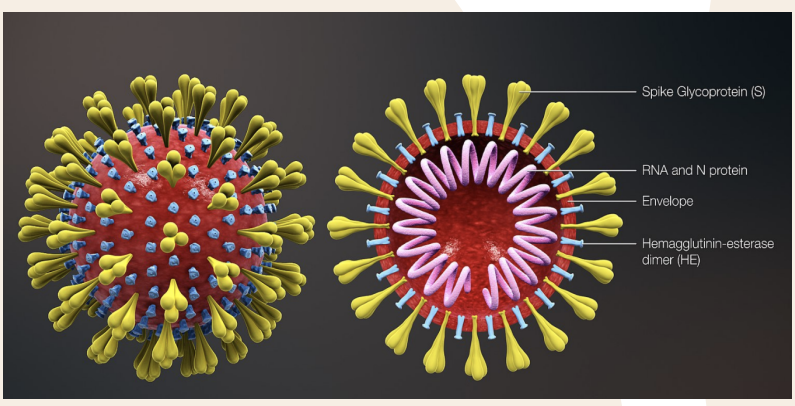
- Get the Facts! -

COVID-19

Rare-Ed

WHAT IS THE CORONAVIRUS?

- An RNA virus encapsulated by a protective membrane with spikes on its surface. The spikes are glycoproteins which work like a lock-and-key mechanism to infect our own cells. Coronaviruses are also zoonotic viruses, meaning they can be transmitted between animals and people.



Source: https://commons.wikimedia.org/wiki/File:3D_medical_animation_corona_virus.jpg

WHAT IS THE VIRAL MECHANISM?

- The spikes bind to our cell receptors, allowing the virus to fuse with the cell membrane and enter our cells.

WHAT PART OF THE BODY DOES IT INFECT?

- The virus enters and infects cells of the lungs, bronchi, and the nose. Specifically, the virus attacks progenitor cells that develop into respiratory tract cells. These cells line the airways and function to sweep mucus and bacteria out of the lungs (Berlin Institute of Health 2020).

WHAT MAKES COVID-19 DIFFERENT FROM OTHER VIRUSES?

- It has the largest known RNA virus genome and has the highest known frequency of recombination of any RNA virus. A high recombination frequency means that the virus' genetic code is mutating at a high rate, making diagnostic detection and vaccine production very difficult.

HOW CAN I HELP?

- Continue practicing social-distancing
- Wear protective gear at high-risk sites like gas-stations and grocery stores.
- Wash your hands, targeting under the finger nails and between your fingers.
- Help at-risk communities and first-responders by donating to #GivingTuesdayNow.

Sources:
1. https://www.sciencedaily.com/releases/2020/04/200407131453.htm
2. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/myth-busters
3. https://jamanetwork.com/journals/jama/fullarticle/2762452
4. https://www.sciencedirect.com/science/article/pii/S0896841120300469
5. https://coronavirus.jhu.edu/data/cumulative-cases

GET THE FACTS! (from the WHO)

1. **Catching the new coronavirus DOES NOT mean you will have it for life**, however, a JAMA medical journal paper revealed that the virus can linger in your body for up to 13 days after COVID-19 symptoms have ended (Zhongnan Hospital of Wuhan University 2020).

2. **Being able to hold your breath for 10 seconds or more without coughing or discomfort DOES NOT mean you don't have coronavirus.** Instead, go to a local testing center where they will stick a Q-tip up your nose and test your mucus membranes for the virus.

3. **Drinking alcohol does not protect you against COVID-19.** In fact, alcohol can weaken your immune system and lead to risky behavior that can make it easier to contract the virus.

THE PAST, PRESENT, AND FUTURE OF COVID-19

Dec 18, 2019 - First reported cases of COVID-19 infections. 5 patients were reported with acute respiratory distress, and 1 patient died (4).

Jan 25, 2020 - In 25 provinces of China, 1975 cases were reported with 56 deaths (4).

Jan 30, 2020 - The first human-to-human transmission of COVID-19 reported in the US (4).

Feb 16, 2020 - WHO reports 51,174 confirmed cases, and 1,666 deaths in China alone. Globally, the cases have reached 51,857 in 25 countries (4).

Apr 18, 2020: JHU reports that the US has 32,491 confirmed cases and 1,891 deaths (5). The Institute of Health Metrics and Evaluation (IHME) projected that 64,746 hospital beds and 15,804 ventilators were needed (6).

Aug 4, 2020: In the US, it is projected the country will have 60, 308 deaths by this date (6), however hospital resource use is expected to near 0.