

OPTIMAL HEALTH UNIVERSITY™

Presented by Dr. Wayne Terai

The Phlegm Files: Think Twice About Antibiotics

When you have a respiratory infection, do you surreptitiously check your tissue to see what color your phlegm is? You're not alone. It's a commonly held belief that light-colored or clear phlegm means you aren't very sick, while yellow or green phlegm means a bacterial infection and a round of antibiotics.

While many doctors and patients use phlegm color as a barometer for bacteria, it's not an accurate indicator, says Dr. Terai. In fact, treating a respiratory infection with antibiotics often does more harm than good. Phlegm is a fact of life, so join Dr. Terai and learn what it means and why antibiotics perhaps shouldn't be your first line of attack.

Phlegm 101

Phlegm is one of several forms of mucus that are present in everyone's body. Mucus keeps various tissues moist and protects the body against foreign objects. In the respiratory system, it keeps dust and other matter out of the lungs. Mucus also contains antibodies that kill pathogens like bacteria and viruses.

When inflamed by allergens or disease, the respiratory system produces a larger amount of nasal mucus as well as phlegm, called *sputum* when it is expelled through the mouth by coughing.

This is a normal part of the immune response, explains Dr. Terai — the phlegm traps allergens, bacteria and viruses.

The excess mucus may start clear and thin and then thicken and change color as the body attacks pathogens with an enzyme produced by white blood cells, the foot soldiers of the immune system. This germ-killing enzyme, myeloperoxidase, contains iron that gives phlegm and nasal mucus a yel-

lowish or greenish shade when present in large amounts.

Discolored Phlegm and Antibiotics

Outdated thinking among both doctors and patients held that yellow or greenish phlegm indicates a bacterial infection that should be treated with antibiotics. However, recent research shows this is not the case.

The body can produce colorful myeloperoxidase-rich phlegm in response to viral and bacterial invasions alike, says Dr. Terai. Though many doctors continue to hand out antibiotics when-

ever green or yellow phlegm is present, this isn't wise.

A new study from the University of Cardiff, in Wales, examines data from 3,402 adult patients complaining of acute cough. Patients whose cough produced colored phlegm were more likely to be prescribed antibiotics than those with colorless or no phlegm. But the patients receiving antibiotics did not recover from symptoms any faster than those without antibiotics (*ERJ* 2011; Epub).

Another investigation comparing phlegm color to the concentration of bacteria it contains showed no relationship between the two (*Respir Med* 2009;103:601-6).

Remember, greenish phlegm is caused by an iron-rich enzyme that fights pathogens, not by bacteria themselves.

Other studies show that discolored phlegm sometimes means a bacterial infection is more likely, but only when professionally assessed — patient reports of phlegm color were often not accurate (*Clin Microbiol Infect* 2010;16:583-8).



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However, researchers also conclude that phlegm color alone does not predict that antibiotics will knock out the underlying infection (*Scand J Prim Health Care* 2009;27:70-3).

The Overuse of Antibiotics

As you can see, antibiotics may not be effective against respiratory infections with discolored phlegm because bacteria are often not the source of the problem.

There are other good reasons not to take antibiotics for a simple respiratory infection. For one thing, they are often ineffective at shortening the duration of symptoms like cough. A cough from acute lower respiratory tract infection tends to last nearly two weeks on average — with or without antibiotic therapy (*Br J Gen Pract* 2008;58:88-92).

Antibiotics may also cause a range of side effects. *Antibiotic* means *against life*, and antibiotics often kill more than the undesirable bacteria in the body.

Stomach upset, including diarrhea and nausea, is a common side effect as antibiotics kill off the “good” bacteria that live in the digestive system.

By upsetting normal balances of bacteria, these drugs may also encourage an overgrowth of *Candida* yeast, potentially causing yeast infections (*J Clin Microbiol* 2006;44:3213-7).

The overuse of antibiotics has implications for public health as well. Bacteria mutate to select traits that protect them from the antibiotics to which they have been exposed. So-called “superbugs” like MRSA (multidrug-resistant *Staphylococcus aureus*) are on the rise, with MRSA-related hospitalizations doubling in recent years (*Emerg Infect Dis* 2007;13:1840-6).

Safe Alternatives

The doctor doesn’t deny that excessive phlegm and other symptoms are uncomfortable, but suggests natural ways to manage them while your immune system tackles their root cause. Many respiratory infections are self-limiting, meaning that they run their course and go away without the need for harsh antibiotics.

Getting plenty of rest allows the body to focus on fighting infection. In the meantime, drink plenty of water to stay hydrated, and use saline nasal spray, a humidifier, or steam to keep the sensitive mucus membranes hydrated.

Nasal irrigation, such as with a neti pot, is a popular drug-free solution for symptoms of upper respiratory infections. It is safe and effective for both children and adults (*Can Fam Physician* 2003;49:168-73).

Vitamin C, beta-carotene and omega-3 fatty acids help to reduce the inflammation of tissues that respiratory infections bring. Boost your nutrition status by eating a variety of colorful fruits and vegetables, and eat fatty fish or take fish oil.

Be Proactive to Stay Well

You’ve heard it said that “the best defense is a good offense,” and this couldn’t be truer when it comes to your health. Our chiropractic office helps patients avoid illness by counseling them on sound nutrition, physical fitness, stress reduction and other factors that influence overall well-being. By maintaining optimal health with our support, you can keep your immunity strong.

Chiropractors view all aspects of wellness — including a healthy immune system — as directly connected to the nervous system. The spinal cord is at the center of the nervous system, and it can be hindered by **vertebral subluxations**. These areas of dysfunction in the spine result from misaligned vertebrae (back bones) that doctors of chiropractic correct with gentle maneuvers called **chiropractic adjustments**.

Regular chiropractic adjustments are an important part of maintaining your health. To learn more, call today and schedule a consultation.



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