

Bird Flu Diagnosis And Personal Hygiene

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During a pandemic flu outbreak pay particular attention to your body. Early detection will be very important because symptoms may not appear for 24 hours after infection. If antiviral medications such as Tamiflu are available for treatment they must be taken within 48 hrs. of the onset of the first symptoms. A good way to monitor for potential infection is to keep a twice-daily temperature log using a good quality oral digital thermometer.

Symptoms

The first sign of influenza may be the abrupt onset of fever (temperature of 37.7°C to 40.0°C [100°F to 104°F]) and dry cough. Then, temperature gradually declines, but fever may be present for up to a week. Other symptoms may include chills, anorexia, generalized or frontal headache, severe Myalgia and Arthralgia, weakness, and fatigue. Symptoms of respiratory illness may predominate, and patients also may have a sore throat and a persistent nonproductive cough, with or without chest pain. Patients with influenza may be flushed and have conjunctivitis, pain on eye motion, or photophobia.

Comparison of Influenza and the Common Cold

Features	Influenza	Common cold
Onset	Abrupt	More gradual
Fever	Common: 37.7°C to 40.0°C (100°F to 104°F)	Uncommon or only 0.5°C (1°F) increase
Myalgia	Severe, common, Muscular pain or tenderness	Uncommon
Arthralgia	Severe, common, Pain in a joint or joints	Uncommon
Anorexia	Common, Loss of appetite	Uncommon
Headache	Severe, common	Mild, uncommon
Cough (dry)	Common, severe	Mild to moderate
Malaise	Severe, A vague feeling of bodily discomfort	Mild
Fatigue, weakness	More common than with the common cold; lasts 2 to 3 weeks	Very mild, short lasting
Chest discomfort	Common, severe	Mild to moderate
Stuffy nose	Occasional	Common
Sneezing	Occasional	Common
Sore throat	Occasional	Common

There are several ways to tell the difference between the flu and less severe illnesses. First of all, unless there are other cases of flu around the area, your illness is probably not flu. Colds, bronchitis, sinusitis, ear infections, and sore throat can lay you low but are less severe. Flu is a really severe illness compared with these more common conditions. So, the severity of illness is an important clue that the patient indeed has the flu. Healthy people sick with pandemic flu will be so ill and weak they will have a hard time getting up out of bed without help.

The flu usually begins in the nose with sneezing and a runny nose. A sore throat, fever, and muscle aches and pains will follow. Over the next day or two, the virus will move into the lung causing cough, more fever, headache, and general weakness. If the virus gains access to the body through the gut, nausea, vomiting, abdominal cramping, and diarrhea are likely.

Fever

Everyone with flu will have a fever, which is one of the ways our bodies fight infections. Virus and bacteria don't grow as well when our body temperatures are higher than normal, and our body's immune system is more active when we have a fever. So, some fever is good for fighting infections. On the other hand, too much can cause damage and accelerate dehydration. The "best" temperature for balancing the benefits vs. the deficits is between 100.5°F and 101°F taken orally. If taken rectally, increase the range by ½ degree

Cough

Almost every patient with influenza develops a cough. A wet cough is one that produces phlegm or mucus while a dry one does not. Coughing serves several useful purposes. The most important is to help clear the breathing passageways of collections of mucus or other debris that accumulate under conditions of health and disease. In this case, cough is helpful. On the other hand, when the cough is not due to mucus but instead caused by irritation on the delicate tissue lining the breathing passageways, then coughing can cause damage serving no useful purpose. The vigorous and intense contraction of the back, abdominal, and rib muscles occurring repeatedly during coughing can bruise or tear them. This leads to pain when taking a breath or when these areas are pressed with the fingers. Since an excessive dry cough can be harmful, it is the one we want to suppress. On the other hand, our goal is to encourage a wet cough to help the body rid itself of mucus and debris. In patients with infections of the ears, nose, throat, or sinuses, cough can occur when mucus from these irritated tissues finds its way down into the bronchial passageways. Cough from this cause is best treated with an antihistamine and decongestant rather than a cough suppressant. The dry cough is the one we want to suppress, and the wet cough is the one we want to encourage.

Shortness Of Breath

When a person is *short of breath*, he is having a hard time getting a satisfying breath. He feels like he is not getting enough air. Sometimes this symptom is due an asthma attack or when the air passages go into a spasm of tightening. When this happens, the patient wheezes when they inhale and exhale breath. The higher the pitch of the wheeze, the more constricted the breathing tubes. With some other causes of shortness of breath, the breathing passages are wide open, and the problem is deep in the lung being due to a buildup of fluid or pus. These are serious complications of flu. So, shortness of breath developing in a patient with flu should be evaluated by a doctor or at a hospital as soon as possible.

Pneumonia usually causes the patient to have a wet cough with lots of mucus. The mucus can be clear or colored, and can be thick or thin. Since those who develop pneumonia during the pandemic are at high risk of dying, if at all possible, they need professional medical treatment.

Nausea, Vomiting, And Diarrhea

Vomiting and diarrhea occur when the virus affects the stomach or intestine. These flu signs cause the patient to become dehydrated quickly especially in the presence of fever. When the intestine is infected and food is eaten, it can't be digested and this leads to a worsening of the diarrhea and stomach cramps.

Signs Or Symptoms Of Serious Complications Of Bird Flu

Symptom or Sign	Likely Assessment	Remedy
Shortness of breath	Pneumonia	Push fluids, seek medical help
Cyanosis (skin turns blue)	The lung is unable to bring oxygen to the blood. This is a very bad sign and is often associated with a rapid death.	Keep the patient as comfortable as possible, seek medical help
Bleeding from mouth, coughing up blood, passing red blood per rectum. Severe bruising.	A severe blood clotting disorder is present and is a very bad sign. Death is likely.	Keep the patient as comfortable as possible, seek medical help

Personal Hygiene

At some point in time you will become profoundly aware of just how vulnerable you are to this virus and you will want to take aggressive steps to protect yourself. Although you might be able to stay at home for many weeks, and thereby avoid all contact with the general public, you will eventually have to venture into the world for something. When you do, you will want protection. From a practical perspective, there is really nothing that can provide a 100% guarantee that you will not get the flu while you are out in public, but there are a few reasonable steps you can take that will help you prepare for the most common means of flu transmission.

Before you even step out to get the mail, put on a pair of disposable gloves. You have probably heard this before, but the most common means of transmitting the flu from human to human (or a cold) is from hand to face. That is, from your own hand to your own face. So, if you do come into contact with something that is contaminated, and if you then touch your nose, your mouth, or your eyes, you can introduce that very contaminant directly into your body. You pick it up from "who-knows-where" and it goes right from your hand to your face and it makes you sick. That is why hand washing is so important. In addition to hand washing, you need to wear disposable gloves before you come into contact with any object that has the remotest possibility of being contaminated. This includes such everyday things as doorknobs, gas pumps, mail, money, groceries, and other people—in fact, any object that you have not personally quarantined or sanitized.

Hand Hygiene

The best protection is a thorough and vigorous hand washing with soap and water. Alcohol based hand cleaners are also very effective but should only be used after as much soil as possible has been removed from your hands with soap and water or a moistened towelett. Any brand of moistened towelettes (preferably containing alcohol) will work. It is important to note that just coughing into hands can create enough soil for the alcohol based hand cleaners to become ineffective. However, if it is not possible to first use soap and water or a towelette, the use of these hand cleaners alone is better than doing nothing at all. However, it is very important to note, that for alcohol based hand cleaners to be effective, even after washing, **hands must be wet with the cleaner for at least 30 seconds.**

One quart containers of alcohol based hand cleaner can be purchased at Safeway for \$5.00. A solution made from 2 teaspoons of household bleach added to one quart of water can also be used as a disinfectant for hands and 3 teaspoons per quart (1/4 cup per gal.) for surfaces. Bleach solutions will weaken quickly (24 hrs.) and should be made with caution and in small amounts.

Whichever method used, care must be taken not to allow hands to become rough or chapped from excessive cleaning. This can create cracks and crevices that may collect infectious organisms making your hands much more difficult to clean.

Latex, vinyl, Nitrile or heavy-duty gloves are another alternative for protection of hands but should be disposed of when torn. For providing caregiver services, gloves should be conserved by being used for body substance contact only and changed between patients/clients. Influenza viruses are known to survive on the hands up to 15 minutes, on non-porous surfaces such as steel and plastic for up to 48 hours and on cloth, paper, and tissues for up to 12 hours. Keep your fingers out of your eyes and nose. Cough into a tissue or your arm. Not your hands!! If you cough into a tissue, properly dispose of it immediately. Do not save it for re-use.

Flu Face Masks

Apart from aggressive social distancing, frequent hand washing, and the religious use of disposable gloves, the most important thing you can do to protect yourself from the flu is to wear a respirator. This device can prevent the inadvertent inhalation of airborne particles that might contain the virus. Since viruses are transmitted easily from person to person through the aerosol cocktail of saliva and mucus that is ejected by coughs and sneezes, it makes good sense to filter out these contaminated airborne droplets before they get into your lungs. That is where the respirator comes in. A respirator is merely a passive air filter that you wear over your nose and mouth. The most common one is the disposable N95, which is available for about \$1. This respirator is widely recommended by public agencies, but it is not capable of providing protection against the flu in all circumstances.

The reasons are as follows: most N95 disposable respirators have a "one size fits all" design, so the perimeter seal is questionable; these respirators lack an exhaust valve, so any potential perimeter could be broken when you exhale; and, the designation of "95" means that only 95% of the particles that are 0.3 microns or larger will actually be filtered out. That allows 5% of the potentially infected particles to pass by the filter and enter your mouth or nose.

Given these flaws, you should not rely upon the N95 for protection in close quarters. What you really need are N100 masks, but you need both the inexpensive disposable ones and the high-end reusable ones. Use the disposable N100s for limited service when the risk is low, and save the reusable ones for extended service in close quarters. If you must care for someone who has the flu, you will also need a face shield to protect your eyes from direct contact with anything that is ejected by a cough or sneeze.

First, the most important thing: These masks are not an excuse to mix with others in public during a pandemic. If you see them as total protection, or if you believe the untruths you are reading online from unscrupulous sellers, you could end up sick, or dead. We can't stress this enough. A good quality mask is excellent protection, but please do your best to combine with "social distancing" and common sense. Having said this, they've been proven in health care settings to be VERY effective. We simply don't know how long the pandemic will last, or what kind of scenario will come that requires us to travel, or to seek supplies. As they say: Don't leave home without them.

These masks are disposable, but many experts agree that if it is not exposed to infectious matter, each mask can be worn for several wearings by the same person. Try to keep wearing to 2-3 hours or less, this will help extend the life. Store in a warm, dry place in a paper bag and allow it to dry completely (2-4 days) between wearings. You can "cycle" masks like this. Placing the bagged mask in sunlight for a few hours is advantageous. The mask lasts longer if not allowed to get too wet from your breath. Don't try to save them for too long. Discard if it gets dirty, if breathing becomes labored, if the mask gets wet, or if structural integrity is compromised. Discard if there is ANY chance you've been exposed, before you enter your safe area.

If you could have been exposed, remove mask with gloves, or with hands coated with alcohol gel. Then double-bag the mask in plastic bags, and put it in a closed container. Then, use alcohol gel on exposed skin. Remove clothing. Leave the clothes in a plastic trash bag for one week before washing. Keeping away from family members, go to the shower if water is available. THIS IS NOT IDEAL, but we don't have disinfection chambers! We will all just do the best we can. You need plan on approximately one mask per approximately 12 hours of wear. Make every attempt to stay 20 feet or more from people in public, and remember that the virus lives on hard surfaces (like a can in the grocery store) for 48 hours. They can live much longer in the cold. They can live for months or even longer when frozen! A mask is a protective device that works very well to keep you from inhaling germs, but you must exercise caution. Never put a mask on a sick person, you could kill them, and it won't work. The mask protects the wearer from others: It's an EXHALE valve.

It's very important to use an alcohol hand cleaner when handling an exposed mask, or if you touch anything in public. Brands include Purell Hand gel, Purell generic types, GermX, Members Mark from Sams Club. Ask the pharmacist where the alcohol hand gels are located in the store. Most germ transmission is from your hands touching nose and mouth. If you are planning to be at home during the pandemic, you need a lesser number of masks per person, but be sure you have enough since there are many unknowns about this pandemic, and we just don't know under what circumstances we might have to leave our secure location. No need to wear a mask in your home unless you are caring for a sick person. Check before putting on each time and replace if face piece or head straps show any signs of damage or deterioration. Replace if face piece is visibly dirty, splashed on, or becomes difficult to breathe through. If you might end up caring for someone with influenza, plan on at least 1-2 per day.

Wearing effective respiratory and eye protection when in a public setting or around others may be your best protection from exposure to the influenza virus. Masks are rated by the National Institute for Occupational Safety and Health. Masks should be rated N95 or higher. An N95 mask or filter is 95% efficient at filtering out particles 0.3 microns and above. An N100 mask has a 99.7% efficiency in filtering out these particles. The virus is about 0.1 micron in size but when expelled from patients it is usually larger than this because it is enveloped in saliva as droplets making the N95 mask, if correctly worn, sufficient to prevent the virus from reaching the respiratory tract through the mouth and nose. If respirators such as N95s are not available, covering mouth and nose with a surgical type mask, and wearing eye protection such as glasses, can provide some protection from droplets if around coughing persons.

Eye Protection

Eyes are particularly vulnerable to viral contamination. Particles from a cough or sneeze can travel through the air at least three feet. Walking through a viral contaminated mist with unprotected eyes can result in infection. There are many different companies selling eyewear that will provide protection.

If goggles or respirators are not available, plain surgical masks with eye shields or eye glasses can provide some protection against air born droplets. When removing these items, it is important to wash hands, use an alcohol based hand cleaner or towelettes afterwards. They will be contaminated.