INFLUENZA
AN OVERVIEW FOR THE DENTAL PROFESSIONAL

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The Institute for Advanced Therapeutics, Inc.
INFLUENZA
AN OVERVIEW
FOR THE
DENTAL PROFESSIONAL

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This course was developed to help expand the knowledge and skills of dental professionals with respect to the subject of influenza.

The information in this course has been carefully researched and is generally accepted as factual at the time of publication. The Institute for Advanced Therapeutics, Inc. disclaims responsibility for any contradictory data prior to the publication of the next revision of this course.
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HOW TO BEST PROCEED WITH THIS COURSE

Each chapter should be approached systematically in a careful and objective manner. It is important to master each chapter before going on to the next. Relax, take your time, and go at your own pace. As 2 credits of continuing education is rewarded after successfully completing this course, the reading of this manual and completion of the test questions should not take less than 2 hours. Only after you have successfully mastered all the material in the course should you proceed to the test questions.

COMPLETING THE TEST

Before beginning, please clearly write your name, address, zip code, and license number on your test answer card. Read each question carefully before answering. Please use a ballpoint pen to fill-in your answers on the answer card by completely shading your choice. Keep in mind that each question has only one correct answer. The test consists of 20 questions. For a passing grade, you must correctly answer 16 questions. We encourage your input and would welcome any suggestions to improve our course or test questions. Please feel free to note your suggestions or comments on the evaluation form found at the end of this course.

INFORMATION FOR CERTIFICATION

In order to receive your 2 hours of Influenza: An Overview for Dental Professionals continuing education credit, you must be the purchaser of this course. Only one person per purchase of this course is eligible to receive credit. Please notify us of any address or name changes as we keep permanent records for certification and licensure.
MAILING INSTRUCTIONS

Please mail or fax your completed test answer card and course evaluation form to:

The Institute for Advanced Therapeutics, Inc.
P. O. Box 848152
Pembroke Pines, Florida 33084

If you have any questions regarding this course, please contact our Customer Service Department at 1-954-441-9553 or fax us at 1-954-432-1824.
COURSE OBJECTIVES

Upon completion of this course, you will be able to:

1. Understand how influenza is acquired.

2. Recognize symptoms of influenza.

3. Identify how influenza is transmitted.

4. Learn ways to reduce the risk of transmission.
WHAT IS INFLUENZA?

Influenza, commonly known as the flu, is a viral infection of the respiratory system.

Influenza is highly contagious and spread from person to person through the air when someone coughs, sneezes, or speaks. The virus can also be spread when someone touches a surface or another person’s body that contains the flu virus then touches his or her nose, mouth, or eyes. The nose, throat, and lungs are affected.

Although some people with influenza develop life-threatening complications, most fully recover within two weeks.

The flu is caused by one of three types of influenza virus: A, B, or C. These viruses have the ability to mutate constantly and different strains circulate worldwide each year.

Type A: The most common of the influenza viruses and the most severe. This type usually is to blame for the most serious epidemics worldwide.

Type B: A common virus type that still is to blame for some epidemics but symptoms are generally milder than type A.

Type C: This virus type does not cause epidemics and is associated with very mild or no symptoms at all.
Outbreaks of influenza occur in the late fall and winter seasons. The Centers for Disease Control (CDC) reports that approximately 10 to 20% of the United States population contract influenza during the flu season each year. In addition, the CDC reports that each year an average of 36,000 people in the United States die from the flu and its complications and an average of 114,000 people are hospitalized.

Although the flu virus can strike persons of any age, the highest rates of infection are among children. Populations most at risk for serious illness and death from influenza and its complications include:

1. Persons aged 65 and older.
2. Children under the age of 2.
3. Persons of any age with chronic medical conditions that place them at increased risk for complications from the flu.
4. Pregnant women.
TRANSMISSION

Influenza can be easily transmitted via air or direct contact with the virus. The virus enters the body through the nose, mouth, or eyes. Those infected generally develop symptoms one to four days following exposure. Persons may spread the disease from the day before showing symptoms up to seven days after symptoms start. Infected children can shed the virus even longer. Severely immunocompromised individuals can shed the virus for weeks or even months. In general, however, the disease is more contagious earlier on than later.

Transmission of the influenza virus usually occurs by inhaling the respiratory droplets of an infected person who has coughed, sneezed, or talked within three feet of proximity since the droplets are fairly large in size and usually do not remain suspended in the air over long distances. This is called “droplet spread.”

One can also become infected by touching a surface contaminated by infected respiratory droplets or secretions then touching the nose, mouth, or eyes.

The following conditions must be met in order for the influenza virus to be transmitted.

- a means of access through which the influenza virus can enter the host
- a host that is not immune to the influenza virus
- a method of transmission
- a source that allows the influenza virus to survive and reproduce
- the influenza virus in sufficient quantities to cause disease
Be aware of some common transmission methods.

1. Being less than 3 feet away from an infected person who coughs, sneezes, or talks.

2. Using a telephone recently used by an infected person then touching your nose, mouth, or eyes.

3. Touching a door knob that was contaminated by an infected person then touching your nose, mouth, or eyes.

4. Touching a desk or using a keyboard of an infected person then touching your nose, mouth, or eyes.

5. Shaking or holding the hand of an infected person then touching your nose, mouth, or eyes.

6. Touching any surface contaminated with infected respiratory droplets then touching your nose, mouth, or eyes.

NOTES:
SYMPTOMS

Influenza differs from the common cold, which is also a viral respiratory infection, in that influenza typically causes fevers, headaches, and extreme exhaustion and is often more severe. Symptoms typically appear suddenly and may include:

1. Fever of 101 degrees or above.
2. Body or muscle aches.
3. Headache.
4. Sore throat.
5. Dry cough.
6. Stuffy or runny nose.
7. Chills.
8. Extreme fatigue.
10. A general run-down and lousy feeling all over.
11. Diarrhea, vomiting, abdominal pain, and earaches may occur but are more commonly reported in children.

Fortunately, most flu victims recover completely within two weeks without medical intervention. The elderly or immunocompromised may take longer to recuperate.

Complications from the flu can sometimes develop into a very serious or even life-threatening condition. Complications usually appear after a brief period of improvement. If you exhibit any of the following symptoms following a brief period of improvement from the flu, contact your health care provider immediately.

1. High fever.
2. A cough productive of thick yellow-green-colored or bloody mucus.
3. Shaking chills.
4. Pain in the chest with each breath.
5. Severe or persistent nausea or vomiting.
6. Mental confusion.
7. Convulsions.
8. Shortness of breath or difficulty breathing.
9. Fainting or near-fainting.
10. Worsening of previously existing medical conditions.

Complications of flu can lead to the following medical conditions.

1. Bacterial pneumonia.
2. Primary influenza viral pneumonia.
3. Worsening of chronic medical conditions including diabetes, congestive heart failure, or asthma.
4. Dehydration.
5. Sinus and ear infections.
7. Encephalopathy.
8. Transverse myelitis.
10. Myocarditis.
11. Myositis.

Most doctors diagnose influenza based on symptoms alone and on the basis of whether it is epidemic in the community. Laboratory tests can be performed to confirm influenza but only if performed within the first few days of symptom onset.

**NOTES:**
TREATMENT

There are two methods aimed at reducing the duration and misery caused by influenza. Sufferers can be treated symptomatically and/or with antiviral medication. Effective non-prescription treatments used for symptomatic relief include:

1. Acetaminophen (e.g. Tylenol®). It is a preferred choice over aspirin or non-inflammatory drugs as it is less likely to cause stomach upset. Aspirin should not be used in children under 18 years of age to treat influenza symptoms as it may increase the risk of developing Reye syndrome, a rare but serious medical condition affecting the liver and central nervous system.

2. Over-the-counter decongestants and antihistamines can help relieve cough, congestion, and nasal discharge.

3. Bed rest and a reduction in physical activity can be beneficial.

4. Adequate nutritional intake and plenty of fluids can assist in rapid recovery.

5. Avoid the use of antibiotics to treat the flu virus as they are only effective against bacterial infections.

6. Avoid alcohol and tobacco during the flu.

Antiviral medications which can be prescribed by a physician can reduce the length of time the flu symptoms last usually by one day as compared with placebo. They can also make one less contagious to others. These medications, however, must be administered within 48 hours of the onset of symptoms to be effective.
The treatment typically lasts for five days. The following prescription antiviral drugs have been approved by the Food and Drug Administration (FDA) for treatment of influenza.

1. Amantadine (Symmetrel®).
2. Rimantadine (Flumadine®).
3. Oseltamivir (Tamiflu®).
4. Zanamivir (Relenza®).

The above antiviral medications can also be used to help prevent influenza infection if taken for at least two weeks during a flu outbreak in the community or dental care facility but should not be considered a substitute for vaccination. Amantadine, rimantadine, and oseltamivir are 70% to 90% effective when used to prevent influenza.

NOTES
PREVENTION/VACCINATIONS

The most effective way to prevent or reduce the severity of symptoms should you get infected with the flu is to get a yearly flu vaccine. Those wishing to be vaccinated must get vaccinated each year because strains of flu virus change from year to year and flu vaccines are updated annually.

An influenza vaccination can provide immunity and break the chain of infection by eliminating a susceptible host. Dental professionals should be offered influenza vaccination just before the start of the flu season each year. Administrative staff can be offered vaccination as well. Vaccination of health care workers has been linked with reduced work absenteeism.

There are currently two vaccination methods available.

1. Injection.

The FDA approved a nasal spray flu vaccine called FluMist® in 2003. Available only through your health care provider, FluMist® is approved for healthy individuals 5 to 49 years of age.

The best time to get the flu vaccine is 6 to 8 weeks before the beginning of flu season in October or November. The Centers for Disease Control and Prevention generally recommends the flu vaccine for populations at increased risk for complications from influenza including the following:

1. Persons 50 years of age or older.
2. Women in their second or third trimester of pregnancy during the flu season.
3. Persons who are immunocompromised.
4. Diabetics.
5. Persons who are severely anemic.
6. Persons who have heart, lung or kidney disease.
8. Residents of nursing homes and other long-term care facilities.
9. Persons with HIV.
11. Persons 6 months to 18 years of age who are on aspirin therapy.
12. Persons who live with or who are in close contact with persons of high risk.

You should not get the flu vaccine if you are:

1. Allergic to eggs.
2. Have a high fever.
3. Have a history of having had an allergic reaction to the flu vaccine in the past.
4. Have a history of developing Guillain-Barré syndrome shortly after getting a flu vaccine in the past.

Other ways to help protect against the flu include:

1. Wash your hands often.
2. Avoid touching your nose, mouth or eyes which are gateways for the influenza virus to enter the body.
3. Cover your mouth and nose when coughing or sneezing to prevent others from getting infected.
4. Stay away from places where the flu is epidemic.
5. Avoid close contact with individuals exhibiting flu symptoms and stay away from others if you have flu symptoms.
6. Stay home when you have the flu to prevent others from getting infected.

Dental professionals should take extra precautions by:

1. Getting a flu vaccine annually.
2. Washing hands before and after touching each patient or surface in the patient’s environment whether or not gloves are worn. An alternative would be to use an alcohol-based hand rub.

3. Wearing gloves when working in a potentially contaminated environment.

4. Wearing protective gear such as a surgical mask, gloves, and gown if close contact with infectious patients is required.

5. Complying with the dental practice’s infection control policy.

6. Employing a strict policy of work restriction when an employee is considered infectious.

7. Using appropriate disinfection methods.

END OF COURSE
REFERENCES


Attention IAT Student:

For immediate grading and to print your certificate from your computer you must take the online test.

To take the test online now, visit:


Note: Faxed or mailed in answer sheets may take up to 3 business days to process after arrival.