

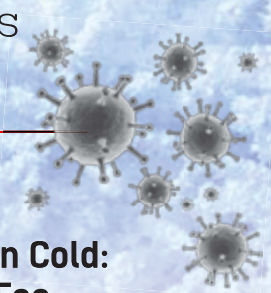


SKEPTICS CORNER

Cold And The Common Cold

How much of a connection is there between the two?

By Daniel Liang



Daniel Liang looks at a familiar world in an unfamiliar way - through a skeptical lens. Every month he peeks under the hood of a meme, myth, bias, or news article. Disclaimer: Nothing in this article is meant to be taken as medical advice. Always consult your own licensed healthcare provider.

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fter a very warm start to the winter, Dongguan had its first snowfall in 124 years. Somewhat ironically, the extreme weather compelled the notoriously cold-averse Dongguan people to head outdoors in droves. The most common advice heard before braving the cold was, “bundle up, or you will catch a cold”.

The common cold gets its name from the temperature, and there is one in Chinese as well: “着凉” - literally, “contacted by cold”. So does mere exposure to lower temperature cause one to catch a cold? Of course not. Way back in the 1950s, the definite cause of the common cold was determined to be viruses (mostly rhinoviruses), not cold temperature. No virus, no cold. This seems like an open-and-shut case, but it is more complicated than that. Before we dive into that, let’s look at the cold a bit more.

The Common Cold: A Stubborn Foe

Despite herculean efforts, modern medicine is no closer today to a cure or vaccine for the common cold, and treatment is largely focused on symptom relief. There are products ranging from over-the-counter drugs to supplements, with disappointingly little evidence for efficacy. In fact, the American Academy of Pediatrics recommends that parents should stop using children’s cold medicine for kids under 6, because they do not work for young children. For the rest of us, the short list of treatments with mixed scientific evidence include nasal wash (e.g., neti pots, for nasal symptoms), honey (for cough), and NSAIDs (e.g. ibuprofen, for pain relief). Over-the-counter drugs for cough, such as cough suppressants and expectorants, surprisingly lack evidence that they work. There is some evidence that probiotics may help prevent catching a cold.

Things turn more complicated when we ask a slightly different question. Does exposure to cold increase the risk of developing a cold?

Thankfully, it is generally a self-limiting disease, and most will get better with or without treatment in 7-10 days. This self-limiting nature also creates the illusion that whatever remedy tried in desperation actually worked, when in reality the cold would have gone away on its own.

Why Are Colds Associated with Cold Temperature?

One reason is simple correlation. Most colds tend to occur in winter and spring, when temperatures are lower, and it is tempting to connect the dots and draw a conclusion. A positive correlation hints at a possible connection, and is a good place to start an investigation but a horrible place to end.

Another less obvious reason is because of confusion. Why is that? Well, we all get runny noses when we are out in the cold, which is called cold-induced rhinorrhea. It is a perfectly normal physiological response, and will subside in warmer air. A runny nose also happens to be a symptom of the common cold. The underlying causes for the same symptoms cannot be more different, yet can be easily conflated and thought to be the same. This type of misattribution error is no stranger to many of our expat readers—for example, when the taxi driver talks progressively louder and ends up shouting in your face, because he confuses your inability to understand Chinese with the inability to hear.

存疑之隅——天冷与感冒



丹尼尔梁推翻了“感冒由天冷引起”的谬误。

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A Better Question

It is clear that colds are caused by viruses and not low temperature. However, things turn more complicated when we ask a slightly different question. Does exposure to cold increase the risk of developing a cold? Many of us have had the experience of feeling a cold coming on, but eventually fizzle out as our immune system fights it off. It is well known that people with weakened immune systems are more susceptible to developing a cold. Could exposure to cold somehow impair the immune system enough to cause an asymptomatic, subclinical infection to develop into a full blown cold? One published review seems to lean towards that view, but it is still far from a definite conclusion. In the author's own words, "It should be emphasized that one of the most difficult aspects to address in human studies of this topic is the control of possible confounders."

Let's look at an analogy. Suppose you find that pregnancy rate increases with alcohol consumption. It is clearly absurd to think that alcohol is directly involved in human reproduction. Storks are. Does alcohol consumption

increase the likelihood of pregnancy? That is a very different question with complex social factors involved. Much like wearing beer goggles might impair judgment enough to turn a "no" into a "yes", exposure to cold might affect the immune system.

A Better Explanation

So why are there more colds in winter? Let's start by looking at how the disease is spread. The virus is transmitted by contact with infected secretions, and the best chance of that happening is when there are many people in a confined space for an extended period of time. That tends to happen when it is cold outside and people stay indoors.

Another example further illustrates the importance of social factors. In tropical climates where the temperature doesn't prevent people from going outdoors, colds are more frequent in the rainy season. But when it comes to long hours in indoor spaces with lots of close contact and poor hygiene, nothing beats a school. Speaking anecdotally as a parent of young kids, I believe that any parent would agree that schools

are simply oversized petri dishes that turn healthy kids into diseased, legged biohazards.

Conclusion

The notion that exposure to cold will cause a cold is pre-scientific nonsense. Whether prolonged exposure to cold increases the risk of a cold is unclear, but likely pales in comparison to the much larger risk of transmission due to increased social contact.

Washing hands frequently, eating and living healthily, and avoiding contact with sick people will do much more to prevent colds than bundling up. So Dongguaners, don't worry about layering up until your joints can't bend - go out and have fun in the snow. Hopefully it won't take another 124 years.



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