

## October 2021 Health Notes by Evelyn Ames Brief History of Pandemics and People's Superstitions

Step back in time. What did people believe to be causes of pandemics that decimated world population several times? How did they behave? Are today's behaviors similar? Scientists now understand the microbes that cause pandemics (e.g., bubonic plague, cholera, smallpox). In past times, people tried to explain the overwhelming number of deaths by believing the gods were angry, using astrological observations, following religious beliefs, blaming others, passing on superstitions and bizarre beliefs. "Throughout the centuries, plague arrived in wave after devastating wave, taking numerous forms—from bubonic (which affects the lymphatic system) to pneumonic (which attacks the lungs) to septicemic (which infiltrates the bloodstream). Perhaps the most virulent occurrence came in the mid-1300s with the Black Death, which felled more than 20 million people across Europe alone." Its cause is largely believed to have been bacteria-carrying fleas "riding" their host, the rat. As human civilizations flourished, so did infectious disease. Large numbers of people living in close proximity to each other and animals, often with poor sanitation and nutrition, provided fertile breeding grounds for disease. New overseas trading routes spread infections far and wide, creating global pandemics. The plague of Justinian (Byzantine Empire, in 541 CE) decimated Constantinople and spread across Europe, Asia, North Africa and Arabia killing an estimated 30 to 50 million people, possibly half of the world's population. The Black Death, in Europe around 1347, claimed an astonishing 200 million lives in just four years.

Angry gods: many early cultures looked to a vengeful or unforgiving God—or gods. "In ancient Greek mythology, Homer wrote in *The Iliad* of the god Apollo raining plague down on the Greek army with his arrows during the Trojan War, killing animals first, then soldiers. Apollo's arrows came to symbolize disease and death." "...The wrath of the Lord was kindled against the people, and the Lord smote the people with a very great plague." (Numbers 11:33). During the Middle Ages, it was believed that sneezing not only spread Black Death but caused a person to expel their soul. Hence, "God Bless You!"

Astrological movements and...bad air: astrology and "noxious vapors" were believed to be the breeding ground for pestilence. The alignment of Saturn, Mars, and Jupiter in 1345, and a lunar eclipse, were suggested to be causes of bubonic plague in France. Parisian medical scholars wrote "For Jupiter, being wet and hot, draws up evil vapors from the earth and Mars, because it is immoderately hot and dry, then ignites the vapors, and as a result there were lightning, sparks, noxious vapors and fires throughout the air." As for "bad air," "Terrestrial winds spread the noxious airs widely, smiting down "the life force" of anyone who ingested it into their lungs." "This corrupted air, when breathed in, necessarily penetrates to the heart and corrupts the substance of the spirit there and rots the surrounding moisture, and the heat thus caused destroys the life force, and this is the immediate cause of the present epidemic." The noxious vapors were given another label: "miasma" a few centuries later. If it smelled bad, it must carry disease. Philadelphia and yellow fever is a good example of past beliefs in miasma.

Conspiracy theories: Pandemics have long bred prejudice and mistrust. People look to blame others, including those governing. Long-standing biases bring out the worst. "Throughout medieval Europe the plague became an excuse to scapegoat and massacre Jewish people. Medieval Christian mobs attacked Jewish ghettos with virtually every wave of the disease, claiming that Jewish citizens poisoned wells and conspired with demons to spread the disease. In one pogrom, 2,000 Jews were burned alive in the city of Strasbourg on February 14, 1349". In the 19th and early 20th centuries, as cholera occurred across Europe, class-based conspiracy theories arose. The poor and marginalized accused the ruling elite of ruthlessly spreading the disease and deliberately poisoning them. Citizens took out their hatred on police, government, and medical establishments. Hospitals and town halls were destroyed. With the Russian flu of 1889, "the New York Herald, speculated that the flu could travel on telegraph wires, after a large number of telegraph operators seemed to contract the disease. Others hypothesized that the flu may have arrived on letters from Europe, since mail carriers had begun to fall ill. In Detroit, when bank tellers began to get sick, some jumped to the conclusion that they'd caught it from handling paper money. Other rumored culprits included dust, postage stamps and library books."

Stopping the plague: with Great Plague of 1665 (killed 100,000 Londoners in seven months) all public entertainment was banned. Victims forcibly shut into their homes; red crosses were painted on their doors along with a plea for forgiveness: "Lord have mercy upon us." Venetian law kept newly arrived sailors in isolation until they showed no sickness. Additional legislation forced isolation of 40 days (quarantino). Smallpox: cowpox used by Edward Jenner to vaccinate against the disease (inoculated gardener's 8-year-old son with cowpox; exposed him to smallpox virus with no ill effect. World Health Organization announced in 1980 that smallpox had been completely eradicated. Snow, in England, removed handle of public water cistern to prevent women fetching water from transmitting cholera due to poor sanitation.

<https://www.history.com/news/how-infectious-diseases-spread-myth-superstition-theories> **Justinian's Flea by William Rosen**

<https://www.history.com/topics/middle-ages/pandemics-timeline>

<https://www.history.com/news/pandemics-end-plague-cholera-black-death-smallpox>