Metagenics
New Chapter
Allergies / Asthma / Respiratory
Antioxidants / Oxidative Stress
Articles
Blood Sugar / Diabetes
Body Care - Eyes Skin Teeth Hair
Bone Health
Brain Aging / Cognitive
Cancer Therapies / Prevention
Cardiovascular
Chinese Remedies / Mushrooms
Depression / Insomnia / Stress
Digestion
Disease Protocols
Energy / Sports / Green Foods
Hormone / Prostate
Immune / Bacterial / Viral
Intimacy
Liver / Urinary / Detox-Cleanse
Newsletters
Pain / Anti-Inflammatory
Pets
Powdered Supplements
Vitamins / Aminos / Minerals
Weight Control

Home > Articles > Articles M - Q > ~ Preparing for the Bird Flu and Other Killer Viruses

~ Preparing for the Bird Flu and Other Killer Viruses

By Dr. Michael Murray, N.D., October 18, 2005

Michael T. Murray, N.D. is widely regarded as one of the world's leading authorities on natural medicine. He is a graduate, faculty member, and serves on the Board of Trustees of Bastyr University in Seattle, Washington. Dr. Murray is the co-author of *A Textbook of Natural Medicine,* the definitive textbook on naturopathic medicine for physicians. He has also written over 20 other books including *How to Prevent and Treat Cancer with Natural Medicine, Dr. Murray's Total Body Tune-Up,* and *How to Prevent and Treat Diabetes with Natural Medicine.*

Visit Dr. Murray's Web Site at www.doctormurray.com

- Introduction
- Influenza pandemics: A brief history
- Strengthening Your Immune System
- Lifestyle and immunity
- Nutrition and immunity
- Additional support
- Addressing the echinacea controversy
- What to look for in an Echinacea product
- Stopping a Cold – Cold
- Final Comments

The “bird flu” is the common name given to avian influenza - an infectious disease of birds caused by type A strains of the influenza virus. There are many different subtypes of type A influenza viruses. The subtype that is the most significant to humans right now is H5N1. Although this strain has been around for some time, a significantly deadly outbreak of influenza H5N1 occurred among poultry in Hong Kong in 1997 and throughout Asia during late 2003 and early 2004. During that time, more than 100 million birds in the affected countries either died from the disease or were killed in order to try to control the outbreak. In 1997, the entire poultry population of Honk Kong (estimated to be 1.5 million birds) were wiped out in an attempt to block the spread of the disease. Obviously, this effort failed.

So, what is the big deal about birds dying from a virus. Well, although the H5N1 virus does not usually infect humans if it does make the leap it produces severe and often fatal consequences. The first documented infection of humans with an avian influenza virus occurred in Hong Kong in 1997, when the H5N1 strain caused severe respiratory disease in 18 humans, of whom 6 died. Since the more recent outbreak of H5N1 in Asian poultry, fatal human infections of H5N1 have now been reported in Cambodia, Indonesia, Thailand, and Vietnam.

Why H5N1 is of particular concern?

Of the 15 avian influenza virus subtypes, H5N1 is of particular concern for several reasons. First, it mutates rapidly and has a documented propensity to acquire genes from other viruses that would allow it to infect humans. Secondly, it is an extremely deadly virus compared to other subtypes.

Published information about the clinical course of human infection with H5N1 is limited. In the 1997 Hong Kong outbreak, patients developed symptoms of fever, sore throat, cough and, in several of the fatal cases, severe respiratory distress secondary to viral pneumonia.

Human-to-human transmission

Right now it appears that human infection with H5N1 most often occurs from contact with infected poultry or contaminated surfaces; however, it is thought that in a few cases human-to-human spread of H5N1 have occurred, but spread of the virus has not continued beyond one person. However, because all influenza viruses have the ability to change, scientists are concerned that the H5N1 virus one day could be able to infect humans and spread easily from one person to another. Because these viruses do not commonly infect humans, there is little or no built in immune protection against them in humans. If the H5N1 virus were able to infect people and spread easily from person to person, an influenza pandemic (worldwide outbreak of disease) could begin.

Influenza pandemics: A brief history

The warning of a major bird flu pandemic coming from various health experts and recently echoed by President Bush are based on historical patterns. Throughout history influenza pandemics have occurred. In the 20th century, the following pandemics occurred:

- 1918-19 – The "Spanish flu" caused the highest number of known influenza deaths. More than 500,000 people died in the United States and up to 50 million people died worldwide. Many people died within the first few days after infection, and others died of secondary complications.
- 1957-58, "Asian flu," [A (H2N2)], caused about 70,000 deaths in the United States . First identified in China in late February 1957, the Asian flu spread to the United States by June 1957.
- 1968-69, "Hong Kong flu," [A (H3N2)], caused about 34,000 deaths in the United States . This virus was first detected in Hong Kong in early 1968 and spread to the United States later that year. Influenza A (H3N2) viruses still circulate today.

Both the 1957-58 and 1968-69 pandemics were caused by viruses containing a combination of genes from a human influenza virus and an avian influenza virus. The 1918-19 pandemic virus appears to have an avian origin. One of the scary factors about the Spanish flu was that nearly half of those who died were young, healthy adults. Most often flu infections target the very young, the old, and those with poor immune function.

Strengthening Your Immune System

When working properly, the immune system has a remarkable arsenal of weapons that have an enormous capacity to fight off microorganisms that have the capacity to infect us and do us harm. At all times, day and night, we are constantly exposed to various “bugs” –bacteria, viruses, fungi, and other invisible invaders. They are in the food we eat and the air we breathe. They're in everything we touch or smell. Despite this onslaught, many of us rarely catch a cold or get sick because of the strength or our immune system. With a strong immune system, you are safe from attack by all but the most virulent microorganisms. Even if infection does gain a foothold, it's usually just a matter of time before your immune system mounts an effective counterattack. Strengthening your immune system is the primary goal in gearing up to deal with not only the coming “cold and flu season,” but also in preparation for a possible influenza pandemic.

The first step is to follow a health promoting lifestyle including learning to deal with stress effectively. Next is to make sure that you provide the immune system with all the vital nutrients it needs to function optimally. These two simply steps can go along way in supporting central control mechanisms to keep the immune system functioning in a manner that not only increase your resistance to colds and flu and other infections but also protect yourself against cancer and other potentially deadly diseases.

Lifestyle and immunity

Now let's discuss the practical steps you can take to improve immune system function. The first goal is to take a look at your lifestyle to see if there are any factors that may be interfering with your body's ability to fend off illness. Among the most likely culprits:

- Chronic or severe stress
- Excessive consumption of alcohol
- Exposure to environmental toxins
- Cigarette smoke
- Lack of exercise
- Poor sleep quality

For most people, the biggest factor that depresses their immune function is stress. When you experience stress, your adrenal glands pump out more adrenaline and corticosteroids. These hormones inhibit white blood cell formation and function and cause the thymus gland – the main central control unit of the immune system - to shrink. Stress suppresses immunity by stimulating the sympathetic nervous system. This is a part of the autonomic nervous system that is responsible for the fight-or-flight response.

Good immune function requires being under the control of the other “arm” of the autonomic nervous system, the parasympathetic nervous system. This system automatically assumes control during periods of rest, relaxation, visualization, meditation, and sleep. But, if we stay relaxed and calm during our waking hours, it can balance out the negative effects the sympathetic nervous system exerts. During the deepest levels of sleep, potent immune-enhancing compounds are released, and many immune functions are greatly increased. At least seven hours of sleep per day is essential for helping the immune system function at its peak.

If you want a properly functioning immune system, it is absolutely vital that you reduce the amount of stress in your life as well as learn to better control it. The basic strategy for stress reduction is to find positive, relaxing ways of releasing excess tension and help your autonomic nervous system function under parasympathetic control. Stress reduction does not mean that you have to give up the high-energy lifestyle that you really enjoy. Find a routine that works for you. Doing so will not only help your immune system but will also improve your relationships and free up energy and focus.

Nutrition and immunity

A deficiency of virtually any single nutrient can significantly impair immunity. Throughout the world, nutrient deficiency is by far the most common cause of poor immune function. This fact is by no means limited to people whose diets are restricted by poverty. In America, many people are overfed but undernourished. They choose foods that have a lot of calories, but little real nutritional value. Here are some simple guidelines:

- Eat a diet that is rich in a variety of vegetables (especially the green leafy ones), fresh fruits, whole grains, beans, nuts, and seeds. These plant foods are rich in essential nutrients and immune boosting chemicals.
- Cut out the sweet stuff. Sugar makes your white blood cells sluggish. Studies show that eating 100 grams of sugar (about 3.5 ounces) reduces the ability of a type of white blood cell known as a neutrophil to engulf and destroy bacteria by as much as forty percent within two hours after ingestion. Since neutrophils account for about sixty to seventy percent of your white blood cells, interfering with them can seriously impair your immune function.
- Decrease the intake of saturated fats and cholesterol. A diet high in saturated fat suppresses immunity.
- Eat sufficient, but not excessive amounts of protein. Adequate protein intake is critical in the making of white blood cells, antibodies, and chemical messengers such as interferon. You also need protein to make antioxidant enzymes such as glutathione, which is found in abundance in white blood cells. Elevated glutathione levels are associated with better immune function. Individuals with low immune function can often benefit from eating more protein from fish, lean poultry, and lean cuts of meats. Taking a high quality protein supplement is also a good idea if you have a history of low immunity. Whey protein is the highest quality protein. An additional 40 to 50 grams per day for one month will boost protein stores back to normal. After the month is up, I would still recommend 20 grams of either choice or combined daily. In vegetarians, substitute soy protein for whey protein.
- Take a high-potency, high-quality vitamin and mineral supplement like my MultiStart formulas from Natural Factors. Doing so will increase your intake of all of the key vitamins and minerals required for optimal immune function. A landmark study found that adults who took a multi vitamin and mineral supplement had a fifty percent decrease in the number of days of illness due to infection compared to the group that took a placebo. Those taking the supplement were also showed improvement on eight out of twelve objective measures of immune function.

Additional support

While a health promoting lifestyle and optimal nutrition provide a strong foundation for strengthening immune function, during times of increased stress or exposure to viruses and other organisms additional support is definitely need. One formula that I highly recommend to provide this extra boost is Anti-V from Natural Factors. This herbal formula contains the following concentrated extracts:

- Echinamide® a patented, clinically proven, super-extracted Echinacea purpurea liquid that guarantees high levels of the three key active groups of compounds responsible for echinacea's actions on the immune system.
- Astragalus (Astragalus membranaceus) – the most famous herb in Chinese medicine for strengthening the immune system that is now backed by scientific evidence.
- Lomatium (Lomatium dissectum) – this herb garnered attention during the Spanish influenza in 1917, after it was discovered that Native Americans were recovering from this flu much quicker than everyone else.
- Reishi (Ganoderma lucidum) – referred to in Chinese medical texts as 'the mushroom of immortality,' reishi is valued by modern herbalist for its ability to promote resistance during times of stress.
- Licorice (Glycyrrhiza glabra) – a valued, time-tested herb noted in recent scientific investigations for its anti-viral properties.

The dosage recommendation for immune support during acute viral infections is to take 50 drops in water or two capsules every two to three hours. For long-term support or prevention the recommendation dosage is to take 50 drops or one two capsules two times a day or as directed by your health practitioner

Addressing the echinacea controversy

A recent clinical study published in the New England Journal of Medicine found that an extract of the root of Echinacea angustifolia was not effective in preventing the common cold in subjects artificially inoculated with the rhinovirus. However, there were several methodological problems in this study that were not reported. First of all, the three Echinacea preparations were manufactured for the study from a single lot of dried root. All were made at a concentration ration of 1 kilogram of root to 5 liters of extract (1:5 tincture), and were extracted with supercritical CO_2, 60 percent ethanol, and 20 percent ethanol respectively to yield different percentages of alkylamides. The dosage for each of the extracts was 1.5 mL three times daily, representing 300 mg per dose or 900 mg per day of Echinacea angustifolia root. This dosage is nowhere near an effective dosage required to produce a meaningful result. I like the comment from American Herbal Product Michael McGuffin about the insufficient dosage “. . . it is not unlike taking one-third or less of the dose of cough syrup and wondering why you are still coughing. The standard dosage for dried Echinacea angustifolia root used at the onset of a cold is well established at 3 grams per day or more and this study used less than one gram.”

What to look for in an Echinacea product

What determines the effectiveness of any herbal product is its ability to deliver an effective dosage of active compounds. The specific components of echinacea responsible for the immune enhancing effects are the polysaccharides, alkylamides, and cichoric acid. While each of these components is effective alone, the greatest degree of enhancement occurs when the three active components are at a specific ratio. The benefits of such a preparation have been clinically verified. For example, recently published studies with a commercially available echinacea product (Echinamide®) containing standardized levels of alkamides, cichoric acid, and polysaccharides prepared from freshly harvested Echinacea purpurea plants showed just how impressive results can be when a high quality product is used.

In one double-blind study, Echinamide or a placebo was given to 282 subjects aged 18-65 years with a history of two or more colds in the previous year. Subjects were instructed to start the echinacea or placebo at the onset of the first symptom related to a cold, consuming 10 doses the first day and four doses per day on subsequent days for 7 days. The total daily symptom scores were found to be 23.1% lower in the echinacea group than in placebo. The researcher concluded that early intervention with Echinamide® results in reduced symptom severity in subjects with upper respiratory tract infection. Some people cleared their cold symptoms up to three times faster than the placebo group.

Stopping a Cold – Cold

The common cold is caused by a variety of viruses that infect the oral and nasal passages and the sinuses. The symptoms of a cold are well known: fever, headaches, nasal congestion, sore throat, a general “blah” feeling (more technically known as malaise).

If you are an adult and you get more than one or two colds a year, or if your cold lasts more than four or five days, you probably have a weakened immune system. Kids have a tendency to get more colds because of increased exposure to cold viruses, but any more than 3 or 4 per year are excessive.

As is true of all health concerns, prevention is the smartest strategy. By boosting your immunity, you'll have a better chance of keeping colds from developing in the first place.

When you do get a cold, follow these recommendations. Be sure to:

- Rest
- Drink plenty of liquids (water, diluted vegetable juices, soups, or herb teas). Try to drink eight ounces of water every hour.
- Avoid sugar (including natural sugars such as honey, orange juice, and fructose), because sugar depresses the immune system.
- Eat a healthy balanced diet.

And take:

- High potency multivitamin-multimineral supplement
- Vitamin C: 500 mg every hour that you are awake with a glass of water. If excessive gas or diarrhea is produced reduce dosage to 500 mg every two hours.
- Anti-V (from Natural Factors) 50 drops in water or two capsules every two to three hours.

Final Comments

I think the advice given in this article is especially relevant given the fact. What we definitely know is that the H5N1 virus is resistant to amantadine and rimantadine, two antiviral medications commonly used for influenza. Two other antiviral medications, oseltamavir and zanamavir, may be effective, but we simply do not know. The bottom line is that it is important to do everything you can to strengthen your immune system. Given the potential severity and life-threatening nature of the H5N1 virus, it is clearly important to seek proper medical attention if you begin to experience any flu like symptoms (fever, malaise, joint pain, running nose, sore throat, etc.) appear this year.

Key References . . .

MULTISTART FORMULAS - Dr. Michael Murray, Natural Factors | ~ Preparing for the Bird Flu and Other Killer Viruses - References