

DISEASE



CCWH
203

DISEASE IN HUMAN HISTORY

Disease! Crash Course World History 203

Diseases have been around for all of human history, but in different contexts, the same microbes have had very different effects. Where diseases have spread rapidly, they have contributed to some world historical changes, like the decline of empires, reorganized labor systems, or colonization. The impact of disease leads us to question whether the humans are really the authors of our story or whether other species are really the agents of change.



00:01

John Green

Hi, I'm John Green, this is Crash Course World History, and today we're going to talk about a subject that makes me profoundly uncomfortable: disease. This is a tough subject for me personally because I'm a bit of a hypochondriac, but, to be fair, my fears are kind of rational. I am afraid that my existence will be ended by a soulless, microscopic organism, and to be fair, they have killed a lot of people. You're not paranoid if germs are actually out to get you, and, as we'll see today, they are. Fortunately, we live in the 21st century, when communicable disease does not play such a massive role in human history, unless of course you count bird flu or SARS or HIV-AIDS or antibiotic-resistant bacteria. All right, Stan, let's just go to the intro.

CCWH theme music plays

00:45

Painting of women with smallpox; other paintings of the sick and/or dying

Okay, so long-time viewers of Crash Course will remember the 16th century Great Dying in the Americas, not only as an example of historians' total inability to name things, but also as perhaps the most important and wide-ranging effect that disease has had on human cultures in millennia. But traditionally the study of history hasn't focused much on diseases, partly because they're mysterious and terrifying, and partly because they don't fit in very well with our ideas about history being the result of human agency. We like to imagine that things happen because we did good things or because we did bad things or at least because we did some kind of thing. But, in fact, history often happens because lots of people got smallpox.

There's also the fact that diseases were often seen to be the result of divine will or else divine wrath. Plus, because people didn't know that much about disease, they didn't write about it very often, and when they did write about it, they didn't always write about it particularly well. So when you read primary sources, often they're like, "Why'd they die? Well, too much of that miasma." That's not particularly helpful to us.

01:42

John Green as his younger self

So, given all that, we are going to have to engage in a bit of speculation here.

Mr. Green, Mr. Green, I love speculation. It's way more fun than history. Like, what would have happened if the South won the Civil War?

No, Me from the Past, not that kind of speculation. The kind of speculation where you guess what did happen, not what would have happened.

Image of a mosquito

So, diseases have been with humans as long as there have been, like, humans. And humans first appeared in tropical regions in Africa, which are home to a wide variety of micro-parasites, so it's probably a good bet that those parasites played a role in keeping human populations really low for a long, long time. It's only after we see migration out of Africa and into regions less amenable to diseases about 64,000 years ago that we start to see the growth of human populations necessary to create what we—problematically—call civilizations.

02:26

So, humans migrated into river valleys that became the cradles of civilization with agriculture and surpluses, et cetera. This allowed us to escape those population-limiting tropical diseases, but it created all kinds of new disease problems. The communities in river valleys had more people and more population density, which allowed for epidemics. I mean, one of the great things about hunting and gathering

Drawings of river valley civilizations; a painting of a village struck by disease, with a man wheeling cadavers through the town

Close up image of the mentioned parasitic flatworm

03:35

Painting of Ancient Greece, featuring impressive architecture

04:32

A drawing of an ancient trade market

Painting depicts the Black Death as a grim reaper riding on a monster

05:14

is that diseases cannot wipe out a city if you don't have cities. Also, river valleys can be breeding grounds for disease, especially where cultures developed irrigation, which often relied on slow-moving or standing water. And if you ever had to clean a bird bath, you'll know that standing water is the perfect environment for disease carriers and nasty microorganisms.

For example, schistosomiasis was recorded in Egypt as early as 1200 B.C.E. What is... what is that, Stan? Oh, apparently, it's a parasitic flatworm. Do we still have that? We do, we do, awesome. Anyway, lots of diseases come from domesticated animals. But, you can't have bacon without swine flu. So, you know, it's comme ci, comme ça. That's going to be a hilarious joke when we all die of swine flu—just kidding! We're all going to die of bird flu. But from, like, a macro historical perspective, it's not like disease is all downside. I mean, sometimes it's helped populations shielded themselves from conquest. That was the case in Africa until the 19th century.

Okay, so we like to say that one of the hallmarks of civilization is writing, and pandemic diseases were the type of events that people tended to write about in early civilizations, because they were a big deal. Like pestilence appears in "The Epic of Gilgamesh," early Chinese historians describe the increase in disease as populations spread from the northern Yellow River region to the more tropical Yangtze River region. Ancient Greece was relatively disease-free because of its climate and also the isolated nature of city-states; but the more the cities became involved in trade, the more susceptible to epidemics they were.

The best example of this was the plague that struck Athens in 430 and 429 B.C.E. during the Peloponnesian War. At that leads us to a very important point, which is there is a decent correlation between war and disease. Armies tended to carry it along with them, and food shortages and displacements made civilians more likely to get sick. That is still very much the case, and the weird, symbiotic relationship between war and disease is something that we're going to look a lot at in the next several weeks.

But nothing spreads disease quite like trade. Trade is so good for economies and so bad at keeping individual human beings not dead. Like Ancient Rome's integration into transcontinental trade networks like the Silk Road may explain why the historian Livy recorded at least 11 pestilential disasters, and it is very likely that disease—and the accompanying decline in population—contributed to the fall of the Roman Empire.

But of course you can't talk about the history of disease without mentioning the most famous epidemic of all time: the Black Death. I mean, if the Black Death were a soccer team, it would be Liverpool Football Club. If the Black Death were a band, it would be the Beatles. If the Black Death were an industry, it would be 18th century textile processing in Liverpool.

The plague, which struck Europe in the mid-14th century, originated in fleas that came from rats, and bubonic plague can be found throughout the world, even in the western U.S. today. It's more treatable now, thankfully. But anyway the Black Death started in China and spread westward over the caravan routes, really

picking up steam when plague-carrying rats jumped onto Mediterranean trading ships. So the death rate from this plague was incredibly high, perhaps a third of people living in Europe died. Oh, it must be time for the Open Letter. Oh look, it's the Grim Reaper—stay away from me.

An open letter to the Black Death. Dear Black Death, I don't want to compliment you, but that term "Black Death" is just some fantastic branding. Such a scary term—it's a shame that people in the actual 14th century didn't use it. It was first coined in 1832 by a German doctor and professor of the history of medicine, J.F.K. Hecker. And the term became popular in English after it was used in "A History of England" by Elizabeth Cartwright Penrose. So, great job, J.F.K. Hecker. It took a historian who was also a doctor to come up with a name as catchy as "the Black Death," but for once, historians, you did it. A terrifying thing got the terrifying name it deserved. Best wishes, John Green.

06:20

So we're not 100 percent sure that the Black Death was bubonic plague. Its virulence suggests that in some places it might have been pneumonic. But we have descriptions of it that match bubonic plague, like this one from Florentine chronicler Matteo Villani. "It was a plague that touched people "of every condition, age, and sex. "They began to spit blood and then they died—"some immediately, some in two or three days, "and some in a longer time. "Most has swellings in the groin, "and many had them in the left and right armpits "and in other places; one could almost always find an unusual swelling somewhere on the victim's body." Stan, I appreciate you doing that in text and not pictures, because it sounds truly horrible. Thank goodness that was the last we saw of outbreaks of bubonic plague—what's that? There was an outbreak in 1904 in San Francisco? Oh boy—and India in 1994?

Text bubble: These 20th century bubonic plague outbreaks were very limited compared to the black death. The 1900-1904 plague in San Francisco killed 113 victims, and the 1994 outbreak in India claimed 52 lives.

07:07

Obviously the plague affected a lot of individuals' lives, but it also affected world history. Like, plague probably contributed to the fall of the Yuan dynasty in China in the 14th century, but its greatest effects were felt in western Europe. Okay, lets go to the Thought Bubble.

*Black Death in London, 1349:
Animation of a person walking through London: there is a wagon full of bodies and several infected people crawling on the ground with sores covering their bodies*

There's some debate about whether the Black Death kick-started Europe's economy and ended the Middle Ages. It probably did create some opportunity, like guilds were forced to admit new members to replace the many workers who had died, and persistent European inflation until the end of the 14th century suggests both a shortage of products and higher wages. Again, Matteo Villani provides us with some evidence of the effect of the plague on Italy's economy. "Nurses and minor artisans working with their hands "want three times or nearly the usual pay, "and laborers on the land all want oxen and all seed and want to work the best lands and to abandon all others." So the plague may have actually been good for workers, at least those who survived.

Animation of people and a clergyman dropping their bibles and pulling out cigarettes and bottles of alcohol

A sick woman walks past a newly-built brick house, but is struck by the grim reaper

08:33

Drawing depicts Native peoples carrying away their dead

09:08

An early painting of a baby being given a vaccination

10:02

The plague also probably changed European Christianity. When faced with seemingly random and widespread death, some people abandoned piety for hedonism, and ineffectiveness of priests in dealing with the crisis may have led to an increase in anti-clericalism and a greater receptiveness to the ideas of the Protestant Reformation. And attempts to combat the plague changed the way that Europeans lived too. For example, there were new construction techniques, such as building out of brick instead of wood. And in many places tile roofing replaced thatched roofs, where rats liked to live. These new shelters created more barriers between humans and disease-carrying rodents, and plus, there were fewer plague infested rats falling out of the ceiling, so that's nice. Thanks, Thought Bubble.

So the Black Death looms larger in our Eurocentric imaginations, but in terms of devastation and human suffering, it pales in comparison to the Great Dying that accompanied the Columbian Exchange. The pre-Columbian Americas were certainly no paradise, but the records we have suggest that Amerindian cultures were largely free of disease until the arrival of Europeans. They did have syphilis, but that's preventable. Not to be redundant, but the most obvious and often most overlooked aspect of the Great Dying is the dying. I mean, perhaps 90 percent of native populations of the Americas may have perished, destroying communities and families and entire cultures.

And at the same time that diseases were destroying indigenous social orders, Europe's population was growing, thus creating more pressure to colonize the Americas, Asia, Africa, and eventually Australia. And so it's fair to say, as historian Jared Diamond has, that disease was, if not the decisive factor, a crucial determinant of Europe's dominance in the modern era.

So, while not exactly the last hurrah of epidemics, the world has not seen anything remotely like the devastation brought by the Columbian Exchange since. Some of that is due to our new shared immunological profiles, but much of it can be chalked up to massive improvements in science and medicine.

The most significant medical advance in the battle against viral epidemic diseases like smallpox was inoculation, which was probably actually invented in Asia but came into wide use in England after 1721 and in continental Europe about a century later. And then the development of antibiotics in the 20th century proved extremely effective against bacterial diseases like bubonic plague and tuberculosis.

Some of these advantages have had tremendous results, like smallpox has been eliminated from the human population. But infectious disease continues to be a leading killer of humans, and we still see deadly epidemics of diseases like cholera around the world. And even though antibiotics have been in wide use for less than 100 years, many drug-resistant bacteria have already emerged, and terrifying diseases like tuberculosis have started to make a bit of a comeback. Then you have modern endemic diseases HIV-AIDS along with the lurking threat of new and terrifying epidemics like the various flus we often hear about. All of that reminds us that disease is still shaping human history and has the potential to be the most powerful force in human history. Like, the one that ends it.

We like to think that the human story is both told by and made by humans, but, in fact, it's a lot more complicated than that, because we share this planet with countless creatures. I know we all like to think of ourselves as individuals, but we cannot separate ourselves, not only from other people, but also from the larger biosphere. That whole story is the story of history. Thanks for watching, I'll see you next week.

11:05
Credits roll

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