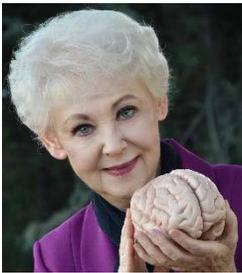


Price of Pandemics

Part 2 – Epidemic-Pandemic

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Epidemics and pandemics are no strangers to Planet Earth and are nothing new.

Technically, the term *epidemic* refers to the widespread occurrence of an infectious disease in a community at one time. Epidemics may turn into a *pandemic*, often defined as an epidemic that has spread over several countries or continents during relatively the same time period.

Smallpox is one example. Highly contagious, it is one of the most devastating diseases ever to hit this world. Caused by the variola virus, about a third of those infected died during its 2000-year reign of terror. Although the origin is uncertain, it is thought to date back to the 3rd century BC because of a smallpox-like rash discovered on three mummies in Egypt. Mexico battled smallpox for 500 years after it was introduced—albeit unwittingly—by Spanish invaders. One source reported that Mexico went from eleven million people pre-conquest to one million. The last known natural case occurred in Somalia in 1977. By then the cumulative worldwide deaths from smallpox were reported to be 500 million. The development of a smallpox vaccination slowed deaths from this disease so dramatically that, by 1980, it was considered virtually “eradicated.” If a case occurs now, it likely will be attributed to terrorism.

And then there is influenza. More recent pandemics have involved a type of influenza virus. The words *influenza* and *flu* are often used interchangeably. However, influenza causes a respiratory ailment that is very different from the stomach “flu” that causes vomiting and diarrhea.

The years 1918–1919 saw the most severe influenza outbreak of the 20th century and remains among the most devastating pandemics in human history. Believed caused by an Influenza A virus (subtype H1N1), it had genes of avian origin. Although there is no universal consensus regarding its place of origin, it spread worldwide and was quickly dubbed “Spanish Flu” because of the eight million casualties in Spain alone. The overall death toll was estimated between 20 and 50 million. In the United States, a second wave

began with the return of soldiers from the War; an estimated 28 percent of the country's population were eventually infected.

The Asian flu pandemic of 1956-1958 involved Influenza A (subtype H2N2). Reportedly originating in China, its reign killed over two million.

About 1920 a lentivirus appears to have crossed species from chimpanzees to humans in the area now known as Kinshasa. Because it attacks the immune system in humans, it became known as the Human Immunodeficiency Virus, or HIV. It likely arrived in the United States around 1960. By the mid- to late 70s, the epidemic was in full swing; by 1980, it had reached pandemic proportions, having spread throughout five continents: Africa, North America, South America, Europe, and Australia. In 1981 Acquired Immune Deficiency Syndrome (AIDS) was recognized as a new disease. The HIV/AIDS pandemic is one of the most persistent worldwide. The possibility of a vaccine remains uncertain, allowing for the possibility that this will continue to pose a significant public health threat for decades to come. The website AIDS.gov reports that 35 million have died since 1981 and another 36.7 million people worldwide are living with HIV.

2017-2018 was the first season in the United States to be classified as having "high severity" of influenza across all age groups. An estimated 80,000 people died in this epidemic, making it the deadliest in at least 40 years. Deaths often resulted from complications, such as stroke, heart attack, and pneumonia—individuals with underlying chronic diseases being at higher risk. Influenza A (subtype H3N2) viruses predominated overall during this epidemic. However, toward the end of the outbreak, Influenza B viruses became more commonly reported.

2019-2020 saw the Coronavirus 2019 (also known as Covid-19 or SARS-CoV-2) pandemic emerge. This RNA or retrovirus reportedly has the highest mutation rates of any organism on the planet. First identified in the region of Wuhan, China, it too, will take its place in history when the financial impact and death tolls are eventually compiled.

A century ago, your risk for becoming infected with an epidemic or pandemic virus likely depended primarily on where you lived. In today's world it doesn't matter if you live 12 thousand miles away from the epicenter. The reason? International travel! Upwards of 28 million people take cruises every year. More than 3 billion take an airplane flight annually. Thousands of military personnel return from far-flung portions of the globe. This blows up the balloon of your potential risk exponentially, whether the other person is showing symptoms or not.

How do you lower your risk in the 21st Century?

By developing good health habits and practicing them daily. By following recommended preventive strategies when epidemics/pandemics do occur. By creating a Longevity Lifestyle and embracing it for the rest of your life. Seventy percent of how *long* and how *well* you live is in your hands. Make good choices. It matters.

Do epidemics and pandemics other than those caused by destructive organisms exist?
Part 3 addresses that.