks on patients immediately (clinically tolerable)
- c. Rapid triage symptomatic patients in designated areas (negative pressure)
- d. Immediate placement in isolation precautions
- e. Strict adherence to hand hygiene guidelines by healthcare workers
- f. Proper environmental hygiene

Since no disinfectant efficacy is currently available for MERS-Cov, Diversey recommends disinfectants susceptible to the human coronavirus such as:

Product	Oxivir® 1 RTU / Wipes	Oxivir® Tb RTU / Wipes	Oxivir® Five 16	Alpha® HP Multisurface Disinfectant Cleaner	Avert™ Sporidical Disinfectant Cleaner/Wipes	Virex® II 256	Virex® Tb	Virex® Plus	Expose® II 256	MoonBeam®3 UV Disinfection
Contact Time (Min)	1	1	5	5	1	5	3	3	10	3
										
Product	Oxivir® Tb RTU / Wipes	Oxivir® Plus (Concentrate)	Virox® 5 Concentrate	Virox® 5 (RTU & Wipes)	Percept (TM/MC) (Concentrate, RTU & Wipes)	Virex® II 256	Avert™ Disinfectant Cleaner	MoonBeam®3 UV Disinfection		
Contact Time (Min)	1	5	5	5	5	5	1	3		
