

Seasonal Flu & H1N1 Overview Home Study Course

1 CE Hour
Text and Online Study Guide

Presented by the:
Center for Massage Therapy Continuing Education

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It is the responsibility of the practitioner to determine the appropriateness of the principles presented in terms within the scope of practice. This information is in no way meant to diagnose or treat medical conditions.

Instructions for the H1N1 & Seasonal Flu Overview home study course

Thank you for investing in the H1N1 & Seasonal Flu Overview online course, a 1 CE hour course designed to further your knowledge in the principles and practices of protecting yourself from the H1N1 and seasonal flu viruses.

This guide will contain all of the instructions you will need to complete this course. This is a 1 CE hour course, so that means it should take you approximately 1 hour to read the text and complete the examination.

PLEASE READ THE FOLLOWING DIRECTIONS FOR COMPLETION OF THIS COURSE.

The following are steps to follow in completing this course:

- 1. Read the instructions and review the text and exam.**
- 2. Access the online examination by logging in to your account at www.massagetherapyceu.com.**
- 3. Complete your examination and print your certificate. The exam is open book and there is no time limit for completion.**

You must pass the exam with a 70% or better to pass this home study course. You are allowed to access and take the exam up to 3 times if needed. There is no time limit when taking the exam. Feel free to review the text while taking the exam. There are no trick questions on the exam. All of the answers are clearly found in the text. The exam is also included at the end of the text for review before taking the exam.

It is advised to answer the exam questions in the study guide before testing online. That way, when you are testing you do not have go back and forth through the online exam.

Good luck as you complete this course. If you have any questions please feel free to contact us at 866-784-5940, 712-490-8245 or info@massagetherapyceu.com. Most state boards require that you keep your “certificate of achievement” for at least four years in case of audit. Thank you for taking our Seasonal Flu & H1N1 Overview course.

Seasonal Flu & H1N1 Overview Text

Introduction

This course will focus on the H1N1 flu with discussion of the main seasonal flu virus, influenza. What it is, how it spreads, what you can do to protect yourself, and vital statistics will be outlined and examined.

The “swine flu”, officially called the “2009 Novel H1N1 influenza A” virus, was first noticed in the United States in April 2009. As of October 17, 2009, worldwide there have been more than 414,000 laboratory confirmed cases of H1N1 and nearly 5,000 deaths reported to the World Health Organization. There may be many more unconfirmed cases and/or deaths not reported.

On June 11, 2009 the World Health Organization signaled a global pandemic for the H1N1 influenza. Given ongoing H1N1 activity to date, the Center for Disease Control (CDC) anticipates that there will be more cases, more hospitalizations and even more deaths associated with this pandemic in the United States over the fall and winter.

As of 2016, H1N1 is considered a regular human flu virus, similar to other seasonal flu viruses, and continues to circulate seasonally worldwide. Although the global pandemic is over, there is still much we can learn about the H1N1 virus and how seasonal flu viruses are spread.

Why is the H1N1 virus sometimes called “swine flu”?

H1N1 virus was originally referred to as the “swine flu” because laboratory testing showed that many of the genes in this virus were very similar to influenza viruses that normally occur in pigs, or swine, in North America. Further study has shown that the H1N1 virus is very different from what normally circulates in North American pigs.

Studies have also proven that the H1N1 virus is not spread through pork or any food product. You cannot get infected with H1N1 from eating pork or pork products. Eating properly handled and cooked pork products is safe.

How do H1N1 and seasonal flu viruses spread?

Spread of the H1N1 virus is thought to occur in the same way that the seasonal flu spreads. Flu viruses are spread mainly from person to person through coughing or sneezing by people with influenza. Sometimes people may become infected by touching something, such as a surface or object, with flu viruses on it and then touching their mouth or nose.

There has been no evidence that H1N1 or seasonal flu viruses can be spread through food, treated drinking water, recreational water in a water park or from domesticated animals (cat or ferret) to humans.

Who is most at risk of H1N1 and the seasonal flu virus?

Everyone is at risk of contracting H1N1 and seasonal flu. However, during the flu season, certain people are at a higher risk of serious complications related to the virus. This includes people 65 years and older, children younger than five years old, pregnant women and people of any age with certain chronic medical conditions. About 70% of people who have been hospitalized with the H1N1 virus have had one or more medical conditions previously recognized as placing

people at “high risk” of serious seasonal flu-related complications. However, children, teenagers and adults, both under and over 50 years old have also become seriously ill and in some cases died.

High risk groups with chronic illness predisposing them to infection include:

- Serious respiratory conditions such as asthma and chronic obstructive pulmonary disease
- Cardiac disease
- Diabetes mellitus
- Chronic metabolic diseases
- Chronic renal diseases
- Haemoglobinopathies (genetically inherited disorders of red blood cell haemoglobin including sickle cell disease and the thalassaemias)
- Immunosuppressive diseases (including cancers, HIV/AIDS infection, drugs)
- Chronic neurological conditions

Can I get H1N1 more than once?

Getting infected with any influenza virus, including H1N1, should cause your body to develop immune resistance to that virus. It's not likely that a person would be infected with the identical influenza virus more than once. However, people with weakened immune systems might not develop full immunity after infection and might be more likely to get infected with the same virus more than once. It is possible that a person could have a positive test result for flu infection more than once in an influenza season.

Can I get the seasonal flu more than once?

Basically, yes. Getting infected with either an influenza A or B virus should cause your body to develop immune resistance to that virus. However, it is not known how many different strains of the flu virus exist. It's not likely that a person would be infected with the identical influenza virus more than once. But they can be infected with many different viruses throughout the flu season. People with weakened immune systems might not develop full immunity after infection and might be more likely to get infected with the same virus more than once. It is possible that a person could have a positive test result for flu infection more than once in an influenza season.

What are the signs and symptoms of H1N1 and the seasonal flu in people?

The symptoms of H1N1 and seasonal flu virus in people include:

- Fever
- Cough
- Sore throat
- Runny or stuffy nose
- Body aches
- Headache
- Chills
- Fatigue
- Possible vomiting and diarrhea
- Respiratory problems with or without fever

In children, additional symptoms may include:

- Bluish or gray skin color
- Not drinking enough fluids
- Not waking up or interacting
- Being so irritable that the child does not want to be held

Keep in mind that although these symptoms are associated with the H1N1 and seasonal flu virus, they are also associated with many other illnesses. Just because you may be experiencing some of these symptoms, it does not mean that you have H1N1 or the seasonal flu.

Older persons may not develop a fever when they become infected with the flu, including H1N1. In an older person, H1N1 symptoms might appear as a lack of appetite or confusion. For some elders with pulmonary disease or congestive heart failure, H1N1 and/or flu symptoms may appear as difficulty breathing.

How severe is illness associated with the H1N1 virus?

Illness with the H1N1 virus has ranged from mild to severe. While some people infected with H1N1 have recovered without needing medical treatment, hospitalizations and deaths from infection with this virus have also occurred.

How severe is illness associated with the seasonal flu virus?

Pretty much the same as the H1N1 virus; the seasonal flu virus ranges in severity from mild to severe. While some people infected with the influenza virus have recovered without needing medical treatment, hospitalizations and deaths from infection with influenza have also occurred.

How does H1N1 compare to the seasonal flu?

With seasonal flu, we know that seasons vary in terms of timing, duration and severity. Seasonal influenza can cause mild to severe illness, and at times can lead to death. Each year, in the United States, an average 36,000 people die from flu related complications and more than 200,000 people are hospitalized from flu related causes. Of those hospitalized, 10% are children younger than 5 years old. More than 90% of deaths and about 60% of hospitalizations occur in people older than 65.

When the H1N1 outbreak was first detected in April 2009, the CDC began working with states to collect, compile and analyze information regarding the outbreak. The information analyzed by CDC supports the conclusion that the H1N1 flu has caused greater disease burden in people younger than 25 years of age than older people. At this time, there are relatively fewer cases and deaths reported in people 65 years and older, which is unusual when compared with seasonal flu. However, pregnancy and other previously recognized high risk medical conditions from seasonal influenza appear to be associated with increased risk of complications from H1N1.

How long can an infected person spread H1N1 and the seasonal flu to others?

People infected with H1N1 and the seasonal flu may be able to infect others from 1 day before getting sick to 5 to 7 days after. This can be longer in some people, especially children and people with weakened immune systems. Statistics have shown that the flu virus can remain in nasal passages up to 21 days after symptoms have subsided.

How are H1N1 and seasonal flu viruses treated?

H1N1 as well as the seasonal flu virus has limited treatment methods. Treatment involves the use of vaccination (pre-infection) or antiviral drugs (post-infection).

Can I be vaccinated from the seasonal flu?

Yes, relatively speaking. The seasonal flu vaccine will protect you from the strains of the virus that you are vaccinated for. In the past 12 months:

- 49.6% of children 6 months to 17 years received an influenza vaccination
- 31.7% of adults 18-49 years received an influenza vaccination
- 48.1% of adults 50-64 received an influenza vaccination
- 69.1% of adults 65 years and older received an influenza vaccination

If you are interested, contact your doctor or local health department to find out where you may obtain a flu vaccination.

What are antiviral drugs?

Antiviral drugs are prescription medicines (pills, liquid or an inhaled powder) that fight against viruses your body. Antiviral drugs are not sold over the counter and are different from antibiotics.

When used for treatment, antiviral drugs can make you feel better and shorten the time you are sick by 1-2 days. Examples of antiviral medications used to treat H1N1 are Tamiflu® and Relenza®. They are safe for adults, pregnant women, and children.

How do I keep from getting H1N1 and/or the seasonal flu other than vaccination?

Everyday actions, recommended by the CDC, that can help prevent the spread of germs that cause H1N1 and the flu include:

- Cover your nose and mouth with a tissue when you sneeze or cough
- Throw the tissue in the trash immediately after you use it
- Wash your hands frequently with soap and water
- If soap and water are not available, use an alcohol-based hand rub (hand sanitizer)
- Avoid touching your mouth, eyes and nose
- Avoid close contact with persons who are sick
- If you are sick with flu-like illness stay home until the symptoms subside

Other important actions that you can take are:

- Follow public health advice regarding school closures
- Avoid large crowds and use other social distancing measures
- Be prepared in case you get sick and need to stay home for a week or so by keeping tissues and hand soap at home

What is the best technique for washing my hands to avoid contacting the flu virus?

The CDC recommends that when you wash your hands, with soap and warm water, that you wash for 15-20 seconds. When soap and water are not available, hand sanitizers may be used. If using gel, rub your hands until the gel is dry. The gel doesn't need water to work; the alcohol in it kills the germs on your hands.

What should I do if I think I am sick with the seasonal flu or H1N1?

If you get sick with influenza symptoms this flu season, you should stay home and avoid contact with other people except to get medical care, if needed. Most people with H1N1 have mild illness and have not needed medical care or antiviral drugs. The same is true of the seasonal flu.

If you are at high risk or have a chronic illness and you get sick you should visit your doctor immediately. Emergency warning signs that need immediate medical intervention in children include:

- Fast breathing or trouble breathing
- Bluish skin color
- Not drinking enough fluids
- Not waking up or not interacting
- Being so irritable that the child does not want to be held
- Flu like symptoms improve but then return with fever and worse cough
- Fever with a rash

In adults:

- Difficulty breathing or shortness of breath
- Pain or pressure in the chest or abdomen
- Sudden dizziness
- Confusion
- Severe or persistent vomiting

If I have been diagnosed with H1N1 or influenza, will I have it forever?

No. Although many viruses that infect the body are incurable such as HIV, H1N1 is an influenza A virus. Flu viruses are not permanent in the body. In general, flu viruses infect the body anywhere from 3-7 days, but can last up to 21 days before the body is able to rid itself of the virus.

How long should I stay home if I am sick?

The CDC recommends that you stay home for at least 24 hours **after** your fever is gone except to get medical care or for other things that no one else can do for you. Your fever should be gone for 24 hours without the use of a fever reducing medicine. You should stay home as much as possible, missing work, school, travel, shopping, social events and public gatherings.

How will I know if I am infected with H1N1 or the seasonal flu?

You may not be able to find out definitively what flu virus you have. The CDC reports that currently available rapid influenza diagnostic tests cannot distinguish between H1N1 and influenza A since H1N1 is a strain of the influenza A virus. Most people with flu symptoms this season will not require testing for H1N1 because the test results usually do not change treatment methods. According to the CDC, as of September 2009, more than 99% of circulating influenza viruses in the United States are H1N1. Therefore, if your health care provider determined that you had influenza back in 2009 or 2010, you most likely had H1N1. That is not necessarily the case with current influenza infections. There are many strains of the virus.

What tests can be done to determine if I have H1N1?

There are laboratory tests available that can tell the difference between H1N1 and other strains of influenza. These are expensive and can take 1-3 days to provide results. In the 2009-2010 flu season, the CDC has recommended that this testing be focused on:

- People who are hospitalized with suspected flu
- People such as pregnant women or people with weakened immune systems

Currently, if it is suspected that you have the seasonal flu, you will most likely not receive testing to determine the strain of the virus. This is mainly because, no matter the strain, the treatment remains the same.

How long can H1N1 and seasonal flu viruses remain viable on objects (such as books and doorknobs)?

Studies have shown that influenza viruses, such as H1N1, can survive on environmental surfaces and can infect a person for 2 to 8 hours after being deposited on the surface.

What kills the H1N1 and seasonal flu viruses?

Any seasonal flu virus, including H1N1, is destroyed by heat between 167-212 degrees Fahrenheit. It can also be destroyed through the use of chemical germicides, such as chlorine, hydrogen peroxide, detergents (soap), iodophors (iodine-based antiseptics) and alcohols if used in proper concentration for a sufficient length of time.

Implications for you and your massage practice?

Protecting your massage practice from H1N1 and seasonal flu viruses includes protection of yourself and your clients. You can do this by taking general universal precautions to keep yourself and your working area clean and sanitized in order to minimize the spread of H1N1 and other flu viruses.

Protecting yourself and your clients includes taking all of the precautions outlined above to prevent the contact and spread of H1N1 as well as influenza, and also includes:

- Washing your hands, forearms and elbows thoroughly before and after every client
- If you use a tissue to sneeze or cough in, dispose of it and wash your hands before touching your client
- Avoid touching your eyes, nose, and mouth while working on clients
- If you are at high risk for contacting H1N1 or influenza, and/or worried about contraction, use gloves while working on clients
- Do not treat clients who are sick or have flu like symptoms
- If you do treat someone with flu symptoms, wear a mask and gloves to protect yourself

Protecting your massage equipment includes preventing or minimizing the spread of germs. You can do this by taking the following steps:

- Wash your table linens and hand towels after each client (you can use Clorox to disinfect them if necessary)
- Use clean linens and/or towels for each client
- Sanitize an uncovered massage table and any bolsters before and after use

- Sanitize a face cradle after every use, covered or not
- Sanitize your massage lubricant bottle after each use
- Clean your working area (cupboards, countertop) frequently

Related links

In conclusion, H1N1 and the seasonal flu will probably affect almost everyone in the United States each year. Taking steps to prevent infection as well as taking steps to minimize the spread if you are already infected are very important in our fight against H1N1 and seasonal flu. Below are resources used in the making of this course as well as additional resources if you would like more information.

1. <http://cdc.gov/h1n1flu/>
2. <http://cdc.gov/h1n1flu/states.htm>
3. <http://www.pandemicflu.gov/>
4. <http://www.who.int/csr/disease/swineflu/en/index.html>
5. <https://www.cdc.gov/nchs/fastats/flu.htm>
6. <https://www.cdc.gov/flu/keyfacts.htm>
7. <https://www.cdc.gov/flu/>

Seasonal Flu & H1N1 Overview Exam

1. Worldwide, about how many cases of H1N1 have been reported as of October 17, 2009?
 - A. 35,000
 - B. 5,000
 - C. 414,000
 - D. 150,000

2. Studies have linked H1N1 virus to American swine and pork products.
 - A. True
 - B. False

3. Chronic illnesses which put people at high risk for serious complications relating to H1N1 and seasonal flu include all of the following EXCEPT:
 - A. Cardiac disease
 - B. Common cold
 - C. Diabetes mellitus
 - D. Chronic neurological disease

4. Which of the following is a sign/symptom of H1N1 and/or the seasonal flu?
 - A. Fever
 - B. Sore throat
 - C. Headache
 - D. All of the above

5. Which of the following is a difference between the seasonal flu and H1N1?
 - A. H1N1 is the same as the seasonal flu
 - B. H1N1 has caused more burden in people younger than 25 than the seasonal flu usually does
 - C. H1N1 is incurable, the seasonal flu can be treated with antibiotics
 - D. H1N1 infects more people older than 65 than the seasonal flu usually does

6. Which of the following medications can be helpful in treating H1N1 and the seasonal flu?
 - A. Tamiflu
 - B. Amoxicillin
 - C. Dopamine
 - D. Antihistamines

7. All of the following are things you can do to prevent the spread of H1N1 and the seasonal flu EXCEPT:
 - A. Cover your nose and mouth with a tissue when you sneeze or cough
 - B. Wash your hands for 15-20 seconds with soap and water
 - C. Touch your nose, mouth, and eyes frequently
 - D. Avoid contact with those that are sick

8. Which of the following are emergency warning signs of the flu, including H1N1?
 - A. Fast breathing or trouble breathing

- B. Sudden dizziness
 - C. Severe persistent vomiting
 - D. All of the above
9. About how long should a person stay home if infected with H1N1 or the seasonal flu?
- A. 2-3 days
 - B. 24 hours after the fever is gone without medication
 - C. 12 hours after the fever is gone without medication
 - D. 5-7 days
10. How long can the H1N1 and seasonal flu viruses survive on objects?
- A. 2-8 hours
 - B. 8-10 hours
 - C. 12-16 hours
 - D. 20-24 hours
11. Which of the following can kill the H1N1 and seasonal flu viruses?
- A. Heat between 167-212 Fahrenheit
 - B. Chlorine bleach
 - C. Detergents
 - D. All of the above
12. Which of the following is a way you can minimize the spread of H1N1 and other viruses in your practice?
- A. Wash your hands thoroughly before and after each client
 - B. Wash sheets and towels after one use
 - C. Sanitize your massage room with a disinfectant
 - D. All of the above