

MEDZONE



PHARMACOLOGY

Mediated by

MedZone Family



Bronchial Asthma

1. Which of the following is contraindicated in pregnancy
 - A. LT antagonist
 - B. Anti Ig monoclonal Ab
 - C. prednisone
 - D. Dexamethazone
2. which of the following cause oral candidiasis
 - A. Dexamethazone
 - B. prednisone
 - C. beclomethazone
 - D. none of above
3. ketotifen is from
 - A. corticosteroid
 - B. LT antagonist
 - C. mast cell stabilizers
 - D. all of above
4. Drugs used in combination with corticosteroids to reduce its dose
 - A. zafirlukast
 - B. zileutin
 - C. omalizumab
 - D. all of above
5. The most common combination is
 - A. long acting B agonist+ corticosteroids+methylxanthine
 - B. long acting B agonist+ corticosteroids+LT antagonist
 - C. long acting B agonist+ corticosteroids +mast cell stabilizer
 - D. both 2&3
6. The following drugs may induce bronchospasm EXCEPT:
 - A. Pilocarpine
 - B. Aspirin
 - C. Acetylcholine.
 - D. Ephedrine
7. Salbutamol:
 - A. Is devoid of any action on heart rate
 - B. Contract uterine smooth muscle

C. Can cause skeletal muscle tremors

D. b+c

8. Which of the following is most useful in treatment of acute attack of bronchial asthma:

A. Beclomethasone aerosol

B. Salbutamol inhalation

C. Methacholine

D. Chlorpheniramine

9. One of the following drugs is a useful bronchodilator but not acting via stimulation of Beta adrenoceptors in respiratory smooth muscles:

A. Adrenaline

B. Salbutamol

C. Isoprenaline

D. Theophyllin

10. In asthmatics, mast cell degranulation on the cell surface could be inhibited by the following EXCEPT:

A. Terbutaline

B. Aminophylline

C. Ketotifen

D. Pindolol

11. The following drug is contraindicated in bronchial asthma:

A. Nedocromil

B. Morphine

C. Zafirlukast

D. Salbutamol

12. Moniliasis of mouth is a complication of inhalation of:

A. Beclomethasone

B. Ipratropium

C. Formoterol

D. Nedocromil

13. The following antitussive is suitable for treatment of dry irritant cough:

A. Benzonatate

B. Potassium iodide

C. Tincture ipecacuanha

D. Creosote

14. All of the following drugs can dilate the bronchi, EXCEPT:

- A. Salbutamol**
- B. Ipratropium**
- C. Theophylline**
- D. Sodium cromoglycate**

15. Treatment of status asthmaticus include all of the following, EXCEPT:

- A. Adequate hydration**
- B. Aminophylline orally**
- C. Salbutamol by nebulizer**
- D. Hydrocortisone I.V**

16. The first line in treatment of acute attack of bronchial asthma is the quick relief medication:

- A. Inhaled Ba-agonist**
- B. Oral theophylline**
- C. Muscarinic antagonist inhalation**
- D. Cromolyn sodium orally**

17. The following drugs can be used in treatment of bronchial asthma EXCEPT:

- A. Aminophylline**
- B. Ketotifen**
- C. Salbutamol.**
- D. Carbachol.**

18. Concerning the inhaled asthma reliever salbutamol, which of the following is INCORRECT:

- A. It stimulate beta-2 adrenoceptors**
- B. It relax bronchial smooth muscle**
- C. It may produce bradycardia**
- D. It is used by inhalation or oral**

19. Terbutaline specifically stimulates:

- A. Alpha receptors**
- B. Beta receptors**
- C. Alpha 2 receptors**
- D. Beta 2 receptors**

20. The following drugs are useful in management of asthma EXCEPT:

- A. Montelukast**
- B. Leukotriene**
- C. Prednisolone**
- D. Ipratropium**

21. Fluticasone by inhalation is useful in long-term control of bronchial asthma by acting as:

- A. Anti-leukotriene**
- B. Anti-inflammatory corticosteroid**
- C. Anti-histamine**
- D. Mast cell stabilizer**

22. Theophylline produce a bronchodilator effect through:

- A. Stimulation of β_2 -receptors**
- B. Blockade of M_1 -receptors**
- C. Decrease c-AMP level**
- D. Inhibit PDE enzyme**

23. Side effects of salbutamol include which of the following:

- A. Tachycardia**
- B. Vomiting**
- C. Bradycardia**
- D. CNS depression**

24. The following drug is a quick relief medication for acute bronchial asthma

- A. Inhaled salbutamol**
- B. Montelukast**
- C. Nedocromil by inhalation**
- D. Oral theophylline**

25. Long-term control medications of chronic bronchial asthma include the following drugs EXCEPT:

- A. Selective long-acting β_2 -agonists (LABA) as salmeterol**
- B. Slow release theophylline**
- C. Inhaled corticosteroids as budesonide**
- D. β -adrenergic antagonists as pindolol**

- 26. Adrenergic agonists clearly play a role in managing some patients with asthma, whether for prophylaxis (control medication) or for rescue therapy. Which of the following drugs is classified as an adrenergic agonist, but has no physiologically relevant or clinically useful effects on airway smooth muscle tone?**
- A. Albuterol**
 - B. Salmeterol**
 - C. Norepinephrine**
 - D. Terbutaline**
- 27. An elderly man with COPD is being managed with several drugs, one of which is inhaled ipratropium. Which of the following is the main mechanism that accounts for the beneficial effects of this drug?**
- A. Blocks of an endogenous bronchoconstrictor mediator**
 - B. Inhibits CAMP breakdown via phosphodiesterase inhibition**
 - C. Prevents antigen-antibody reactions that lead to mast cell mediator release**
 - D. Stimulates ventilatory rates (CNS effect in brain's medulla)**
- 28. A 16-year-old girl treated for asthma develops skeletal muscle tremors that are drug-induced. Which of the following was the most likely cause?**
- A. Salbutamol**
 - B. Beclomethasone**
 - C. Cromolyn**
 - D. Ipratropium**
- 29. A 26-year-old patient with asthma is being treated with montelukast. Which of the following is the main mechanism by which this drug works?**
- A. Blocks the proinflammatory effects of certain arachidonic acid metabolites**
 - B. Enhances release of epinephrine from the adrenal (suprarenal) medulla**
 - C. Increases airway β -adrenergic receptor responsiveness to endogenous norepinephrine**
 - D. Inhibits CAMP breakdown via phosphodiesterase inhibition**

- 30. A 23-year-old woman with asthma has what is described as "aspirin (hyper) sensitivity" and experiences severe bronchospasm in response to even small doses of the drug. Which of the following is the most likely mechanism by which of the aspirin provokes her pulmonary problems?**
- A. Stimulates synthesis of leukotrienes**
 - B. Induces formation of antibodies directed against the salicylate on airway mast cells**
 - C. Induces hypersensitivity of H₁ receptors on airway smooth muscles**
 - D. Induces hypersensitivity of muscarinic receptors on airway smooth muscles**
- 31. A patient suffering status asthmatics presents in the emergency department. Even large parenteral doses of a selective β_2 agonist fail to dilate the airways adequately; rather, they cause dangerous degrees of tachycardia. Which of the following pharmacologic interventions or approaches is most likely to control the acute symptoms and restore the bronchodilator efficacy of the adrenergic drug?**
- A. Add inhaled cromolyn**
 - B. Give parenteral diphenhydramine**
 - C. Give a parenteral corticosteroid**
 - D. Switch to epinephrine**
- 32. A 23-year-old woman is using a salbutamol inhaler for frequent acute episodes of asthma and describes symptoms that she ascribes to salbutamol. Which of the following is NOT a recognized action of salbutamol?**
- A. Diuretic effect**
 - B. Positive inotropic effect**
 - C. Skeletal muscle tremor**
 - D. Smooth muscle relaxation**
- 33. Which of these groups of drugs is used for asthma treatment?**
- A. Methylxanthines**
 - B. M-cholinoblocking agents**
 - C. Beta₂-stimulants.**
 - D. All of above**

34. Tick the drug belonging to non-selective beta2-adrenomimics:

- A. Salbutamol**
- B. Isoprenaline**
- C. Salmeterol**
- D. Terbutaline**

35. Select the side-effect characteristic for non-selective beta2-adrenomimetics

- A. Depression of the breathing center**
- B. Tachycardia**
- C. Peripheral vasoconstriction**
- D. Dry mouth**

36. Pick out the bronchodilator drug related to xanthine:

- A. Atropine**
- B. Orciprenaline**
- C. Adrenaline**
- D. Theophylline**

37. Pick out the bronchodilator drug belonging to sympathomimics:

- A. Isoprenaline**
- B. Ephedrine**
- C. Atropine**
- D. Salbutamol**

38. The property of prolonged theophyllines is the prevention of night asthmatic attacks. It's:

- A. True**
- B. False**

39. The mechanism of methylxanthines action is:

- A. Inhibition of the enzyme phosphodiesterase**
- B. Beta2 -adrenoreceptor stimulation**
- C. Inhibition of the production of inflammatory cytokines**
- D. Inhibition of M-cholinoreceptors**

40. Which of the following M-cholino-blocking agents is used especially as an anti- asthmatic?

- A. Atropine**
- B. Ipratropium**

C. Platiphylline

D. Metacin

41. Indicate the side effect of Theophylline:

A. Bradycardia

B. Increased myocardial demands for oxygen

C. Depression of respiratory center

D. Elevation of the arterial blood pressure

42. All of the following drugs are inhaled glucocorticoids EXCEPT:

A. Triamcinolone

B. Beclometazone

C. Sodium cromoglycate

D. Budesonide

43. Choose the drug belonging to membrane stabilizing agents:

A. Zileutin

B. Sodium cromoglycate

C. Zafirlocast

D. Montelukast

44. Tick the drug which is a 5-lipoxygenase inhibitor:

A. Budesonide

B. Sodium cromoglycate

C. Zileutin

D. Beclometazone

45. Zileutin prevents the production of leukotrienes. This statement is:

A. True

B. False

46. Indicate the drug which is a leucotriene receptor antagonist:

A. Sodium cromoglycate

B. Zafirlucast

C. Zileutin

D. Triamcinolone

47. Zafirlucast prevents aspirin-sensitive asthma. This consideration is:

A. True

B. False

- 48. The following drug is classified as an adrenergic agonist, but has no useful effects on airway smooth muscle tone.**
- A. Salbutamol**
 - B. Epinephrine**
 - C. Norepinephrine**
 - D. Salmeterol**
 - E. Terbutaline**
- 49. The inhaled ipratropium has the following main mechanism that accounts for its beneficial effects:**
- A. Blocks Ach bronchoconstrictor effect**
 - B. Enhances release of epinephrine from the adrenal medulla**
 - C. Inhibits cAMP breakdown via phosphodiesterase inhibition**
 - D. Prevents Ag-Ab reactions that lead to mediator release**
 - E. Stimulates respiratory center**
- 50. A 6-year-old girl treated for asthma develops skeletal muscle tremors that are drug-induced, the following drug was the most likely cause:**
- A. Beclomethasone**
 - B. Salbutamol**
 - C. Cromolyn**
 - D. Ipratropium**
 - E. Montelukast**
- 51. The following is the main mechanism of action of montelukast in asthma.**
- A. Blocks the inflammatory effects of certain arachidonic acid metabolites**
 - B. Enhances release of epinephrine from the adrenal (suprarenal) medulla**
 - C. Stimulates respiratory center**
 - D. Inhibits cAMP breakdown via phosphodiesterase inhibition**
 - E. Prevents Ag-Ab reactions that lead to mediator release**
- 52. Each of the following may be mechanism of action of aminophylline EXCEPT:**
- A. Phosphodiesterase enzyme inhibition.**
 - B. Mast cell stabilization.**
 - C. Blocks the inflammatory effects of certain arachidonic acid metabolites.**
 - D. Adenosine receptor blocker.**
 - E. Improve diaphragmatic contraction.**

53. The following is the main action of acetylcysteine in COPD.

- A. Blocks receptors for the cysteinyl leukotrienes**
- B. Inhibit leukotriene synthesis**
- C. Suppresses airway inflammation**
- D. Reverses ACh-mediated bronchoconstriction**
- E. Makes airway mucus secretions thinner for easier removal.**

54. The following is the mechanism of aspirin-induced bronchial asthma.

- A. Induces hypersensitivity of muscarinic receptors on smooth muscles**
- B. Induces formation of antibodies directed against the salicylate on airway mast cells**
- C. Induces hypersensitivity of H₁ receptors on airway smooth muscles**
- D. Blocks synthesis of endogenous prostaglandins with shift of arachidonic acid metabolism to leukotrienes synthesis**
- E. Prevents or reduces epinephrine binding to β 2-adrenergic receptors**

55. For dry cough. In order to suppress the cough without risk of suppressing respiratory center or causing sedation, the following would be the best choice:

- A. Codeine.**
- B. Dextromethorphan.**
- C. Pholcodeine.**
- D. Tincture ipecacuanha**
- E. Promethazine.**

56. A patient consumed an excessive dose of theophylline and developed toxicity. Which of the following is the most likely consequence of this?

- A. Bradycardia**
- B. Drowsiness progressing to sleep and then coma**
- C. Hepatotoxicity**
- D. Paradoxical bronchospasm**
- E. Seizures**

- 57. A patient suffering acute severe asthma presents in the emergency department. Even large doses of inhaled salbutamol and ipratropium fail to dilate the airways adequately; the following is most likely to control the acute symptoms and restore the bronchodilator efficacy of salbutamol?**
- A. Add inhaled cromolyn**
 - B. Give a parenteral corticosteroid**
 - C. Give parenteral diphenhydramine**
 - D. Switch to epinephrine**
 - E. Switch to isoproterenol (non-selective β_1 & β_2 agonist)**
- 58. The following bronchodilator is used in COPD and least likely to cause cardiac arrhythmia and can be used safely in cardiac patients:**
- A. Aminophylline**
 - B. Cromolyn**
 - C. Prednisone**
 - D. Tiotropium**
 - E. Salmeterol**
- 59. The following is a non-selective but very potent and efficacious bronchodilator that is not active by the oral route:**
- A. Aminophylline**
 - B. Epinephrine**
 - C. Ipratropium**
 - D. Salbutamol**
 - E. Zafirlukast**
- 60. The following bronchodilator is used by oral route:**
- A. Cromolyn**
 - B. Epinephrine**
 - C. Ipratropium**
 - D. Prednisone**
 - E. Theophylline**
- 61. The following parenteral drug is life-saving in status asthmaticus:**
- A. Aminophylline.**
 - B. Methylprednisolone**
 - C. Epinephrine**
 - D. Salbutamol**

62. The following statements are correct EXCEPT:

- A. Ketotifen is used for prophylaxis in bronchial asthma**
- B. Antitussive drugs are used for dry cough**
- C. Expectorants increase viscosity of sputum**
- D. Bromhexine is a mucolytic agent**
- E. Ammonium chloride is an expectorant**

63. Which of the following therapies is most likely used for reducing frequency of asthma attacks?

- A. Fluticasone by aerosol**
- B. Salbutamol by aerosol**
- C. Montelukast orally**
- D. Intravenous methylprednisolone**
- E. Salmeterol inhaler**

64. Regarding theophylline, all of the following statements are correct EXCEPT:

- A. It acts through phosphodiesterase inhibition in both bronchi and mast cells**
- B. Blocks purine receptors in bronchial tree**
- C. Needs no monitoring of blood level as it is safe**
- D. It can cause arrhythmia especially in cardiac patients**
- E. It is dangerous in patients with history of epilepsy**

65. Regarding the use of corticosteroids in bronchial asthma, the following statement is INCORRECT:

- A. They have potent anti-inflammatory action**
- B. They decrease frequency of asthma attacks**
- C. Inhaled corticosteroids have low risk of systemic adverse effects**
- D. Spacers decrease systemic absorption of inhaled corticosteroids**
- E. Ciclesonide has more systemic adverse reactions**

66. The most common side effect of ketotifen is:

- A. Tremors.**
- B. Oral moniliasis.**
- C. Drowsiness.**
- D. Palpitation**

67. Aminophylline can be administered by the following routes EXCEPT:

- A. Oral**
- B. Rectal**
- C. S.C.**
- D. LM.**
- E. Slowly LV.**

68. Inhaled corticosteroids may precipitate:

- A. Oropharyngeal moniliasis.**
- B. Laryngospasm**
- C. Hoarseness of voice.**
- D. a & c.**
- E. Viral laryngitis.**

69. Decrease the dose of theophyllin in the following condition EXCEPT:

- A. Liver cirrhosis.**
- B. Smoking**
- C. Renal failure.**
- D. Old age.**
- E. CHF**

70. The following drugs are mast cell stabilizers EXCEPT:

- A. Ipratropium bromide**
- B. Disodium cromoglycate.**
- C. Theophylline.**
- D. Salmeterol**
- E. Terbutaline**

- 1. The following drugs are mucolytics EXCEPT:**
 - A. Bromhexine**
 - B. Acetyl cysteine.**
 - C. Ambroxol.**
 - D. Noscapine.**
 - E. Carboxymethyl cysteine.**
- 2. Which of the following is a nauseate expectorant**
 - A. Pholcodine**
 - B. Tincture ipecacuanaha**
 - C. Acetylcholine**
 - D. Bromhexine**
- 3. An elderly man, in obvious respiratory distress due to exacerbation of his emphysema and chronic bronchitis, presents in the emergency department. One drug ordered by the physician, to be administered by respiratory therapist, is N-acetylcysteine. Which of the following is main action or purpose of this drug?**
 - A. Block receptors for the cysteinyl leukotrienes**
 - B. Inhibit metabolic inactivation of epinephrine or β 2-agonists that were administered**
 - C. Inhibit leukotriene synthesis**
 - D. Thin airway mucus secretions for easier removal by suctioning or postural drainage**
- 4. All of the following statements about anti-cough remedies are true, EXCEPT:**
 - A. Cough suppressants are called antiemetics.**
 - B. Dry imitative cough should be suppressed.**
 - C. Guaiacol is a stimulant expectorant.**
 - D. Codeine can be complicated by constipation.**
- 5. All of the following drugs destroy disulfide bonds of proteoglycans, which cau depolymerization and reduction of viscosity of sputum, EXCEPT:**
 - A. Acetylcysteine**
 - B. Ambroxol**

C. Desoxiribonuclease

D. Bromhexin

- 6. Indicate the drug belonging to antitussives of narcotic type of action:**
- A. Glaucine hydrochloride**
 - B. Aethylmorphine hydrochloride**
 - C. Tusuprex**
 - D. Libexine**
- 7. Tick out the drug belonging to non-narcotic antitussives:**
- A. Libexine**
 - B. Tusuprex**
 - C. Codeine**
 - D. Aethylmorphine hydrochloride**
- 8. Which of the following is a centrally acting antitussive?**
- A. Guaifenesin**
 - B. Codeine**
 - C. Acetylcysteine**
 - D. Bromhexine**
- 9. Dextromethorphan is classified as:**
- A. An opioid antitussive**
 - B. A non-opioid antitussive**
 - C. An expectorant**
 - D. A mucolytic**
- 10. Which of the following antitussive drugs has the highest potential for dependence?**
- A. Benzonatate**
 - B. Codeine**
 - C. Dextromethorphan**
 - D. Diphenhydramine**
- 11. Which drug suppresses cough by numbing the stretch receptors in the respiratory tract?**
- A. Benzonatate**
 - B. Codeine**
 - C. Guaifenesin**
 - D. Dextromethorphan**

- 12. Antitussives are most suitable for which type of cough?**
- A. Productive cough**
 - B. Dry, non-productive cough**
 - C. Chronic cough with mucus production**
 - D. Allergic cough**
- 13. What is the mechanism of action of opioid antitussives like codeine?**
- A. Suppress the cough reflex by acting on peripheral receptors**
 - B. Thin the mucus for easier expulsion**
 - C. Suppress the cough reflex by acting on the medullary cough center**
 - D. Inhibit the production of histamine**
- 14. Which of the following is NOT a centrally acting antitussive?**
- A. Codeine**
 - B. Dextromethorphan**
 - C. Guaifenesin**
 - D. Noscapine**
- 15. Which of the following is a non-narcotic antitussive?**
- A. Morphine**
 - B. Codeine**
 - C. Noscapine**
 - D. Hydrocodone**
- 16. Which of the following is the most commonly used expectorant?**
- A. Dextromethorphan**
 - B. Guaifenesin**
 - C. Codeine**
 - D. Bromhexine**
- 17. The primary action of expectorant drugs is to:**
- A. Suppress the cough reflex**
 - B. Increase mucus production and secretion**
 - C. Thin and break down mucus**
 - D. Numb the respiratory tract receptors**
- 18. Which expectorant works by stimulating the vagus nerve to increase airway secretions?**
- A. Potassium iodide**
 - B. Acetylcysteine**

C. Guaifenesin

D. Ammonium chloride

19. Guaifenesin is commonly used to treat:

A. Dry, non-productive cough

B. Productive cough

C. Chronic asthma

D. Allergic rhinitis

20. Which of the following is NOT an expectorant?

A. Guaifenesin

B. Bromhexine

C. Ammonium chloride

D. Dextromethorphan

21. Which expectorant drug is also used as a mucolytic in cystic fibrosis?

A. Acetylcysteine

B. Guaifenesin

C. Carbocisteine

D. Ammonium chloride

22. Expectorants are most effective when combined with:

A. Antihistamines

B. Bronchodilators

C. Adequate hydration

D. Antitussives

23. Which of the following expectorants is derived from iodine?

A. Bromhexine

B. Potassium iodide

C. Guaifenesin

D. Acetylcysteine

24. Which of the following is the most commonly used mucolytic drug?

A. Guaifenesin

B. Acetylcysteine

C. Codeine

D. Bromhexine

25. What is the mechanism of action of mucolytic drugs like acetylcysteine?

A. Increases the production of mucus

- B. Breaks down the chemical structure of mucus, reducing its viscosity**
- C. Suppresses the cough reflex**
- D. Increases airway diameter**

26. Acetylcysteine is primarily used to treat:

- A. Dry cough**
- B. Acute asthma attacks**
- C. Mucus build-up in chronic respiratory conditions**

27. Which of the following mucolytics is also used as an antidote for acetaminophen overdose?

- A. Bromhexine**
- B. Acetylcysteine**
- C. Carbocisteine**
- D. N-acetylcysteine**

28. Which mucolytic drug is used to break down the bonds in mucus and is commonly given via inhalation?

- A. Bromhexine**
- B. Acetylcysteine**
- C. Guaifenesin**
- D. Potassium iodide**

29. What is the main therapeutic effect of mucolytic agents?

- A. To suppress cough**
- B. To increase mucus secretion**
- C. To thin and break down thick mucus**
- D. To open up the airways**

30. Which mucolytic agent is used in cystic fibrosis to reduce the viscosity of mucus in the lungs?

- A. Acetylcysteine**
- B. Dornase alfa**
- C. Ammonium chloride**
- D. Guaifenesin**

31. Which mucolytic drug should be avoided in patients with asthma due to the risk of bronchospasm?

- A. Acetylcysteine**
- B. Bromhexine**

C. Carbocisteine

D. Dornase alfa

32. Mucolytic drugs are contraindicated in which of the following conditions?

A. Cystic fibrosis

B. Asthma (due to the risk of bronchospasm)

C. COPD

D. Chronic bronchitis

33. Which of the following drugs is a mucolytic that works by reducing the viscosity of mucus in the respiratory tract, used in conditions like chronic bronchitis?

A. Guaifenesin

B. Acetylcysteine

C. Sodium bicarbonate

D. Ipratropium

Histamine and antihistaminic drugs

- 1. The action of histamine that is not mediated through H1 receptors is:**
 - A. Release of EDRF from vascular endothelium resulting in vasodilatation**
 - B. Direct action on vascular smooth muscle causing vasodilatation**
 - C. Bronchoconstriction**
 - D. Release of catecholamines from adrenal medulla**
- 2. Histamine exerts the following actions except:**
 - A. Dilatation of large blood vessels**
 - B. Dilatation of small blood vessels**
 - C. Stimulation of isolated guineapig heart**
 - D. Itching**
- 3. Fall in blood pressure caused by larger doses of histamine is blocked by:**
 - A. H1 antihistaminics alone**
 - B. H2 antagonists alone**
 - C. Combination of H1 and H2 antagonists**
 - D. None of the above**
- 4. The following statement about histamine is not correct:**
 - A. It is the sole mediator of immediate hyper- sensitivity reaction**
 - B. It plays no role in delayed hypersensitivity reaction**
 - C. It serves as a neurotransmitter in the brain**
 - D. All types of histamine receptors are G protein coupled receptors**
- 5. Histamine is involved as a mediator in the following pathological condition:**
 - A. Delayed hypersensitivity reaction**
 - B. Inflammation**
 - C. Carcinoid syndrome**
 - D. Variant angina**
- 6. The capacity of an antihistaminic to produce sedation depends on the following except:**
 - A. Relative affinity for central versus peripheral H 1 receptors**
 - B. Ability to penetrate blood-brain barrier**
 - C. Individual susceptibility**

D. Ratio of H₁:H₂ blockade produced by the drug

- 7. Which second generation H₁ antihistaminics have the following advantages except:**
- A. Lack of anticholinergic side effects**
 - B. Lack of alcohol potentiating potential**
 - C. Recipient can drive motor vehicles**
 - D. Good antipruritic action**
- 8. The following second generation anti-histaminic is not likely to produce ventricular arrhythmias when administered along with ketoconazole:**
- A. Mizolastine**
 - B. Ebastine**
 - C. Terfenadine**
 - D. Astemizole**
- 9. Select the antihistaminic which blocks cardiac K⁺ channels when given in high doses or along with drugs that inhibit CYP3A4 isoenzyme:**
- A. Chlorpheniramine**
 - B. Promethazine**
 - C. Astemizole**
 - D. Loratadine**
- 10. Select the H₁ antihistaminic which is used topically in the nose for allergic rhinitis:**
- A. Loratadine**
 - B. Cetirizine**
 - C. Fexofenadine**
 - D. Azelastine**
- 11. H₁ antihistaminics are beneficial in:**
- A. All types of allergic disorders**
 - B. Certain type I allergic reactions only**
 - C. Certain type IV allergic reactions only**
 - D. Bronchial asthma**
- 12. Benefit afforded by certain H₁ antihistaminics in the following condition is not based on antagonism of histamine:**
- A. Dermographism**
 - B. Insect bite**

- C. Common cold**
- D. Seasonal hay fever**

13. H1 histamine receptor subtype is distributed in:

- A. Smooth muscle, endothelium and brain**
- B. Gastric mucosa, cardiac muscle, mast cells and brain**
- C. Presynaptically in brain, mesenteric plexus and other neurons**
- D. All of the above**

14. H2 histamine receptor subtype is distributed in:

- A. Smooth muscle, endothelium and brain**
- B. Gastric mucosa, cardiac muscle, mast cells and brain**
- C. Presynaptically in brain, mesenteric plexus and other neurons.**
- D. All of the above**

15. Most tissue histamine is sequestered and bound in:

- A. Granules in mast cells or basophils**
- B. Cell bodies of histaminergic neurons**
- C. Enterochromaffin-like cell of the fundus of the stomach**
- D. All of the above**

16. These categories of histamine H1 antagonists are noted for sedative effects, EXCEPT:

- A. Piperidines; i.e. Loratadine, Fexofenadine**
- B. Ethanolamines (aminoalkyl ethers); i.e. Dimedrol, Clistin**
- C. Ethylenediamines; i.e. Suprastine**
- D. Phenothiazines, i.e. Diprazine, Promethazine**

17. Which category of histamine H1 antagonists is noted for the best antiemetic action?

- A. Alkylamines (propylamines); i.e. Brompheniramine**
- B. Ethanolamines (aminoalkyl ethers); i.e. Doxylamine**
- C. Piperazines, i.e. Hydroxyzine, Cyclizine**
- D. Ethylenediamines; i.e. Suprastine**

18. These categories of histamine H1 antagonists are noted for the anticholinergic effect, EXCEPT

- A. Alkylamines (propylamines); i.e. Brompheniramine**
- B. Piperazines; i.e. Hydroxyzine, Cyclizine**
- C. Ethylenediamines; i.e. Suprastine**

D. Phenothiazines, ie. Diprazine, Promethazine

- 19. Which category of histamine H₁ antagonists is recognized for as second-generation antihistamines?**
- A. Alkylamines (propylamines); i.e. Brompheniramine**
 - B. Piperidines; i.e. Loratadine, Fexofenadine**
 - C. Ethylenediamines; i.e. Suprastine**
 - D. Phenothiazines: ie. Promethazine**
- 20. These histamine H₁ antagonists are recognized for as second-generation antihistamines, EXCEPT:**
- A. Astemizole**
 - B. Loratadine (Claritin)**
 - C. Cetirizine (Zyrtec).**
 - D. Suprastine**
- 21. Which of histamine H₁ antagonists is noted for the serotonin-blocking effect?**
- A. Brompheniramine**
 - B. Cyproheptadine**
 - C. Suprastine**
 - D. Dimedrol**
- 22. Which of histamine H₁ antagonists is noted for the ulcerogenic effect?**
- A. Diazoline**
 - B. Loratadine**
 - C. Suprastine**
 - D. Dimedrol**
- 23. Indication for administration of histamine H₁ antagonists is:**
- A. Prevention or treatment of the symptoms of allergic reactions (rhinitis, urticaria)**
 - B. Motion sickness and vestibular disturbances**
 - C. Nausea and vomiting in pregnancy ("morning sickness")**
 - D. All of the above**
- 24. Indications for administration of histamine H₁ antagonists are the following EXCEPT:**
- A. Prevention or treatment of the symptoms of allergic reactions (rhinitis, urticaria)**

B. Management of seizure states

C. Nausea and vomiting in pregnancy ("morning sickness")

D. Treatment of sleep disorders

25. Side effect of first-generation histamine H₁ antagonists is:

A. Aplastic anemia

B. Vomiting, tinnitus, decreased hearing

C. Sedation

D. Gastric ulcers and upper gastrointestinal bleeding

26. Which histamine receptor produces effects in the gastrointestinal system?

A. H₁

B. H₂

C. H₁&H₂

27. Which toxic effect of histamine is most likely to lead to death, if untreated?

A. Dyspnea.

B. Headache.

C. Histamine shock.

D. Cutaneous flushing.

28. Which is the correct mechanism of action of histamine antagonists?

A. Inhibit the breakdown of histamine.

B. Decrease the production of histamine.

C. Compete with histamine for receptor sites.

D. Block the release of histamine from mast cells and basophils.

29. The sedative effects of antihistamines are produced where?

A. CNS.

B. Periphery

C. Respiratory system.

D. Gastrointestinal system.

30. In which case is a H₁ antihistamine of little value?

A. Acute urticaria.

B. Seasonal hay fever.

C. Anti-motion sickness.

D. Systemic anaphylaxis.

- 31. In general, of the first-generation antihistamines, which H₁ antihistamine drug group produces the fewest sedative effects?**
- A. Alkylamines.**
 - B. Phenothiazines.**
 - C. Ethanolamines,**
 - D. Ethylenediamines.**
- 32. Histamine actions on H₁ receptors can be antagonized by the following EXCEPT:**
- A. Mepyramine through competitive blockade of H₁ receptors**
 - B. Cimetidine through non-competitive blockade of H₁ receptors**
 - C. Adrenaline through physiological antagonism**
 - D. Corticosteroids through inhibition of allergic reactions**
- 33. The main mechanism of action of antihistaminic drugs is that they:**
- A. Prevent formation of histamine**
 - B. Speed up elimination of histamine**
 - C. Competitively inhibit histamine**
 - D. Destroy histamine**
- 34. H₁ antagonists may produce all of the following actions EXCEPT:**
- A. Anti-cholinergic**
 - B. Anti-pyretic**
 - C. Anti-emetic.**
 - D. Anti-parkinsonism**
- 35. Which of the following drugs blocks H₁ and 5HT receptors?**
- A. Chlorpheniramine**
 - B. Meclizine**
 - C. Cyclizine**
 - D. Cyproheptadine**
- 36. Which of the following is a non sedating H₁ antihistaminic drug?**
- A. Dimenhydranate**
 - B. Promethazine**
 - C. Diphenhydramine**
 - D. Cetrizine**

37. H1 antagonists are used in treatment of:

- A. Epilepsy**
- B. Hypertension**
- C. Narcolepsy**
- D. Allergic rhinitis**

38. Adverse effects of H1 receptor antagonists include all of the following EXCEPT:

- A. Anticholinergic effects**
- B. Teratogenic effects**
- C. Allergic reaction**
- D. Parkinsonism**

39. Most antihistamines (H-1 blockers) have additional non-histamine related effects; these are likely to include which one of the following:

- A. Muscarinic decrease in bladder tone**
- B. Anti-motion sickness effect**
- C. Insomnia**
- D. Short duration**

40. A patient undergoing cancer chemotherapy is vomiting frequently. A drug that might help in this situation is:

- A. Bromocriptine**
- B. Loratadine**
- C. Cimetidine**
- D. Ondansetron**

- 1- Which following eicosanoid is generated through the lipooxygenase pathway:
 - A. Prostaglandin E₂
 - B. Thromboxane A₂
 - C. Leukotriene C₄
 - D. Prostacyclin
- 2- There are no preformed stores of the following autacoid/autacoids:
 - A. Prostaglandins
 - B. Leukotrienes
 - C. Angiotensin II
 - D. All of the above
- 3- The cyclooxygenase isoenzymes COX-1 and COX-2 differ from each other in that:
 - A. They catalyse different pathways in prosta-noid biosynthesis
 - B. COX-1 is inhibited by aspirin but not COX-2
 - C. COX-2 is inhibited by ibuprofen but not COX-1
 - D. COX-1 is constitutive while COX-2 is largely inducible
- 4- Which of the following is an irreversible inhibitor of cyclooxygenase:
 - A. Aspirin
 - B. Phenylbutazone
 - C. Indomethacin
 - D. Piroxicam
- 5- Actions of prostaglandin E₂ include the following except:
 - A. Fall in blood pressure
 - B. Bronchoconstriction
 - C. Uterine contraction
 - D. Inhibition of gastric acid secretion
- 6- The following prostanoid is a potent inducer of platelet aggregation:
 - A. Prostacyclin
 - B. Prostaglandin E₂
 - C. Prostaglandin D₂

D. Thromboxane A₂

7- Prostaglandins play pathophysiological role in the following except:

- A. Patency of ductus arteriosus**
- B. Regulation of renal tubular salt absorption**
- C. Ventricular remodeling after myocardial infarction**
- D. Initiation of labour**

8- Low doses of aspirin prolong bleeding time by selectively inhibiting synthesis of the following mediator in the platelets:

- A. Thromboxane A₂**
- B. 5-Hydroxytryptamine**
- C. Platelet activating factor**
- D. Prostacyclin**

9- Aspirin in low doses produces longlasting inhibition of platelet cyclooxygenase (COX) because:

- A. Platelets contain low quantity of COX**
- B. Platelets cannot synthesize fresh COX molecules**
- C. Platelets bind aspirin with high affinity**
- D. Platelet COX is inducible**

10- The early pregnancy uterus is sensitive to the following oxytocic:

- A. Oxytocin**
- B. Methylergometrine**
- C. Prostaglandin F_{2α}**
- D. Both 'A' and 'B' are correct**

11- Montelukast blocks the action of the following autacoid:

- A. Prostacyclin**
- B. Platelet activating factor**
- C. Leukotriene B₄**
- D. Leukotriene C₄/D₄**

12- The actions of platelet activating factor include the following except:

- A. Increased capillary permeability**
- B. Bronchodilatation**
- C. Vasodilatation**
- D. Erosion of gastric mucosa**

13- Select the drug which inhibits cyclooxygenase irreversibly:

- A. Aspirin**
- B. Mephenamic acid**
- C. Naproxen**
- D. Diclofenac**

14- Which of the following drugs is a leucotriene D4 receptor (LTD4) blocker?

- A. Ibuprofen**
- B. Zileuton (Zyflo)**
- C. Zafirlukast (Accolate)**
- D. Diclofenac**

15- Concerning autacoids, which is WRONG?

- A. Angiotensin II stimulates biosynthesis and release of aldosterone**
- B. Thromboxane A2 causes vasoconstriction**
- C. Prostacyclin promotes platelet aggregation**
- D. Bradykinin causes vasodilation**

16- Montelukast blocks:

- A. α -adrenergic receptors**
- B. β -adrenergic receptors**
- C. Muscarinic receptors**
- D. Leukotriene receptors**

17- Paracetamol (Acetaminophen) Inhibits the following enzyme:

- A. COX-1**
- B. COX-3**
- C. COX-2**
- D. Phosphodiesterase**

18- A new born infant is being prepared for surgical repair of a patent ductus arteriosus. Which of the following agents may be administered preoperatively?

- A. Zafirlukast**
- B. Timolol**
- C. Misoprostol**
- D. Alprostadil (PGE)**

18- A patient complains of severe dysmenorrhea. A uterine stimulant derived from membrane lipid in the endometrium is:

- A. Angiotensin (II)**
- B. Prostacyclin (PG 12)**
- C. Histamine**
- D. Prostaglandin (PGE₂)**

19- Prostaglandins involved in inflammatory processes are typically produced from arachidonic acid by:

- A. Cyclo-oxygenase (1)**
- B. Phospholipase (A₂)**
- C. Cyclo-oxygenase (II)**
- D. Lipoxygenase**

20- A 60 year-old woman has glaucoma after cataract surgery. Which of the following can be used to reduce intraocular pressure?

- A. Alprostadil**
- B. Latanoprost**
- C. Aspirin**
- D. Misoprostol**

21- A 17 year-old patient complains that he gets severe shortness of breath whenever he takes aspirin for headache. Increased levels of which of the following may be responsible, in part, for some cases of aspirin hypersensitivity?

- A. Histamine**
- B. Leukotriene (LTC₄)**
- C. Serotonin**
- D. Prostaglandins**

22- Glucocorticoids are widely used for a host of inflammatory reactions & the diseases they cause. Which of the following enzymes is the main target of these drugs?

- A. Cyclo-oxygenase**
- B. Xanthine oxidase**
- C. 5-Lipoxygenase**
- D. Phospholipase (A₂)**

23- A new-born has blood gas & hemodynamic problems because of a patent ductus arteriosus. Which of the following drugs would be administered in an attempt to close the ductus?

- A. Cimetidine**
- B. Misoprostol**
- C. Indomethacin**
- D. Alprostadil (PGE1)**

24- Epoprostenol, an analog of PGI₂ is sometimes used by IV infusion. Which of the following is the main use for this drug?

- A. Closure of a patent ductus arteriosus in newborns**
- B. Contraception in women**
- C. Treatment of pulmonary hypertension & inhibition of platelets aggregation during dialysis.**
- D. Suppression of uterine contractility in women with premature labor**

25- A drug that is used in the treatment of male impotence:

- A. Alprostadil**
- B. Fluoxetine**
- C. Mifepristone**
- D. Zafirlukast**

26- Regarding the use of leukotriene antagonists (LTRAs and 5-LOX inhibitors), the following statement is INCORRECT:

- A. Zafirlukast and montelukast are reversible inhibitors of LT₂ receptors.**
- B. They are of special interest in aspirin-induced asthma**
- C. Zileuton needs regular monitoring for serum transaminases**
- D. Montelukast can be used once/day**
- E. Montelukast is effective in both acute attacks and prophylactic therapy**