

# Novel Coronavirus COVID-19 and Animals

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## What is COVID-19 coronavirus?

COVID-19 is an infectious disease caused by a novel (new) strain of coronavirus (SARS-CoV-2). People and populations around the world do not have any previous immunity to the virus. When a high proportion of individuals in a population are immune this is called group (herd) immunity which means that the pathogen is less likely to find a susceptible individual. The immune majority reduce the spread of disease, protecting the few who are not immune.

This virus strain is contagious before any signs or symptoms of sickness appear. It spreads very easily from person to person and has become a worldwide pandemic. No one is immune from catching this virus regardless of age or health status. This strain of virus can cause serious disease and death in elderly people and those with underlying health conditions such as heart disease, lung disease, and diabetes. Anyone who has a suppressed immune system (immunocompromised) is also considered high risk for complications.

CDC: <https://www.cdc.gov/coronavirus/2019-ncov/index.html>

**The situation regarding COVID-9 is constantly evolving and new research is being carried out around the world to better understand the original source of infection (e.g., bat, pangolin, other animals) as well as the possible transmission from humans to animals (e.g., livestock, pets, wildlife, etc.).**



*Novel Coronavirus (COVID-19) and Animals*

***A safe and effective vaccine for COVID-19 has not been developed yet; existing vaccines for other coronaviruses will not provide protection against COVID-19. It is illegal and dangerous to use any vaccines or drugs labeled for livestock for human or pet use.***

**Are the coronavirus strains present in livestock the same as the COVID-19 coronavirus?**

NO, COVID-19 is a different strain of coronavirus. Although the World Health Organization (WHO) has reported that the coronavirus MERS-CoV is known to be transmitted from dromedary camels to humans, the typical coronavirus found in domestic livestock do not typically infect humans. **Below is a list of some coronaviruses present in livestock worldwide:**

Coronavirus Strains	Target Tissues	Livestock & Other Species
TGE [transmissible gastroenteritis virus]; PEDV [porcine epidemic diarrhea virus]; & delta corona virus	Lung and gastro-intestinal tract	Pigs
Cattle coronavirus infections that are caused by different strains of coronavirus such as: calf diarrhea, winter dysentery in cows, and bovine respiratory disease complex (shipping fever) and related strains affecting other ruminants.	Lung and gastro-intestinal tract	Cattle, small domestic ruminants (e.g., sheep, goat), and captive/wild ruminants (e.g., white tail deer, camelids)
Poultry Infectious bronchitis virus (IBV)	Lung	Poultry



### Is it safe to drink milk and eat beef, pork, chicken, and/or poultry/milk products?

YES, it is safe, COVID-19 is not a foodborne disease, properly prepared and cooked beef, pork, and poultry as well as pasteurized milk products can be safely consumed.

As a standard precaution for other foodborne illnesses, the WHO recommends that meat should always be prepared following good hygienic practices, and that meat should be properly cooked.

WHO: [https://www.who.int/influenza/human\\_animal\\_interface/avian\\_influenza/h5n1\\_research/faqs/en/](https://www.who.int/influenza/human_animal_interface/avian_influenza/h5n1_research/faqs/en/)

FDA: <https://www.fda.gov/food/food-safety-during-emergencies/food-safety-and-coronavirus-disease-2019-covid-19>

USDA: <https://www.usda.gov/coronavirus>

### Is COVID-19 the same as H5N1?

NO, H5N1 is a strain of influenza virus that causes a highly infectious, severe respiratory disease in birds known as highly pathogenic avian influenza (or "bird flu"). This strain of influenza can also infect humans.

### Is COVID-19 the same as SARS?

NO, while the coronavirus strain that causes COVID-19 and the strain that caused the outbreak of Severe Acute Respiratory Syndrome (SARS) in 2003 are very closely related to each other genetically, the symptoms, severity, and transmission are quite different. The virus strain that causes SARS is known as SARS-CoV, while the virus strain that causes COVID-19 is known as SARS-CoV-2. **Below is a list of coronaviruses in humans:**

WHO: <https://www.who.int/news-room/q-a-detail/q-a-coronaviruses>

### Can livestock or pets become infected with the COVID-19 or vice versa?

The Centers for Disease Control and Prevention (CDC) has reported that this virus emerged in China from an animal source and is spreading from person-to-person.

The World Organisation for Animal Health (OIE) recently reported, "now that COVID-19 is widely distributed in the human population there is a possibility for some animals to become infected through close contact with infected humans. Infection of animals with COVID-19 may have implications for animal health and welfare."

There are a few documented cases across the world where a pet has been infected by a COVID-19 positive owner. There were two dogs in Hong Kong and one cat in Belgium. Neither dog showed any signs of disease, but one cat had respiratory and digestive disorders. Additionally, the USDA reported that a Malayan tiger at the Bronx Zoo in New York City also tested positive. This was believed to be transmitted from an infected zookeeper who was actively shedding the virus. Preliminary study from the Friedrich Loeffler Institute in Germany, indicates that COVID-19 can infect fruit bats and ferrets while pigs and chickens are not susceptible.

While COVID-19 has been found to be spread from people to animals in a few cases, there is currently no documented evidence that livestock or pets can spread COVID-19 or that they are a source of infection in the US.

OIE: <https://www.oie.int/scientific-expertise/specific-information-and-recommendations/questions-and-answers-on-2019-novel-coronavirus/>

FLI: <https://www.fli.de/en/home/>

CDC: <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/animals.html>

CDC: <https://www.cdc.gov/coronavirus/2019-ncov/faq.html#animals>

CDC: <https://www.cdc.gov/coronavirus/2019-ncov/index.html>

Coronavirus Strains	Origin	Hosts	Epidemiology
Coronavirus COVID-19 (also known as SARS-CoV-2)	First reported in Wuhan, China in 2019	Humans (Thought to have originated from bats and with an unidentified intermediate animal host). Cats seems more susceptible; dogs have rarely been infected with COVID-19	Spread globally; since the outbreak of COVID-19 until April 15, 2020 over 1.9 million people were infected and 123,000 died
Middle East respiratory syndrome coronavirus (MERS-CoV)	First reported in Saudi Arabia in 2012	Humans (Thought to have originated from bats and with an intermediate animal host such as camels)	Quickly spread to 27 countries; WHO confirmed 2,538 cases and 871 deaths
Severe Acute Respiratory Syndrome (SARS-CoV)	First reported in Asia in 2003	Humans (Thought to have originated from bats and with an intermediate animal host such as wild civet cats)	Quickly spread to 26 countries; WHO confirmed more than 8,000 cases and 774 deaths