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Catch Your Death

Is there any connection between being cold and catching a cold? If not, why is there so much folklore about catching a cold if you sleep uncovered or in a draft?

ANTONIS PAPANESTIS

No, there is no connection. The erroneous association developed for several reasons.

The viruses that cause colds spread faster in the winter because people spend more time inside, where they are closer together.

Because people close the windows in winter, air contaminated by virus particles is not diluted by “fresh” air from the outdoors. This makes it easier for the virus to spread.

The cold, dry air of winter makes the mucous membranes in the nose swell. This produces the “runny nose” we often incorrectly associate with an infection caused by a cold virus. The experience of catching a chill and getting a cold is actually the reverse of the correct order of things. The chill is often the first sign of fever that is the result, not the cause, of the infection by the cold virus.

MARK FELDMAN

Studies have shown that there is no correlation between environmental temperature and suffering from colds. The origin of the old wives’ tale that predicts colds, flu, or pneumonia after exposure to cold temperatures is the short period of fever that precedes the distinctive symptoms of these illnesses.

These periods of fever make the patient feel cold and shivery. Shortly after developing other symptoms, the patient then associates the illness with having “caught cold.” Indeed, the flu is called influenza from the belief that it was caused by the “influence” of the elements. The fact that isolated researchers living in Antarctica never catch colds confirms that these are caught from people and not from “cold.”

PEDRO GONZALEZ-FERNANDEZ

There is actually less chance of your catching a cold in the cold. The virus known as the common cold dies in cold and needs warmth (say, the cosy indoors of a home beside the fire started to keep out the cold) to thrive.

ESPERANDI

How About Gnat?

How is it possible for gnats to fly in heavy rain without being knocked out of the air by raindrops?

L. PELL

A falling drop of rain creates a tiny pressure wave ahead

(below the raindrop). This wave pushes the gnat sideways and the drop misses it. Flyswatters are made from mesh or have holes on their surface to reduce this pressure wave; otherwise, flies would escape most swats.

ALAN LEE

The world of the gnat is not like our own. Because of the difference in scale, we can regard a collision between a raindrop and a gnat as similar to that between a car moving at the same speed as the raindrop (speed does not scale) and a person having only one-thousandth the usual density—for example, that of a thin rubber balloon of the same size and shape. A balloon is easily bounced out of the way, and would burst only if it was crushed up against a wall.

TOM NASH