

# Pandemics

By: Rishav Bhattacharjee

Date: April 12, 2020

## Introduction

Have you ever heard of a pandemic? Well there have been many pandemics throughout history, and one at the time of writing. Pandemics are a disastrous thing sometimes wiping out whole villages. In this essay we will be discussing the three pandemics which were the worst at their hay day and were devastating at the time. Enjoy the essay!

## What is a Pandemic?

A pandemic is a global outbreak of a disease. Here is a quote about the topic. "A pandemic is a disease epidemic that has spread across a large region, for instance multiple continents, or worldwide. A widespread disease with a stable number of infected people is not a pandemic." We can see that a pandemic is a disease that spreads to a large area. Knowing what a pandemic is makes it a lot easier to talk about them. In the next few sections, we will talk about these amazing, yet destructive things called pandemics.

## The Bubonic Plague (The Black Death)

The Bubonic Plague was one of the worst pandemics in the world! In the 1300's the disease ravaged Europe and Asia. This paragraph will show the whole story of the terrible pandemic. The first thing I am going to talk about is where it started. The Bubonic Plague started in China. This might not be surprising, because a lot of diseases start in China. We will talk about more diseases that start in China. You might wonder how The Bubonic Plague spread to Europe all the way to China. Well the quote will explain that and a lot more. "The plague that caused the Black Death originated in China in the early to mid-1300s and spread along trade routes westward to the Mediterranean and northern Africa. It reached southern England in 1348 and northern Britain and Scandinavia by 1350." That explains it if you know what the Silk Road is. If you do not know, well the Silk Road is an extensive trade route going from China through Central Asia and ending in Europe. Or another route which goes to Africa. So that explains how it got to Europe, Asia, and Africa. Now that we know where it started and how it spread, we need to understand what does it do to your body? Well, you might not want to know, but for the purpose of this doc, we will tell you. We will start from when it gets in your body to when it kills you. (maybe) The way Bubonic Plague spreads is by animals, specifically fleas. Here is a quote about how it spreads. "Bubonic plague is mainly spread by infected fleas from small animals. It may also result from exposure to the body fluids from a dead plague-infected animal. In the bubonic form of plague, the bacteria enter the skin through a flea bite." When the disease gets in your body, it affects your lymphatic system and swells the lymph nodes. This quote will explain how it kills you. "Plague causes a painful, relatively quick death that often involves vomiting, bleeding, and gangrene of the skin. Fortunately, today's antibiotics can kill the *Yersinia pestis* bacteria and save its victim upon early detection." The way it kills you is scary!

It causes painful quick death. Also, it causes gangrene. Which if you do not know what that is, it is a bacterial infection that stops the body from replenishing destroyed tissue. The bubonic plague killed 25 million people. Imagine more than the whole population of New York, Los Angeles, Chicago, Houston, Phoenix, Philadelphia, San Antonio, and San Diego. The good thing is (and the quote said this too) that we have antibiotics that can kill the bacteria that causes The Bubonic Plague, *Yersinia pestis*. We have eradicated the disease now but when it was their heyday, they killed millions! Now you know more about this amazing, fascinating, yet deadly, pandemic.

## The Spanish Flu

The Spanish Flu was also very deadly. (actually, very deadly!) In this paragraph you will learn more about this invisible killer. Despite the name, it is thought that it did not start in Spain, but in the UK, USA, France, or China. The first reported case of the Spanish flu was reported in 1918 at a military base in Kansas. The estimate for how many people died from The Spanish Flu is anywhere from 17 million to 100 million. The Spanish Flu Pandemic lasted from 1918-1920. Now, the deadliest part of a pandemic, how it kills you! When the Spanish Flu gets inside of you, it goes to the lungs and causes bacterial pneumonia. Bacterial pneumonia is caused by bacteria getting into your lungs. After that, they infect and inflame the air sacs in your lungs. Then, they get filled up with fluid, which causes pneumonia. So that is one thing The Spanish Flu does, but that is not the only thing. Some other things that The Spanish Flu do to you are massive hemorrhages and edema in the lungs. I hope you have found learning about The Spanish flu interesting. Same as the last pandemic we talked about, (the bubonic plague) The Spanish Flu is amazing yet destructive. (hospital with Spanish Flu victims)



## Coronavirus (COVID-19)

Now for the most recent Pandemic, COVID-19. This virus started in a Wuhan Seafood market in the Hubei Province, which is in China. It is believed that it was a bat that transferred the deadly disease to humans. Once it gets in your body via contact with an infected person, it goes to your lungs. This is a quote about what the Coronavirus does to you when it gets in your body. “How does COVID-19 kill? “Uncertainty over whether it is the virus itself — or the response by a person’s immune system — that ultimately overwhelms a patient’s organs, is making it difficult for doctors to determine the best way to treat patients who are critically ill with the coronavirus.

Clinical data suggest that the immune system plays a part in the decline and death of people infected with the new coronavirus, and this has spurred a push for treatments such as steroids that rein in that immune response. But some of these treatments act broadly to suppress the immune system, stoking fears that they could actually hamper the body’s ability to keep the viral infection in check.” The coronavirus makes your immune system work against you, further damaging your body.

Most people might ask, “Well, how do I know if I have the coronavirus or not?” Well the next quote will explain the symptoms. “People with COVID-19 generally develop signs and symptoms, including mild respiratory symptoms and fever, on an average of 5-6 days after infection (mean incubation period 5-6 days, range 1-14 days). Most people infected with COVID-19 virus have mild disease and recover.” Some symptoms are fever, and mild respiratory symptoms. Which makes it hard for doctors to know if you have the virus or not because those are common symptoms of a lot of



sicknesses and colds. COVID-19 has spread everywhere! Here is a map that shows all the reported cases. The denser the red dots are, the worse! As you can see, places like Europe, China, and the US East Coast have been hit hard. But on the other hand, places like Africa, South America, and Oceania have not had as many cases. If you live in places like Europe, China, and the US East Coast, you might be at a higher risk, but do not worry, here are some tips that help slow the spread.

1. Wash your hands often. Make sure you wash your hands for at least 20 seconds!
2. Wear a face cloth or mask on your face (make sure it covers your mouth and nose!) wherever you go outside
3. Obey the quarantine rules and restrictions

Talking about spread, the coronavirus has caused over 3,000,000 cases and 250,000 deaths! Here are the 5 countries with the most cases, and the 5 countries with the most deaths.

Cases	Deaths
1. USA	1. US
2. Spain	2. Italy
3. Italy	3. Spain
4. Germany	4. France
5. France	5. Germany

I hope these tips, and the passage about the coronavirus have helped you learn about this modern pandemic that will go down in history as one of the worst in modern times. I also hope you enjoyed it!

## Conclusion

I hope you have learned a lot more about pandemics with these 3 examples. Also, I hope that you enjoyed the essay!