



## Course Title: COPD - Concepts & Clinical Management

### Topic: Psychosocial Dimensions of COPD for the Patient and Family

1. \_\_\_\_\_ is at the forefront of the experience of COPD, and becomes a conscious focus of the person's life.  
(A): Low blood pressure  
(B): Breathlessness  
(C): Diabetes  
(D): Hepatitis
2. Distressing breathlessness can be precipitated by certain body positions, by which of the following activity?  
(A): walking  
(B): climbing stairs  
(C): extremes of emotion  
(D): all of the above
3. Acute breathlessness is associated with panic, fear of suffocation, and fear of dying during an attack.  
(A): True      (B): False
4. Which of the following techniques are reported widely by patients as effective ways to help manage frightening breathlessness?  
(A): consciously slowing breathing  
(B): diaphragmatic breathing  
(C): purse-lipped breathing  
(D): all of the above
5. Which of the following is associated with disability and lack of control in COPD patients?  
(A): Sputum production  
(B): Uncontrolled coughing  
(C): Wheezing and urinary urgency  
(D): all of the above
6. \_\_\_\_\_ is strongly linked to levels of breathlessness and depression and has major consequences for functional performance.  
(A): Vertigo  
(B): Pericarditis  
(C): Fatigue  
(D): None of the above
7. The attraction of food is sometimes reduced due to a loss of taste sensation in COPD patients.  
(A): True      (B): False
8. As the disease progresses there are often visible changes such as development of the classic '\_\_\_\_\_', significant weight loss and for some, facial and postural changes from prolonged steroid use.  
(A): dirty chest  
(B): barrel chest  
(C): hemothorax  
(D): none of the above
9. In COPD patients \_\_\_\_\_ may result in cognitive and personality changes that can further isolate people from family and others in the community.  
(A): hyperthyroidism  
(B): hypoxia  
(C): pancreatitis  
(D): scurvy
10. According to a study the rates of depression in COPD are reported at around 40% and up to \_\_\_\_\_% for those on home oxygen management.  
(A): 10

- (B): 33
- (C): 41
- (D): 57

11. \_\_\_\_\_ is a predictor of hospital admissions, and impacts significantly on the quality of life of COPD patients.

- (A): Low blood pressure
- (B): Cardiac disease
- (C): Anxiety
- (D): None of the above

12. COPD patients are more socially active as they encourage environments and situations that may trigger breathlessness.

- (A): True
- (B): False

13. In the vast majority of people in the western world COPD develops as a direct result of \_\_\_\_\_.

- (A): cigarette smoking
- (B): diabetes
- (C): hemothorax
- (D): high blood pressure

14. Which of the following is an emotional coping strategy in COPD?

- (A): conscious control of emotion
- (B): learning to 'go with the flow'
- (C): make the best of unpredictable symptoms
- (D): all of the above

15. \_\_\_\_\_ is a valuable treatment option in chronic lung disease and is directed towards reversing the downward spiral of disability.

- (A): Chemotherapy
- (B): Radiation therapy
- (C): Pulmonary rehabilitation
- (D): Acupuncture

16. The intrinsic motivation of the person with COPD is important in determining the most successful approach to exercise training.

- (A): True
- (B): False

17. Which of the following surgical procedures have expanded the therapeutic possibilities for people with emphysematous hyperinflation?

- (A): Lung Volume Reduction Surgery (LVRS)
- (B): Endobronchial Valve Insertion (EBVTM)
- (C): Oxygen therapy
- (D): Both A and B

**Topic: Neurocognitive Impairment as Systemic Effects of COPD**

18. Compared to the prevalence of mild cognitive impairment (MCI) in the general population, which is in the range of 10–20%

in older adults, a rate of \_\_\_\_\_% present in patients with COPD is more than worrying.

- (A): 25-32
- (B): 40-55
- (C): 60-71
- (D): 75-88

19. Severe COPD stages as well as exacerbations are accompanied by an increased risk of falls.

- (A): True
- (B): False

20. Which of the following reduces the ability of COPD patients to perform daily activities and limit their exercise tolerance?

- (A): Dyspnea
- (B): Muscle mass loss
- (C): Decreased exercise endurance

(D): all of the above

21. Which of the following is recognized as a major determinant for cognitive impairment?

- (A): history of cigarette smoking
- (B): aging
- (C): educational level
- (D): all of the above

22. Which of the following mediators are derived from inflammatory and structural cells in the lung and interact with each other in a complex manner in patients with COPD?

- (A): increased circulating cytokine and chemokine
- (B): acute-phase protein levels
- (C): abnormalities in circulating cells
- (D): all of the above

23. Chronic smoking is also involved in the production of pathogenic changes (decrease in the gray matter density) in areas where Alzheimer's disease develops (inferior parietal lobule and precuneus).

- (A): True
- (B): False

24. Diseases accompanied by hypoxemia and vascular damage (coronary heart disease, cardiac failure, hypertension, and stroke) have a proven risk of developing \_\_\_\_\_ that is amplified if active smoking is also associated.

- (A): diabetes
- (B): neural damage
- (C): cancer
- (D): none of the above

25. Obstructive Sleep Apnea Syndrome (OSAS) is present in over \_\_\_\_\_% of COPD cases.

- (A): 1
- (B): 7
- (C): 20
- (D): 50

26. Depression and anxiety are among the most common comorbidities of COPD, reaching over \_\_\_\_\_% in oxygen-dependent cases, and much more important is that onset of depression was predictive of cognitive decline among COPD patients.

- (A): 10
- (B): 30
- (C): 48
- (D): 70

27. Which of the following are the most important triggers for the development of oxidative stress in patients with COPD?

- (A): cigarette smoke
- (B): systemic inflammation
- (C): hyperthyroidism
- (D): both A and B

28. \_\_\_\_\_ are the intracellular organelles that provide aerobic respiration and cellular energy.

- (A): Ribosomes
- (B): Mitochondria
- (C): Vesicles
- (D): Centrioles

29. COPD-related dyspnea is a strong driver to anxiety, panic or/and depression and reduced quality of life.

- (A): True
- (B): False

30. According to statistics, \_\_\_\_\_% of patients with stable COPD who undergo rehabilitation would suffer from any cognitive impairment.

- (A): 10
- (B): 28
- (C): 41

(D): 77

31. Given the increased prevalence of cognitive impairment in COPD and potentially devastating effects, a \_\_\_\_\_ should be implemented as a routine component of the evaluation of COPD patients.

- (A): chest x-ray
- (B): echocardiography
- (C): structured assessment of cognitive function
- (D): liver function test

**Topic: Pulmonary Rehabilitation in COPD: Current Practice and Future Directions**

32. COPD is a systemic disease associated with which of the following extra pulmonary effects?

- (A): cardiovascular disease and osteopenia
- (B): muscle wasting
- (C): depression
- (D): all of the above

33. \_\_\_\_\_ is defined as "an interdisciplinary programme of care for patients with chronic respiratory impairment that is individually tailored and designed to optimize each patient's physical and social performance and autonomy.

- (A): Radiation therapy
- (B): Pulmonary rehabilitation
- (C): Chemotherapy
- (D): None of the above

34. Pulmonary rehabilitation is focused on an interdisciplinary and holistic approach to the management of COPD, emphasizing behavioral change as a key component.

- (A): True
- (B): False

35. Pulmonary rehabilitation is designed to reduce the symptoms of COPD by improving and enhancing which of the following?

- (A): health related quality of life (HRQoL)
- (B): functional ability
- (C): participation in everyday life and patient autonomy
- (D): all of the above

36. The exercise capacity of patients with COPD is often impaired and limited by \_\_\_\_\_.

- (A): diabetes
- (B): heart disease
- (C): dyspnea
- (D): high cholesterol

37. Self-efficacy refers to the level of belief someone has in their ability to complete a chosen task or goal.

- (A): True
- (B): False

38. The pulmonary rehabilitation programmes of \_\_\_\_\_ are recommended and demonstrate a significant benefit in health status, dyspnea and exercise in patients with chronic respiratory diseases limited by breathlessness.

- (A): 7 days
- (B): 6–12 weeks
- (C): 6 months
- (D): none of the above

39. Which of the following are frequent reasons for referral to a pulmonary rehabilitation programme?

- (A): Dyspnea/fatigue and chronic respiratory symptoms
- (B): Impaired health-related quality of life and increased use of medical resources
- (C): Decreased functional status and difficulty performing activities of daily living
- (D): all of the above

40. Which of the following is the exclusion criteria for enrolment into a pulmonary rehabilitation programme?

- (A): Patients with unstable cardiovascular disease or mobility problems
- (B): Patients with significant psychiatric or cognitive impairment
- (C): Patients with lack of motivation to participate in the programme

(D): all of the above

41. Exacerbations of COPD result in decreased mortality and healthcare use, improving symptoms and health-related quality of life, as well as good exercise capacity, increased skeletal muscle function of the lower limbs and improved physical activity levels.

(A): True (B): False

42. Patients with aortic aneurysms <\_\_\_\_\_cm can participate safely in moderate intensity aerobic exercise training as long as their blood pressure is monitored and controlled.

(A): 5.5

(B): 10

(C): 16.5

(D): 22

43. Education on COPD and its management to both patient and family is an integral component of pulmonary rehabilitation programmes.

(A): True (B): False

44. \_\_\_\_\_ is used to aid removal of airway secretions, which involves teaching on importance of daily clearance and training in drainage techniques.

(A): Lung acupuncture

(B): Chemotherapy

(C): Chest physiotherapy

(D): None of the above

45. In approximately \_\_\_\_% of cases of COPD, cigarette smoking is the direct cause.

(A): 10

(B): 35

(C): 55

(D): 90

46. Patients with COPD are at risk of obesity and muscle wastage due to limitations in physical activity and adverse effects of \_\_\_\_\_ given for exacerbations.

(A): insulin

(B): glucocorticoids

(C): anticoagulants

(D): beta blockers

47. Patients who are attending pulmonary rehabilitation should have the outcome of their treatment in terms of dyspnea, health status and exercise capacity measured.

(A): True (B): False

48. The benefits of an initial pulmonary rehabilitation programme have been shown to persist to some degree for at least\_\_\_\_\_, with quality of life maintained better than the increased exercise capacity.

(A): 7 days

(B): 2 weeks

(C): 1 month

(D): 12 months

49. \_\_\_\_\_ is the use of telecommunication and information technology to provide clinical health care from a distance.

(A): Outpatient care

(B): Emergency admission

(C): Telemedicine

(D): None of the above

**Topic: Advances in Pulmonary Rehabilitation for Chronic Obstructive Pulmonary Disease and Associated Conditions**

50. Pulmonary rehabilitation (PR) is an evidenced-based, proven treatment as mentioned –recent guidelines in patients with chronic obstructive pulmonary disease (COPD).

(A): True (B): False

51. \_\_\_\_\_ is one of the most important and common symptoms experienced by patients with mild-to-severe COPD and are related to reduced health-related quality of life.  
(A): High blood pressure  
(B): Diabetes  
(C): Exercise intolerance  
(D): Gastritis
52. \_\_\_\_\_ is likely to limit exercise tolerance and increases pulmonary ventilation by enhancing output of peripheral chemoreceptors and production of lactic acid.  
(A): Thalassemia  
(B): Hypoxia  
(C): Hypothyroidism  
(D): None of the above
53. In patients with COPD, the cardiovascular system is influenced by which of the following mechanisms?  
(A): increase in right ventricular afterload  
(B): hypoxic vasoconstriction  
(C): increases in effective pulmonary vascular resistance due to erythrocytosis  
(D): all of the above
54. Skeletal muscle dysfunction in patients with COPD is characterized by remarkably increased muscle strength and endurance.  
(A): True      (B): False
55. Unexplained weight loss occurs in about \_\_\_\_\_% of patients with severe COPD and 15% of patients with mild-to-moderate COPD.  
(A): 50  
(B): 70  
(C): 83  
(D): 91
56. In patients with stable COPD, there is an increased metabolic rate due to which of the following?  
(A): abnormal respiratory dynamics  
(B): chronic systemic inflammation  
(C): drugs  
(D): all of the above
57. Respiratory strength has been found to correlate with improved pulmonary function, reduction of dyspnea severity, improved exercise tolerance, and enhanced functionality and quality of life.  
(A): True      (B): False
58. \_\_\_\_\_ is one of the recent rehabilitation modalities that involve passive stimulation of contraction of the peripheral muscles through the application of an electric current via electrodes placed on the skin over the targeted muscles by depolarizing motor neurons.  
(A): Physical therapy  
(B): Acupressure therapy  
(C): Neuromuscular electrical stimulation (NMES)  
(D): None of the above
59. The \_\_\_\_ is a significant predictor of survival, readmission, and is usually sensitive to pulmonary rehabilitation in patients with COPD.  
(A): endurance shuttle walk test (ESWT)  
(B): incremental shuttle walk test (ISWT)  
(C): six-minute walk test (6MWT)  
(D): none of the above
60. \_\_\_\_\_ shows the highest oxygen uptake during incremental exercise tests by achieving the subject's limit of tolerance.  
(A): Elevated blood pressure  
(B): Peak oxygen uptake ( $\dot{V}O_{2peak}$ )  
(C): High glucose level  
(D): None of the above

61. \_\_\_\_\_ is a recommended intervention in patients with advanced-stage pulmonary disease who are unresponsive to pharmacologic and nonpharmacologic treatment.

- (A): Oxygen therapy
- (B): Radiation therapy
- (C): Lung transplantation
- (D): Stem cell therapy

62. In patients with lung cancer, exercise limitations can be due to the effects of the cancer, coexisting morbidities, and/or the effects of treatment and surgery.

- (A): True
- (B): False

63. \_\_\_\_\_ is an indicator of alveolar hypoventilation due to an overload on the ventilatory pump that is greater than its capacity.

- (A): Hemothorax
- (B): Asthma
- (C): Pneumothorax
- (D): Hypercapnia

64. Which of the following are the common comorbidities associated with COPD?

- (A): cardiovascular and metabolic diseases
- (B): orthopedic problems
- (C): depression and anxiety
- (D): all of the above

**Topic: Noninvasive Positive-Pressure Ventilation Therapy in Patients with COPD**

65. Noninvasive positive pressure ventilation (NPPV) is defined as ventilatory support delivered by a non-invasive interface such as mask or similar device, acting as an alternative to intubation or tracheostomy.

- (A): True
- (B): False

66. Exacerbations of COPD increase the respiratory load in patients, exceeding their ability to adequately ventilate through a variety of mechanisms, including which of the following?

- (A): increasing hyperinflation with decreased diaphragmatic excursion and strength
- (B): increasing intrinsic positive end-expiratory pressure (PEEP)
- (C): changes in respiratory patterns and increased respiratory frequency leading to ineffective or inadequate tidal volume generation
- (D): all of the above

67. According to the recent randomized controlled trials (RCTs) which of the following are absolute contraindications for the early extubation to NPPV for COPD patients?

- (A): Cardiac or respiratory arrest
- (B): Severe encephalopathy
- (C): Unable to fit mask
- (D): all of the above

68. The term "overlap syndrome" was introduced by Flenly to describe the association of \_\_\_\_\_ and COPD.

- (A): acute asthma
- (B): obstructive sleep apnea syndrome (OSAS)
- (C): high blood pressure
- (D): type 2 diabetes

69. The \_\_\_\_\_ machines give the adjusted pressure according to respiratory system mechanics by changing the flow and compensates the mask leaks.

- (A): volume preset
- (B): oxygen therapy
- (C): pressure preset
- (D): none of the above

70. Nasal mask covers nose and does not cover mouth so allows speaking, drinking and cough also reduces the risk of vomiting and asphyxia.

- (A): True
- (B): False

71. The most common complications effecting almost half of the COPD patients who are administered NPPV are due to which of the following?  
(A): pneumothorax  
(B): mask leak and/or mask pressure injury  
(C): pneumocephalus  
(D): none of the above

**Topic: Types of Physical Exercise Training for COPD Patients**

72. \_\_\_\_\_ is a main symptom associated with physical exercise performance and, therefore, quality of life in COPD patients.  
(A): Low blood pressure  
(B): Dyspnea  
(C): Anemia  
(D): Hemothorax

73. Exercise testing is frequently used in the clinical evaluation of patients with COPD to evaluate the functional impact of a treatment.  
(A): True (B): False

74. Which of the following are the most common causes of the COPD exacerbation?  
(A): infection of the tracheobronchial tree  
(B): air pollution  
(C): hypothyroidism  
(D): both A and B

75. \_\_\_\_\_ is the main non-pharmacological treatment better tolerated by patients with COPD.  
(A): Steroid medicine  
(B): Radiation therapy  
(C): Aerobic exercise  
(D): None of the above

76. \_\_\_\_\_ is a discipline that includes hydrotherapy, spa therapy, balneotherapy and physiotherapy, and is used for the prevention and treatment of diseases through water.  
(A): Acupuncture  
(B): Chemotherapy  
(C): Therapeutic aquatic exercise intervention  
(D): Radiation therapy

**Topic: Chronic Obstructive Pulmonary Disease and Diabetes Mellitus**

77. COPD is defined as a preventable and treatable entity caused by toxic gases, mainly tobacco.  
(A): True (B): False

78. \_\_\_\_\_ is the second cause of death among COPD patients and the first one among patients with Diabetes Mellitus (DM).  
(A): Sickle cell anemia  
(B): Cardiovascular disease  
(C): Cirrhosis  
(D): None of the above

79. Which of the following are the basis of a common pathogenesis in COPD and Diabetes Mellitus?  
(A): Hypoxia  
(B): Insulin resistance  
(C): Oxidative stress and inflammation  
(D): all of the above

80. The inflamed adipose tissue is a well-recognized trigger of insulin resistance.  
(A): True (B): False