



**STAY  
HOME**



# Jr. Animal Scientist

MARCH 2020



# **CORONAVIRUS**

# COVID-19

COVID-19, is the disease, caused by the 2019 novel coronavirus. The World Health Organization (WHO) named the disease.

**CORONAVIRUS = Virus that causes the disease**

**COVID-19 = Disease**

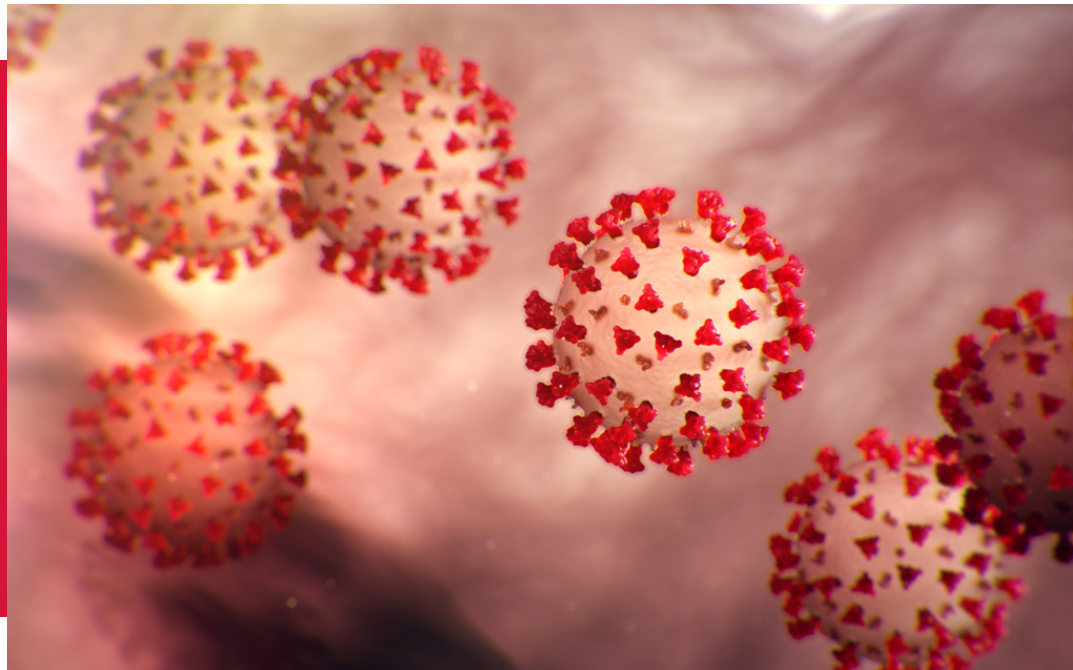
## HOWS IT'S NAMED

**CO - Corona**

**VI - Virus**

**D - Disease**

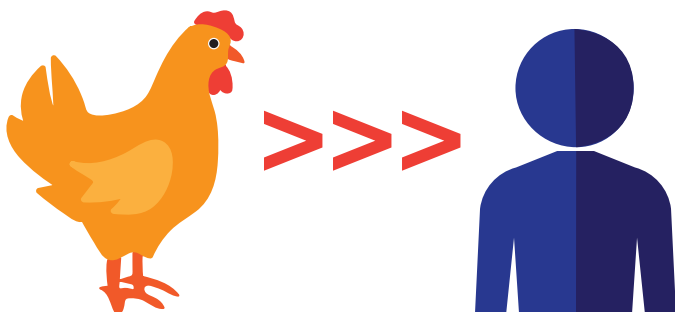
**19 - 2019**



Photos: CDC

There are many types of coronaviruses contracted by humans and animals; however, this strain is considered novel. Novel means that it is new and has not been previously seen in humans. Typically, coronaviruses cause illness in a new form. This strain, however, is believed to have originated in animals and emerged to infect people. This is considered a zoonotic disease, a disease that has the potential to be transmitted between humans and animals. Please note there is much speculation about the animal of origin, maybe a bat or maybe the endangered species pangolin, we do not know.

**WHAT WE DO KNOW - Novel Coronavirus is not carried by our pets or livestock!**



Other examples of coronaviruses that have originated from animals and then spread to people are the Middle East Respiratory Syndrome (MERS) and the Severe Acute Respiratory Syndrome (SARS).



# How is COVID-19 spread?

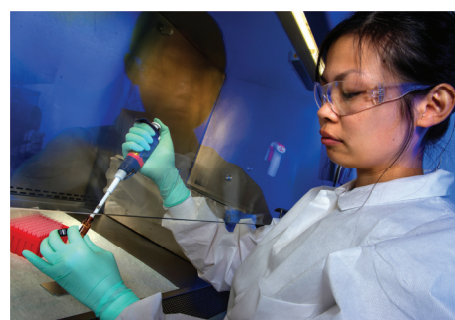
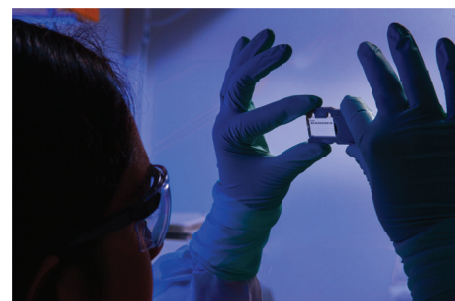
This virus was first detected in Wuhan City, Hubei Province, China. They have linked the first infections to a live animal market, but the virus is now spreading from person-to-person.

This virus spreads through bodily fluids, which happens when you sneeze, cough, shake hands, or touch something that the virus has contaminated and then touch your face.

As of today, the Center for Disease Control (CDC) has not received any reports of pets or other animals (cats, dogs, livestock, etc.) becoming sick with COVID-19 in the United States.



Photo: Burst / Matthew Henry



Photos: CDC

## PREPARE AND PREVENTION



ALWAYS KEEP CLEAN,  
WASH YOUR HANDS



USE FACE MASK  
TO PREVENT INFECTION



FOLLOW THE INSTRUCTIONS  
FROM THE DOCTOR



CHECK YOUR HEALTH  
ALWAYS KEEP UP WITH THE NEWS



EAT COOKED FOOD  
AND HEALTHY FOOD



STAY AWAY FROM THE CROWD  
WEAR A MASK, IF NECESSARY



DO NOT SHARE PERSONAL  
STUFFS WITH OTHERS



DO NOT TRAVEL OVERSEAS  
WHILE THE VIRUS IS SPREADING

Photo: iStock / Pathon Boonsakul

# How to reduce the spread of COVID-19?

Today, the President of the United States has asked all citizens to remain at home. This is the first and critical line of defense in protecting yourself from the virus. Avoid contact with people who are sick. Just like with any cold, practice good health habits like covering your coughs and sneezes, washing your hands often with soap and water, and cleaning and disinfecting surfaces and objects.



Photo: Burst / Matthew Henry

# Animal Biosecurity

People who work with livestock already know a lot about reducing the spread of disease. We practice advanced biosecurity every day. Animal biosecurity refers to the actions and measures taken to keep pathogens from infecting populations, herds, or groups of animals. A significant factor of animal biosecurity is biocontainment, which aims to ensure the control and confinement of a disease. **Biocontainment is a fancy word for social distancing!**

The animal industry practices biosecurity to protect humans from zoonotic disease and to protect animals from disease. The swine and poultry industry have the most rigorous biosecurity measures within livestock facilities.

## Isolation of new animals

One biosecurity tactic is to isolate new animals brought to the farm. These animals are usually kept away from the rest of the herd for a minimum of two weeks. It is important for the isolation area to be at least several hundred yards from the herd and ensure that drainage or wind does not carry contaminants back towards the herd.

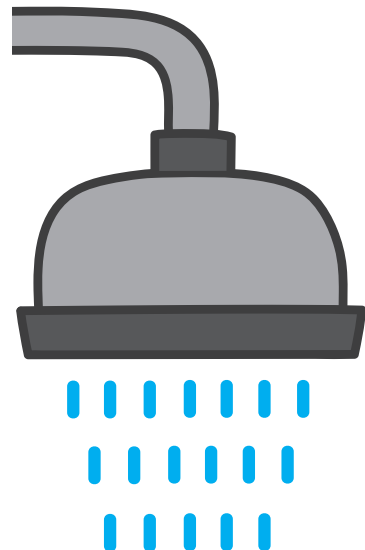
**Social distancing or quarantine is needed after traveling for animals.**



Photos: Burst / Amanda Kirsh



Photos: iStock / dusanpetkovic



## Managing risk posed by visitors

It is not uncommon for workers and visitors at a swine farm to shower before going into the building and showering before coming out. Disease can be introduced to the herd by people traveling between groups of animals. Shower-in shower-out facilities help reduce the transmission of disease between groups. **Wash hands (well washing all of you) to stop disease from spreading.**



# Routes of Transmission



SALIVA



PHYSICAL CONTACT



EYES



SNOT



NOSE



MOUTH



ANIMALS

## CAN YOU MATCH THE ROUTES OF TRANSMISSION?

\_\_\_\_\_ Disease agents are contained in droplets which can pass through the air.

\_\_\_\_\_ Disease agent in animals or the environment are transferred from one to the other.

*Examples: Open wounds, mucous membranes, skin, blood, saliva, nose to nose, rubbing, biting*

\_\_\_\_\_ Breeding or dam to offspring

\_\_\_\_\_ Contaminated inanimate object carries agents to other animals.

*Examples: Brushes, needles, shovels, trailer, humans*

\_\_\_\_\_ Consumption of contaminated feed or water, licking or chewing environments containing feces, urine, or saliva.

\_\_\_\_\_ Insect acquires pathogen from one animal and transmits to other animal(s). Living organisms that carry disease agents from one host to another are called vectors.

\_\_\_\_\_ Infectious agents that can be transmitted between (or are shared by) animals and humans.

*Examples: Brucellosis, Tuberculosis, West Nile Virus, and the Plague.*

**1** Oral

**2** Vector-borne

**3** Fomite

**4** Zoonotic

**5** Reproductive transmission

**6** Aerosol

**7** Direct contact

# HOW TO WASH YOUR HANDS



1  
CLEAN YOUR HANDS WITH WATER  
AND APPLY SANITIZER



2  
RUB YOUR HANDS TOGETHER



3  
RUB THE BACK OF YOUR HAND  
AND CLEAN BETWEEN THE FINGERS



4  
RUB THE BACK OF YOUR FINGERS  
AGIANST YOUR PALMS



5  
RUB YOUR THUMB  
WITH YOUR OTHER HAND



6  
RUB THE TIPS OF YOUR  
FINGERS ON THE PALM



7  
RUB ALL OVER YOUR HANDS  
AND WRISTS



8  
RINSE YOUR HANDS  
WITH CLEAN WATER

Photo: iStock / Pathon Boonsakul

## DICTIONARY

**World Health Organization** - WHO's primary role is to direct international health within the United Nations' system and to lead partners in global health responses.

**Coronavirus** - any of a group of RNA viruses that cause a variety of diseases in humans and other animals.

**Center for Disease Control** - As the nation's health protection agency, CDC saves lives and protects people from health, safety, and security threats.

**Zoonotic disease** - (also known as zoonoses) are caused by germs that spread between animals and people.

**Novel Virus** - A new virus has not yet been identified or previously seen in humans. Typically, most coronaviruses either cause illness in people or animals.

**Biocontainment** - the containment of extremely pathogenic organisms (such as viruses) usually by solation in secure facilities to prevent their accidental release especially during research.

**Biosecurity** - procedures intended to protect humans or animals against disease or harmful biological agents.

**Contaminants** - a polluting or poisonous substance that makes something impure.

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