TOOLKIT: COLDS and FLU

By Myrto Ashe, MD

First, the difference.
What we call "the flu" can be one of several infections.

Most colds, or upper respiratory infections, are caused by a variety of viruses for which we do not have vaccines. They are transmitted mostly by touch. They are contagious from the day before you get sick, to about 2-3 days after you get sick.

Influenza is caused by one specific set of viruses, and every year a new vaccine is made to try to match the strains that will probably predominate. It is more likely to be influenza if your symptoms come on all of a sudden with chills, a high fever, and all the symptoms at once: watery eyes, runny nose, cough. The problem with influenza is that it makes pneumonia more likely, which can kill.

About 50-80 children die each year in this country from complications of influenza. Some have pre-existing conditions that put them at risk. Some don't. Some get terribly sick very quickly.

Avoiding getting upper respiratory infections can be done a number of different ways.

Far ahead of time, one can lead a good healthy lifestyle, including exercise, sufficient sleep, lots of healthy food (especially colorful fruits and vegetables, nuts, seeds, lean meats and fish), and use stress reduction when called for.

Now that winter is here, we can still do several useful things.

1. Vitamin D has been shown to reduce the chance of catching influenza by about 40%. This was the conclusion of a study of schoolchildren in Japan, who were given 1200 iu of vitamin D3 daily and compared to a group given placebo. Of those children who had asthma in the study, the kids on vitamin D also found that their asthma attacks that winter were less severe than those of the kids on placebo.
   The 1200 iu for schoolchildren has been translated as 2000-3000 iu for adults or 600 iu for toddlers, but there is no additional research to support this, to my knowledge.

2. Vitamin C has been shown to be helpful as a preventative, in that it will reliably reduce the duration of colds, if taken before you come down with symptoms. You need to take at least 200mg daily, and perhaps more than 1000mg daily, depending on the research.

3. Zinc has been studied extensively, and the results vary. As a nasal gel, it appeared helpful, but then some of the gels turned out to be contaminated with bacteria, and some people lost their sense of smell from using the product, so I would recommend against it.

   Zinc acetate lozenges are beneficial when used within 24 hours of onset of symptoms, but you need to suck on a lozenge every 2 hours while awake, and the lozenge should contain at least 10 mg of zinc, for a total of more than 75g or so of zinc daily. This is a high dose that you should not keep up for more than a couple of weeks.

   Taking a moderate amount of zinc all winter to prevent colds has not been studied that I can find.

4. Elderberry syrup from the company that markets it as Sambucol (not Sambucus) has been found to be helpful in making influenza duration significantly shorter. You have to use it four times a day, according to recommendations on the package. Sambucus, a different formulation with elderberry extract and not the whole berry, has not had studies published online to my knowledge.

5. The herb Andrographis has been found to be effective in early treatment of the common cold in several studies done in Russia, India, Armenia and other countries. In the US, it was found useful in the treatment of ulcerative colitis, so apparently, it is also an effective anti-inflammatory medication.

6. Honey works to relieve a painful sore throat or a cough. Remember no honey under age 12 months. My kids enjoy a soup spoon loaded with some honey and lemon juice.

7. Chicken soup, in this fun article, is found to be active in reducing inflammation, and thus likely to reduce symptoms of upper respiratory infection, and also many other illnesses, from asthma, to arthritis and depression.
   http://archives.cnn.com/2000/HEALTH/diet.fitness/10/17/chicken.soup.reut/

8. Medications were found to be less useful. Treating fever, by itself is not thought to be useful. Acetaminophen, the main ingredient in Tylenol, can make asthma worse, and thus, can make coughing worse because many people who cough a lot with colds actually have a form of temporary asthma.

   Antihistamines and decongestants may have a very small benefit for runny nose. Expectorants such as guaifenesin are believed to be no help. Codeine is

an ingredient known to stop cough, though the formulation isn't usually used in children.
In adults, I have found that the following can be useful:

- vaporizer, to get mist into the air, especially in very dry homes
- spray decongestant, such as oxymetazolin. Unfortunately, this may contain mercury, and used more than a couple of days in a row, can lead to rebound nasal congestion.
- Guaifenesin with codeine can help with cough
- For people who cough when they laugh, or breathe in, or talk, this is likely a form of temporary asthma called "reactive airway disease". In the short term, this is best treated with asthma inhalers. In the long term, best to try to get rid of this through the use of functional medicine, because it often will get worse over time, and progress to wheezing with exercise and episodes of pneumonia.

9. Bronchitis is defined as "cough productive of sputum". This means that if you cough and there is phlegm, whether the phlegm is thin, transparent, greenish, or thick, greyish and weird-tasting, you have bronchitis.
   Bronchitis is almost always viral, so antibiotics rarely have a place in its treatment. Here is a recent review on the conventional website PubMed Health: http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0010572/
   The problem with antibiotics goes beyond antibiotic resistance. By killing our beneficial gut bacteria, antibiotics have been at the source of a large variety of diseases that are presently on the rise. Be brave and just say no!
   Asthma inhalers, on the other hand, are beneficial in reducing the cough that goes with bronchitis. Also, smokers and patients with COPD are more likely to have a bacterial bronchitis, so for these people, it can be appropriate to prescribe antibiotics.

10. The same exact thing is true of sinusitis. Unless one has a fever over 101 and severe symptoms along with the nasal discharge, there is no good reason to use antibiotics.

11. Kids often get an ear infection soon after a cold. This is also best not treated with antibiotics, as 90% at least resolve on their own. Guidelines include high fever, young age and so on, and can be reviewed online and with your doctor.

12. Most years, between 5 and 20% of Americans get the real "flu", or influenza. This is a serious illness that can keep you in bed for a week. It impacts businesses significantly, so they have been proponents of vaccination.

13. Medications that fight influenza virus include Tamiflu and Relenza. Their effectiveness has recently been put into question by an influential review (on the main scientific site PubMed) that claimed that their manufacturers had

failed to provide important information that was necessary for the reviewers to come to a conclusion. It is tempting to conclude that the reason for this is that the manufacturers do not have favorable evidence of the effectiveness of their products. Due to the fact that the US Military spends millions of dollars stockpiling Tamiflu, this is of national concern.
In one study, children with asthma who caught influenza did have a lower chance of asthma attack if they took Tamiflu. The rate of asthma attack was 68% lower with Tamiflu, compared to 51% lower with placebo. However, there are also serious adverse effects of Tamiflu and Relenza, so the FDA has a warning label on the Tamiflu bottle. The incidence of delirium with Tamiflu is roughly 9% in children.

14. The flu shot, aimed at imparting immunity against some influenza viruses, is developed anew every year and is now recommended for everyone over the age of 6 months. The persons most at risk of dying from complications of influenza are children 2 years of age and under, elders over the age of 65, and persons with pre-existing conditions putting them at higher risk, including respiratory conditions such as asthma and COPD, diabetes, heart, kidney and liver disease, and other chronic conditions. People who are caregivers for such individuals, or family members are also encouraged to get influenza vaccination yearly. Expert opinion appears to be that it is not very effective, but continues to be recommended because it is "the best thing we have". (New England Journal of Medicine, January 2013).

    The effectiveness of the flu shot depends on age. Young children tend to have the best immune response. Elders sometimes have very low rates of immune response. It is difficult to show that the flu shot improves survival outcomes, because there is little research comparing it to placebo. In one study of asthmatic children, the chance of hospitalization *increased* 3-fold for vaccinated children. The problem is that the children getting vaccinated may be weaker than other children to begin with. In one study of Swedish elders, the ones that were vaccinated with influenza *only* had no survival advantage, but the ones vaccinated with influenza *and* pneumonia vaccine did have a survival advantage. There were not enough subjects vaccinated with pneumonia vaccine and NOT influenza vaccine to make an assessment.

    Deaths from complications of influenza seem to be decreasing over the years in children and adults up to the age of 65. Over that age, deaths seem to be increasing every year. I have been assuming that more and more people are being vaccinated every year, but I am not sure of this.

    Some years, the vaccine does not contain the major strains that are circulating in the population. This is because they have to make a guess at the time of vaccine manufacture. At any rate, the vaccine's track record of preventing

influenza is never over 70%, even when the match between vaccine strains and population strains is good. In 2011-12, none of the strains in the population were actually in the vaccine. I believe this means that the entire vaccination campaign was useless that year. However, there is a concern that if we don't proactively vaccinate everyone, some year a pandemic will occur and many healthy people will die as they did in 1918.

Studies showing that vaccinated people are less likely to catch influenza than people who are unvaccinated have been criticized as capturing a phenomenon known as the "healthy person effect", in which more mobile, better organized, less stressed people are better able to access the vaccine. Those who wait too long, procrastinating, or being too busy to get the shot are also more likely to get sick, due to stress and perhaps poor nutrition that goes along with their general chaos. The supportive evidence for this is that people who are vaccinated against influenza also tend to be less sick during the time of the year when influenza does not circulate.

Drawbacks of the vaccine involve a number of rare side effects, including Guillain-Barré syndrome, anaphylactic reaction to egg protein and shoulder injury. Unfortunately, no one has ever studied the long term health effects of a shot containing neurotoxins such as aluminum and mercury, small amounts of egg protein and a number of other substances, given yearly for several decades. We also don't know whether getting influenza a couple of times in your life might be protective in some way. At this point, it is considered unethical to deprive a person of the flu vaccine. Officials at the CDC tell us that a study of risks and benefits involving randomized assignment to placebo and active vaccine will not be done.

From where I stand as a functional medicine physician, there are many things you can do to have a happy and healthy immune system. The hallmark of such an immune system is that it will not be overwhelmed by a challenge, and also will not over-respond, thus limiting your symptoms to perhaps a little fatigue, but avoiding the terrible stuffy nose, muscle aches, "hit by a truck" feeling and lingering cough. Acquiring a healthy immune system will also help prevent or cure a host of illnesses based on inflammation: arthritis, heart disease, depression, autoimmune disease, allergies and asthma, diabetes and obesity. The time to start is now!

Dr. Myrto Ashe is a family physician in private practice in Mill Valley, CA. She specializes in stubborn, or persistent medical issues that haven't resolved with other approaches, or seem to require the ongoing use of medication.
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