Symptoms: To treat or not to treat?


Being sick is no fun. All you want is to feel better, or make your loved one feel better. Often, the first stop is the medicine cabinet or the “cough and cold” aisle of the local pharmacy. But is that really the best thing to do?

The instinct to treat the symptoms of illness makes sense. Over-the-counter medicines may make people feel better, but the reality is that, often, these medicines are just making the work of the immune system more difficult. This is because most symptoms are actually caused by the immune system’s response to an infection. Read on to find out what causes several of the common symptoms people experience when they are sick, and what to consider before opening the cap on that medicine bottle.

Symptoms and their causes

Check out what causes many of the symptoms people may experience when feeling sick:

- Fever — The immune system turns up the body’s internal thermostat for two reasons when a person is ill. First, the cells of the immune system work better at the elevated temperatures associated with fever. Second, the pathogens typically do not reproduce as efficiently at higher temperatures.

- Chills — Sometimes, when a person has a fever, or right before they get a fever, they experience chills or shivering. The cause is rapid contracting and relaxing of small muscles to increase the body's temperature.

- Runny nose, stuffy nose, sinus pressure, sinus headache — One of the body’s important infection-fighting tools is mucus, a thick, sticky substance that contains glycoproteins. It can coat pathogens, inhibiting them from attaching to cells and gaining entry into cells. Unfortunately, excess mucus caused during an infection can also cause several of the symptoms that make people uncomfortable. If mucus accumulates in the sinuses, it can lead to sinus pressure and headaches. Mucus that is expelled through the nose or mouth can contain large amounts of bacteria or viruses. For this reason, people should dispose of used tissues and wash hands in an effort to decrease the spread of infection to others.

- Coughing and sneezing — Both of these are physical ways for the body to remove or expel something, such as a pathogen, dust or excess mucus, from a person’s airways. This is part of the innate immune response.

- Vomiting — Another innate immune system response, vomiting is a way for the body to rid itself of something noxious in the stomach, such as when someone has eaten contaminated food or consumed too much alcohol. Severe vomiting can lead to dehydration, particularly if accompanied by diarrhea, so if you are concerned, as with any of these symptoms, contact a healthcare provider.

- Diarrhea — Another symptom induced by the innate immune system, diarrhea provides a way for the body to rid itself of toxins, which are harmful proteins, or pathogens that are in the intestines.

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Trivia Answer:
The correct answer is B. In 2001, the American Red Cross, in conjunction with the Centers for Disease Control and Prevention (CDC), World Health Organization (WHO), UNICEF, and United Nations Foundation, launched the Measles and Rubella Initiative, a worldwide vaccination campaign that has successfully vaccinated 1 billion children in 80 developing countries.

Go to vaccine.chop.edu/trivia to play Just the Vax, the Vaccine Education Center’s trivia game, where you can find this question and others like it.

Symptoms: To treat or not to treat? [cont.]

So, what to do?

This depends, to some extent, on who the patient is. Infants, people with chronic conditions for which they are being treated, and older adults may require medical guidance before receiving any medications. For example, infants younger than 2 months of age who have a fever need to be evaluated by a medical provider promptly as they may have an “as-yet-undetected” immune deficiency and could quickly take a turn for the worse. Likewise, individuals being treated with medications for chronic conditions may be advised against taking some or all over-the-counter medications because of the potential for interference of the drugs with one another.

However, generally speaking, for otherwise healthy older children and adults, symptoms of illness can be monitored for their severity and progression. If symptoms are mild and the person does not seem too uncomfortable, medications are probably not necessary. However, if the symptoms continue to worsen, are prolonged, or if the person is uncomfortable, you might want to offer medication or contact your healthcare provider for guidance.

For more information about how the immune system works, its different components, and what happens when it is not working properly, check out the popular section of the Vaccine Education Center’s website about the human immune system: https://www.chop.edu/centers-programs/vaccine-education-center/human-immune-system.

News and Notes

August is . . . a month of celebrations!

Although summer is winding down, it is not over yet! As you are enjoying the last “lazy days of summer,” take a moment to note these immunization-related celebrations:

• On August 30, 2019, Dr. Maurice Hilleman, one of the world’s most accomplished scientists, would have turned 100 years old. Although Dr. Hilleman died in 2005, his 100-year birthday is a great time to remember him because his work has touched all of us. He developed more than half of the routinely recommended vaccines that children receive in the first two years of life. Dr. Hilleman was born in Montana near the end of the 1918 influenza pandemic. His twin sister and his mom died within days of his birth. Find out more about how this man, with the odds against him from birth, became an American hero at www.HillemanFilm.com. Check this site later in August for information about a special online event on August 30!

• August is National Immunization Awareness Month (NIAM). As we collectively celebrate the success of vaccines, it is important to remember that vaccines protect against diseases that are still a threat and which can be severe, or even deadly. Vaccines are safe and effective, and they protect best when received according to the recommended schedule.

How does measles vaccine help community immunity?

The Guardian created a graphic demonstration of how measles vaccine coverage can make a community more or less protected against a measles outbreak. Although the graphic, and accompanying article, was published during the measles outbreak that started in Disneyland in 2015, the graphic remains a useful demonstration of community immunity. While cases of measles have decreased in the current U.S. outbreaks, some people are still being diagnosed with the illness.


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