LEARNING OBJECTIVES:

1. Identify viruses causing respiratory disease.
2. Identify transmission routes and simplest ways to prevent transmission.
3. Describe respiratory disease symptoms and identify their causes.
4. Identify laboratory diagnosis methods.
5. Describe influenza virus structure, and influenza replication in lungs.
7. Indicate influenza virus vaccines, source of vaccine, administration, protective efficacy, how the vaccine protects against infection.
8. Distinguish between antigenic drift and antigenic shift and state how each process occurs.
9. Name two types of anti-influenza drugs and indicate their mechanism of action.
10. Indicate the similarities and differences between influenza viruses, rhinoviruses, coronaviruses and adenoviruses.

KEY CONCEPTS:

1. Several respiratory viruses can cause similar respiratory syndromes.
2. Symptoms are due to cytopathic infection + immune response.
3. Severe respiratory infection can cause acute respiratory distress.
4. Influenza is a minus-sense segmented RNA enveloped virus.
5. Influenza has a wide host range, mostly in birds.
6. Influenza has pandemic potential.
7. Influenza is controlled by vaccination but antigenic drift and antigenic shift require vigilance with yearly vaccination.
8. There are anti-influenza drugs available.
9. Other important respiratory viruses are paramyxoviruses (next lectures) and also rhino, corona and adeno viruses.

SOME OPTIONAL SELECTED REFERENCES: