

“Is it safe to eat Chinese food?”

That was a question from an audience member at a [coronavirus public information session held on Friday in New York City](#) by the [Center for Disaster Medicine at New York Medical College \(NYMC\)](#). No, it wasn't a nutrition meeting or a “dishes-to-watch-out-for-if-you-want-to-avoid-flatulence-on-a-date” meeting. This was a session that had assembled medical experts from NYMC, elected officials, and city and state health department officials to answer questions that the public had about the new coronavirus (2019-nCoV) outbreak.

If you look at the [World Health Organization \(WHO\)](#) and [Centers for Disease Control and Prevention \(CDC\)](#) websites on coronavirus, “eating Chinese food” is not listed as a risk for catching the new coronavirus. Sure, you may get some MSG or some flatulence, depending on where you get the food and what specifically you eat. In fact, flatulence is a risk with any type of cuisine. But no, eating Chinese food in New York City is not going to put you at higher risk for a 2019-nCoV infection.

A man pushes a loaded trolley past an empty terrace of a Chinese restaurant in via Paolo Sarpi, the ... [+]

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“There is so much misinformation out there,” said [Edward C. Halperin, M.D., M.A.](#), the Chancellor and Chief Executive Officer at NYMC, who spoke at the session. “We’re seeing government conspiracy theories and the dark side of racism. People saying that you shouldn’t go to Chinese restaurants or racist things about people of Chinese descent.”

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Indeed, with social media fueling the fire, plenty of misconceptions are spreading faster than the 2019-nCoV. Here are some of the more common ones:

**Misconception 1: 2019-nCoV is more contagious and spreading faster than any other pathogen.**

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Not even close. The measles virus is one example of a virus that is much more contagious than the 2019-nCoV. The only reason why the measles virus may not seem like it has spread as quickly during recent outbreaks is because, voilà, most people are already vaccinated against the measles.

The reproductive rate ( $R_0$ ) is the average number of new people that a person with a pathogen can infect, assuming that everyone else is not immune to the virus, [as I described previously for Forbes](#). [A study posted on medRxiv](#) (i.e., not a peer-reviewed scientific journal) first estimated the  $R_0$  of 2019-nCoV to be around 3.8. That means that someone infected with 2019-nCoV could on average spread the virus to close to four other people. That sparked some alarmist and misinformed tweets that went viral on Twitter. The estimate still had a ton of uncertainty and has already been downgraded, according to the first author of the study:

A  $R_0$  of 2.5 would mean that an infected person would on average infect two to three other people. Regardless, keep in mind that this study has not yet gone through scientific peer-review, which means that anything it concludes should be taken with a shaker full of salt. The uncertainty and lack of data are not surprising since getting info on something on the fly about something completely new can be challenging. It can be like trying to figure out how dangerous a road may be while in the middle of a crash.

Nevertheless, an estimated  $R_0$  of 2.5 would fall well below the  $R_0$ 's for measles and pertussis, which tend to be between 12 and 18. These aren't the only diseases that seem to be more contagious than 2019-nCoV. For example, there's also polio and diphtheria.

**Misconception 2: 2019-nCoV is more deadly than any other pathogen.**

Mary Foote, MD, MPH, Senior Medical Coordinator for Communicable Disease Preparedness at the NYC Department of Health, who also spoke at the NYMC session told me that, “people have been claiming that every single person who gets infected will end up dying.” Well, that’s partially sort of true. Everyone who gets infected by the new coronavirus will eventually die. But more often from heart disease, cancer, old age or something else besides the infection, and, in many cases, years from now. Because no one lives forever.

What Foote was referring to was the circulating belief that people are dying from 2019-nCoV infections at much higher rates than in actuality. What’s happening then in actuality?

Let’s look at the numbers. The case fatality rate is the proportion of people who die from a disease divided by the total number of people who got the disease. [Al Jazeera has reported](#) the latest death toll to 304 with at least 14,380 2019-nCoV infections. If you do the math, that’s about 2% of people infected dying. While 2% is not insignificant, it is still much lower than the case fatality rate of numerous other pathogens such as the Ebola (an average case fatality rate of 50%, [according to the WHO](#)), Marburg ([also around 50%](#)), and rabies viruses (which can be close to 100% fatal).

And don’t forget about influenza, which every single year kills tens of thousands of people in the U.S. and 291,000 to 646,000 people around the world, [according to a study published in The Lancet](#). While the case-fatality rate for the typical flu season may be lower (less than 0.01% by some estimates), remember many people get the flu vaccines each year, which can reduce the spread and impact of the flu. Worrying about 2019-nCoV without getting the flu shot is sort of like fretting about something else while wearing a Lady Gaga raw meat outfit in a lion’s cage.

### **Misconception 3: The 2019-nCoV was manufactured in a laboratory and is being deliberately spread.**

Whenever an outbreak of any infectious disease occurs, conspiracy theories will come out like diarrhea into the social media toilet bowl. [According to Fatima Tlis, writing for Polygraph.info, a fact-checking website produced by Voice of America \(VOA\) and Radio Free Europe/Radio Liberty \(RFE/RL\)](#), “[on January 27] a large number of Russian domestic news outlets began suggesting the United States

might be behind the outbreak.” This included claims that the U.S. was using the coronavirus as a bio-terrorism weapon against China and that U.S. pharmacists, yes pharmacists, were making billions off of this. Imagine that, conspiracy theories being spread by sources from within Russia. Apparently, some in China also believe such theories:

Oh, and surprise, surprise, conspiracy theories and misinformation are coming from within the U.S. as well. Halperin said, “We pulled together the session because the Internet has been full of misinformation. I’ve seen claims that this is the result of a bomb or explosion or all a government conspiracy.” A government conspiracy? To accomplish what exactly? Well, there have been suggestions that it is to make money off of a vaccine.

For example, Shiva Ayyadurai, a Republican in Massachusetts running for the U.S. Senate, [claimed in a Facebook post that "The Coronavirus PATENT is owned by the Pirbright Institute."](#) But he does not clarify that the patent is not for the 2019-nCoV. [As I have covered previously for Forbes](#), a number of different coronavirus strains exist, ranging from ones that cause mild-to-moderate cold-like upper respiratory illnesses to those that cause SARS and MERS. Therefore, a patent for one strain does not mean that a patent for 2019-nCoV and a vaccine against this new strain already exist. Nevertheless, look at some of the responses to Ayyadurai’s post such as “it [the 2019-nCoV outbreak] will be dying out by 16 wks, but I bet pharma will put out a vax & make sure it’s a wildfire for profit.”

And this one: “Goes along with the ideology that the earth can only sustain X amount of people and plays into the climate change mindset, so they create viral and bacterial organisms to require vaccines, either of which can eliminate the poor, which in some countries makes up a fair amount of the population. Evil times.”

The 2019-nCoV outbreak is not part of the Resident Evil franchise. Alice (played by Milla Jovovich) ... [+]

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No, that is not evidence that the Pirbright Institute owns the patent for the 2019-nCoV. No, the 2019-nCoV outbreak is not another installment of the *Resident Evil* franchise. No, there isn’t any evidence that someone is manufacturing this virus to reap profits off of a vaccine. Because there

is one small problem with such a theory: there isn't a bleeping vaccine available yet. Which brings us to the next misconception.

#### **Misconception 4: A vaccine is available to stop this outbreak.**

Do you know why a vaccine isn't available yet? That's because developing a vaccine is bleeping difficult and takes time, money, and, you know, real science. First, you have to discover the actual virus or bacteria that's causing the problem. Then you have to figure out how to make a vaccine that actually works. And then the vaccine has to undergo (drum roll, please) rigorous safety testing. You know the type of testing that supplements and other things touted as alternatives to vaccines do not have to undergo.

Speaking of supplements.

#### **Misconception 5: Fill-in-the-blank bogus therapy can prevent or treat coronavirus infections.**

One thing's for sure. If there is a health problem, someone is going to suggest that supplements or "natural medicine" can take care of it. After all, when you don't use science and facts to back your claims, you can pretty much say anything. Tim Caulfield, LLB, LLM, [Professor of Law at the University of Alberta](#), assembled some of the claims in this tweet:

Maybe pharmacists aren't making billions off of this outbreak, but looks like others pushing pseudoscientific therapies are trying to make at least a buck. The claims are aplenty, ranging from keeping you throat moist to prevent the infection to drinking bleach to get rid of the infection. (The drinking bleach suggestion has come up before for other diseases, [as I wrote before for Forbes](#).) While constantly gargling with water may be relatively harmless unless you are on a date or a job interview, don't drink bleach. Just don't.

Currently, there is no real cure for a coronavirus infection. The best way to prevent an infection is to wash your hands thoroughly and frequently. And to not interact too closely with someone who is sick, regardless of whether that person has a coronavirus infection or some other infection.

Which brings us to the next misconception.

#### **Misconception 6: Every case of fever and coughing is the result of coronavirus.**

A fever and a cough alone don't mean that you have a 2019-nCoV infection. (Photo: Getty Images)

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Foote mentioned something else that is afoot: “people are claiming that there are all these cases of coronavirus infection in New York City that are not coronavirus infections.” The world of medicine has a saying, “when you hear hoof beats, think of horses, not zebras.” That doesn’t mean that horses are running around hospitals everywhere. It means when someone has a fever and respiratory symptoms, chances are that it is something much more common like the upper and respiratory illnesses that you usually get rather than a 2019-nCoV infection.

### **Misconception 7: The coronavirus is a punishment for fill-in-the blank.**

Don’t you just love racism? It allows you to blame entire groups of people for virtually anything. “Why do some people always feel the need to blame others when there is a health problem,” Halperin asked. “Now many are blaming the Chinese for this outbreak. This is similar to what happened with HIV when the ‘4-H’s,’ homosexuals, hemophiliacs, heroin addicts, and Haitians were being labeled as at fault.” Remember that whole HIV is a punishment for certain lifestyles garbage? If diseases existed to punish certain groups of people for “moral” wrongdoing, why isn’t there “corrupt politicians fever”, the “bigots blisters”, the “liars lymphadenopathy,” or the “embezzled a lot of money elephantitis”?

### **Misconception 8: You can catch the new coronavirus from Chinese food or other Chinese products.**

Don’t get your underwear in a bunch, even if it was made in China. The audience member at the session who asked about the safety of Chinese food also expressed concerns about food such as tuna shipped all the way from China. A panel member emphasized that tuna that is packaged in China is probably first heated to a temperature that would kill the virus and that the virus probably wouldn’t survive the packaging and shipping process.

The audience member didn’t seem convinced and mumbled something about Chinese people touching the food, which then leads into the next misconception.

**Misconception 9: You should avoid or be afraid of all Chinese people. Actually, why bother distinguishing, just avoid all people of East Asian descent in general.**

Just because the 2019-nCoV outbreak started in Wuhan, China, does not mean that you should avoid and ... [+]

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If you don't normally associate with people of Asian descent, now you have an excuse, right? Except that this excuse would make no scientific sense. Viruses aren't like people on dating web sites. They don't state racial preferences or choose people based on appearance. Instead, viruses like the new coronavirus are totally equal opportunity, infecting anyone who isn't immune and happens to be close enough. In fact, the true equity that such viruses show would make them a good boss, except for the fact that they are viruses. And you don't want a boss who can infect you.

What will it take to spread the following scientific fact? Nothing about having an "Asian appearance" or being of Asian descent will make one more likely to carry the virus:

Oh, and if you see a person who "looks Chinese," don't assume that the person has been anywhere near Wuhan. That would be similar to assuming that everyone who has the skin color of Donald Trump hangs out at the Mara Lago resort.

"There has been horrible misinformation stigmatizing Asian communities in general," said Foote. "This creates a lack of trust among different communities, which can make things worse." She emphasizes that "stigma can prevent people from seeking proper care. It can essentially make people go 'underground' when they do have a problem."

**Misconception 10: The coronavirus outbreak is a hoax trying to fill-in-the blank.**

Wow, that would be quite an impressive hoax: coordinating the World Health Organization (WHO) and all those scientists, health care professionals, organizations, and country governments to design and execute this hoax. So, people somehow can coordinate around the world to implement such an elaborate hoax but can't solve major societal problems such as why ear bud cords keep getting horribly tangled in

your pocket? Can you imagine the resources and effort that would be required to pull all of this off secretly? Heck, getting scientists to agree on anything besides clear scientific facts can be like trying to herd together cats wearing earphones while they are driving little cars.

World Health Organization (WHO) Director-General Tedros Adhanom Ghebreyesus speaks during a press ... [+]

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These are far from the only misconceptions being spread about the 2019-nCoV outbreak. Alas, people with agendas will always be around to spread misinformation, whether it is to smear or discredit certain people, spread bigoted ideas, or to sell something. The challenge is immunizing the public against such nonsense. Foote said, “Proper risk communication is so important. One of the biggest enemies is panic and fear. You want to make sure that people don’t panic from misinformation but at the same time are aware of the real risks so that they take appropriate action.”

She added, “Work has to be done during ‘times of peace’ when there isn’t an emergency. You have build up trust among the different communities and make sure that there are established trusted relationships between community members, health professionals, and the government.”

Halperin felt that such misinformation has gotten traction because “a large proportion of the population is not scientifically literate. There is not enough science education. Many don’t even know what a virus is. For example, on the ferry, I met a skilled engineer who thought that a virus is just a lump of protein.”

He continued by saying that “people ought to know and respect the MD’s, the public health professionals, and the real scientists. If there is an infectious disease outbreak, these are the people who are going to protect the public. They are the ones with the expertise and experience, the often unsung heroes.”