COVID 19: MYTHS & REALITIES!

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Consultant & interventional cardiologist.
Coronavirus Emergence

- Coronaviruses are a large family of viruses that are known to cause illness ranging from the common cold to more severe diseases such as **Middle East Respiratory Syndrome (MERS)** and **Severe Acute Respiratory Syndrome (SARS)**.

- **2019-novel coronavirus (COVID-19)** was identified in Wuhan, China. This is a new coronavirus that has not been previously identified in humans.
COVID-19 Outbreak: Key Events

01/09/2020
1st death from the 2019-nCoV reported in Wuhan

12/31/2019
WHO Alerted by Chinese Authorities of a string of pneumonia in Wuhan

01/13/2020
1st infection reported in Thailand

01/10/2020
Gene sequencing data of 2019-nCoV established and shared globally

01/20/2020
1st infection reported in South Korea

01/26/2020
South Korea reported highest number of new cases after China

01/22/2020
1st infection reported in Macau & Hong Kong

01/22/2020
China changed its counting criteria to include clinical diagnoses in addition to lab-confirmed cases. Resulting in 10-fold increase in cases

01/23/2020
1st infection reported in Singapore & Vietnam

02/14/2020
1st infection reported in Egypt

02/14/2020
Additional citizens in China Huanggang, Ezhou quarantined

02/26/2020
First 2 confirmed cases reported in Pakistan

02/29/2020
1st death reported in United States

01/01/2020
Hunan Seafood Market identified as source of pneumonia and closed

01/16/2020
1st infection reported in Japan

01/21/2020
1st infection reported in United States & Taiwan

01/19/2020
Sudden spike in reporting of an additional 136 cases in Wuhan

02/12/2020
WHO Risk Assessment - China - Very High Region - High Global - High
What is a “Superspreader?”

**In general**
- Infected person infects a number of other individuals, directly or indirectly.
- This happens in many diseases including common flu.

**Common infection**
- Weak immune system, behaviors, degree of contact, travel patterns, can contribute to spread but hard to trace.
- Person can spread virus without exhibiting symptoms.

**Recent Cases**
- Superspreader status
- Infected directly or indirectly

**2020**
- British man catches COVID-19 in Singapore
  - Recovered
- 11 people

**2015**
- Patient in South Korea with MERS virus
  - Died
- 82 people

**2003**
- Doctor with SARS virus in Hong Kong
  - Died
- 100++
How COVID-19 Spreads?

- There is much to learn about the newly emerged COVID-19, including how and how easily it spreads.
- Based on what is currently known, COVID-19 and SARS/MERS-CoV, spread is thought to occur mostly from person-to-person via respiratory droplets among close contacts.

- Close contact can occur while caring for a patient, including:
  - Being within approximately 6 feet (2 meters) of a patient with COVID-19 for a prolonged period of time.
  - Having direct contact with infectious secretions from a patient with COVID-19.
  - Infectious secretions may include sputum, serum, blood, and respiratory droplets.
  - If close contact occurs while not wearing all recommended PPE, healthcare personnel may be at risk of infection.
Symptoms of COVID-19

Symptoms may appear 2-14 days after exposure.
NOTE: If you have been in China within the past 2 weeks and have developed symptoms, call your healthcare provider

Common signs of infection
- Fever
- Breathing difficulties
- Cough
- Diarrhea
- Shortness of breath
- GI Symptoms

Severe cases
- Pneumonia
- Severe acute respiratory syndrome
- Kidney failure
- DEATH

Treatment
- No vaccines or antiviral drugs available
- Supportive therapy and treatment of symptoms
Risk Factors of COVID-19

- Elderly persons above the age of 50 persons with underlying diseases like diabetes, Parkinson’s disease, cardiovascular diseases.
- Demographically:
  - Persons living in China around Wuhan are most at risk.
    - Those who worked and shopped from Animal markets within the localities.
  - Persons traveling into and out of Wuhan.
- Health care workers caring for patients with the COVID-19.
- Based upon data collected from China:
  - ≤10 years: No deaths
  - Between 10-39 years: fatality 0.2%
  - Between 60-69 years: fatality 3.6%
  - Between 70-79 years: fatality 8.0%
  - ≥80 years: 14.8%
How Contagious is COVID-19?

Average number of people infected by an individual ($R_0$)

- **Measles**: 12-18
- **Smallpox**: 5-7
- **Polio**: 5-7
- **Mumps**: 4-7
- **HIV/AIDS**: 2-5
- **SARS-CoV**: 2-5
- **Influenza**: 1-3
- **COVID-19**: 1.5-2.5
- **Ebola**: 1.5-2.5
Fatality Rate and Transmission Rate: Comparison to Other Viruses

- **New coronavirus**: Most estimates put the fatality rate below 3%, and the number of transmissions between 1.5 and 3.5.

Note: Average case-fatality rates and transmission numbers are shown. Estimates of case-fatality rates can vary, and numbers for the new coronavirus are preliminary estimates.
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>What is the correct way</th>
</tr>
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<tbody>
<tr>
<td>Are Hand Dryers effective in killing the virus?</td>
<td>NO</td>
<td>Frequently wash hands and/or clean hands with alcohol-based hand rub. Once cleaned dry them thoroughly by using paper towel or warm hand dryer</td>
</tr>
<tr>
<td>Can ultraviolet (UV) disinfection lamp kill the virus?</td>
<td>NO</td>
<td>UV lamps should NOT be used to sterilize hands or other areas of the skin as UV radiation can cause skin irritation</td>
</tr>
<tr>
<td>How effective are thermal scanners in detecting people infected with the virus?</td>
<td>Thermal scanners are effective in detecting fever</td>
<td>Thermal scanners cannot detect who are infected but are not yet sick with fever. This is because it takes 2-14 days before people who are infected become sick and develop fever</td>
</tr>
<tr>
<td>Can spraying alcohol or chlorine all over the body kill the virus?</td>
<td>NO</td>
<td>Spraying such substances can be harmful to clothes or mucous membranes (i.e., eyes, mouth). Beware that both alcohol and chlorine can be useful to disinfect surfaces, but have to be used under appropriate recommendations</td>
</tr>
<tr>
<td>Is it safe to receive a letter or a package from China?</td>
<td>YES</td>
<td>It is safe. People receiving packages from China are not at risk for contracting the virus. Previous analysis has shown that the coronaviruses do not survive long on objects, such as letters or packages</td>
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# COVID-19 MYTHS vs. REALITY

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<td>Can pets at home spread the virus?</td>
<td>NO</td>
<td>At present there is no evidence that companion animals/pets such as dogs or cats can be infected with this virus. However, it is a good idea to wash hands with soap and water after contact with pets. This protects against various common bacteria such as E. coli and Salmonella that can pass between pets and humans.</td>
</tr>
<tr>
<td>Do vaccines against pneumonia protect against the novel coronavirus?</td>
<td>NO</td>
<td>Vaccines against pneumonia, such as pneumococcal vaccine or Haemophilus influenza type B (Hib), do not provide protection against the new coronavirus.</td>
</tr>
<tr>
<td>Can regularly rinsing your nose with saline help prevent infection with the virus?</td>
<td>NO</td>
<td>There is no evidence that regular rinsing the nose with saline has protected people from infection with the new coronavirus. There is some limited evidence that rinsing the nose with saline can help people recover more quickly from common cold.</td>
</tr>
<tr>
<td>Can gargling mouthwash protect from infection from this virus?</td>
<td>NO</td>
<td>There is no evidence that using mouthwash will protect from infection from the new coronavirus.</td>
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<td>Can eating garlic help prevent infection with this virus?</td>
<td>NO</td>
<td>Garlic is a healthy food that may have some antimicrobial properties. However, there is no evidence from the current outbreak that eating garlic has protected people from the new coronavirus</td>
</tr>
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<td>Does putting on sesame oil block the new coronavirus from entering the body?</td>
<td>NO</td>
<td>Sesame oil does not kill the new coronavirus</td>
</tr>
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<td>Does the new coronavirus affect older people, or are younger people also susceptible?</td>
<td>People of all ages can be infected</td>
<td>Older people, and people with pre-existing medical conditions, such as asthma, diabetes, heart disease, appear to be more vulnerable to becoming severely sick with this virus. It is advised that people of all ages take proper precautions such as good hand and respiratory hygiene</td>
</tr>
<tr>
<td>Are antibiotics effective in preventing &amp; treating this virus?</td>
<td>NO</td>
<td>Antibiotics do not work against viruses, only bacteria. The new coronavirus is a virus, therefore, antibiotics should not be used as a means to prevention or treatment. However, if hospitalized for the 2019-nCoV, antibiotics can be used to treat bacterial co-infections</td>
</tr>
<tr>
<td>Are there any specific medicines to prevent or treat this virus?</td>
<td>NO</td>
<td>To date, there is no specific medicine recommended to prevent or treat the new coronavirus. However, those infected should receive appropriate care to relieve and treat symptoms, and those with the severe form of the disease should receive optimized supportive care. Some specific treatments are under investigation, and will be tested through clinic trial</td>
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