

PATHOPHYSIOLOGY SYNOPSIS – DENTAL MEDICINE STUDENTS

1. Health and disease. Pathologic reactions, processes, conditions. Etiology and pathogenesis. Basic mechanisms of disease development and progression.
2. Reactivity and resistance of the organism. Factors influencing reactivity and resistance. Types of reactivity and resistance.
3. Allergic reactions – definition, types, pathogenesis.
4. Disorders of peripheral circulation – arterial and venous hyperemia, ischemia, infarction. Thrombosis and embolism.
5. Lipid metabolism disorders – abnormal digestion and absorption of lipids in gastrointestinal tract. Lipoproteins – types, metabolism. Disordered lipid transport in the blood. Dyslipidemias. Atherosclerosis.
6. Obesity – definition, types, pathogenesis.
7. Carbohydrate metabolism disorders – abnormal digestion and absorption of carbohydrates. Hyperglycemias and hypoglycemias.
8. Diabetes mellitus – etiology, pathogenesis, pathobiochemistry, complications.
9. Protein metabolism disorders - abnormal digestion and absorption of proteins. Changes in serum proteins.
10. Water-electrolyte balance disorders – dehydration and hyperhydration.
11. Oedemas – definition, types, pathogenesis.
12. Mineral metabolism disorders (Ca, P). Rickets. Osteoporosis.
13. Acid-base balance disorders – basic characteristics, parameters, compensations. Characteristics of the main acid-base disorders.
14. Hypoxia – definition, parameters. Hypoxia classification. Adaptations.
15. Inflammation – definition and biologic significance. Classification and outcome of inflammation. Cardinal clinical signs of inflammation.
16. Inflammation – phases of inflammation. Inflammatory mediators. Vascular changes. Inflammatory cellular response. Metabolic alterations.
17. Fever – etiology and pathogenesis. Fever significance. Fever stages. Metabolism with fever. Alterations in organ and system functions.
18. Basic mechanisms disturbing lung function and gas exchange – Restrictive disorders. Obstructive disorders. Mixed disorders.
19. Mechanisms responsible for pulmonary gas exchange disorders. Changes in V/Q ratio, pulmonary gas exchange abnormalities, alveolar hypoventilation syndrome, breathing control disorders.
20. Respiratory failure – etiology, pathogenesis, types. Acute and chronic respiratory failure.
21. Coronary artery disease – definition, types, pathogenesis.
22. Arterial hypertension – essential hypertension. Secondary (symptomatic) hypertension. Etiology, pathogenesis.
23. Acute circulatory insufficiency – syncope, shock – definition, types, etiology, pathogenesis.
24. Anaphylactic shock – etiology, pathogenesis, management.
25. Heart failure - definition, etiology, pathogenesis, types.
26. Anemias – definition, etiology, pathogenesis, classification.
27. Leukemias – etiology, pathogenesis, types.
28. Hemostatic abnormalities - hemorrhagic diathesis.
29. Gastritis and ulcers – etiology, pathogenesis, types.
30. Etiology and pathogenesis of liver disorders. Hepatitis. Liver cirrhosis.

31. Functional manifestations of liver disease – jaundice, portal hypertension, ascites.
32. Etiology and pathogenesis of kidney disorders. Functional syndromes.
33. Etiology and pathogenesis of acute and chronic renal failure.
34. Etiology and pathogenesis of endocrine disorders.
35. Disturbances in the thyroid gland function.
36. Disturbances in the adrenal glands function.
37. Obstructive sleep apnea. Bruxism.
38. Pain – definition, pathogenesis, types.

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