What is a coronavirus?

First off, let’s clarify our terms. We’ve all been calling this thing the coronavirus, but actually, coronavirus is a type of virus. It’s called that because the little spiky things protruding from the virus reminded researchers of a crown. “Corona” is Latin for crown, or halo. You may remember SARS (Severe acute respiratory syndrome) from 2003 and MERS (Middle East respiratory syndrome) from 2012. Both of those were caused by coronaviruses.

For a while, folks were calling this one “the novel coronavirus,” meaning it was new. The Centers for Disease Control and Prevention prefer the name COVID-19 for the disease caused by SARS-CoV-2.

Coronaviruses affect only birds and mammals.

Where did it come from?

The short answer: Researchers don’t know just yet.

Early research in the UK suggested the COVID-19 virus is similar to one found in horseshoe bats. That’s not so far-fetched as its sounds: SARS spread from bats to cats to humans. And MERS originated in bats and spread to camels before the first human was infected.

The first human cases of COVID-19 were detected in early December in the Wuhan Province of China. The CDC says the first cases of COVID-19 were linked to a live animal market there. The Chinese government has said they now think the very first case may have been a 55-year-old man who fell ill on Nov. 17 of last year.

From there, the COVID-19 spread around the world.

How does the virus work?

Like all viruses, this one has just one purpose in life: to reproduce. This only becomes a problem when the human body detects the virus and then goes into overtime to try to rid itself of the virus. Most of the respiratory symptoms a patient suffers are actually brought on by the body’s immune system.

Once it’s in the lungs, the virus uses proteins made of spike proteins to latch onto a receptor on a lung cell. Researchers have noted that the COVID-19 virus seems to be “stickier” than, say, the SARS virus. Which may be one reason this strain has spread more quickly.

How does the virus spread?

COVID-19 can damage the lungs. But how does the coronavirus gain access to the lungs?

For the most part, COVID-19 spreads from person-to-person. An infected person can cough or sneeze, spreading the virus through tiny droplets that are too small to see.

COVID-19 can also live for a period of time outside the body. So these droplets can come to rest on a table or counter that can be touched by someone else who comes along later.

This is why we’ve been advised to not touch our mouths, noses and faces. Cells in our nose and nasal tissues also have receptors for the spike protein. We can get droplets on our fingers that then multiply and spread to our own respiratory systems.

What makes the COVID-19 virus so different from the others?

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The virus then transfers its RNA into the lung cell and hijacks the cell’s reproduction machinery. Copies of the virus emerge from the host cells and go out in search of new host cells where they repeat the process.

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How has COVID-19 affected other countries?

COVID-19 has spread like wildfire across the globe. As of March 21, there have been 284,566 confirmed cases worldwide, 675,000 cases in the U.S., 19,654 cases in Europe, 27,000 cases in Asia and 25 million cases in South America and Africa.

World Health Organization declaration of the COVID-19 pandemic as a global health emergency led to the rapid spread of the virus across the world. As of March 21, there have been 284,566 confirmed cases worldwide, 675,000 cases in the U.S., 19,654 cases in Europe, 27,000 cases in Asia and 25 million cases in South America and Africa.

COVID-19 numbers as of 11 a.m. Saturday, March 21

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<tr>
<th>Disease</th>
<th>Cases Worldwide</th>
<th>Deaths Worldwide</th>
<th>Cases in the U.S.</th>
<th>Deaths in the U.S.</th>
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<tr>
<td>H1N1 1918-19</td>
<td>500 million</td>
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<td>25 million</td>
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<td>H2N2 1957-58</td>
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<tr>
<td>COVID-19 2019-20</td>
<td>284,566</td>
<td>11,868</td>
<td>19,624</td>
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