Exam questions\subquestions
Endocrinology
For MD program students

1. Endocrine System
1.1 Endocrine system as one of the regulatory systems
1.2 Structural and functional organization of the endocrine system
1.3 The relationship of the endocrine, nervous and immune systems
1.4 "Hormone" as a classic model of the endocrine system
1.5 Classification of hormones based on chemical structure
1.6 Stages of hormone biosynthesis
1.7 Secretory and transport properties of hormones
1.8 Metabolism and inactivation of hormones
1.9 Mechanisms of synthesis and action of hormones
1.10 Principles of hormone regulation (nervous, endocrine, neuroendocrine, metabolic, paracrine, autocrine regulation)
1.11 Principles of hormone regulation +/- communication (feedback regulation)
1.12 Clinical syndromes caused by dysfunction of the endocrine system (hormone excess, hormone deficiency, hormone metabolism, hormone transport, secretion rhythm disturbance, hormone resistance, etc.)
1.13 General characteristics of methods for studying hormones (radioimmune, immune, enzyme immunoassay, fluorescent, electrochemical and other methods)

2. Metabolic Syndrome
2.1 Metabolic syndrome as a cluster of serious disorders of the cardiovascular system and central nervous system
2.2 Prediabetic and preatherosclerotic condition
2.3 Features of the metabolic syndrome in children and adults
2.4 Basic principles of the treatment of metabolic syndrome

3. Diabetes
3.1. Classification of diabetes
3.2. Clinical aspects of the physiology of carbohydrate metabolism
3.3. Laboratory diagnostics and criteria for compensation of diabetes mellitus
3.4. Insulin preparations and insulin therapy; Insulin Pump.
3.5. Type 1 diabetes
3.6. Type 2 diabetes
3.7. Other forms of diabetes mellitus (diabetes classification based on WHO 2019)
3.8 Acute complications of diabetes mellitus
3.8.1 Diabetic ketoacidosis
3.8.2 Hyperosmolar coma
3.8.3 Hypoglycemia
3.9 Late complications of diabetes
3.9.1 Diabetic macroangiopathy
3.9.2 Diabetic retinopathy
3.9.3 Diabetic nephropathy
3.9.4 Diabetic neuropathy
3.9.5 Diabetic foot syndrome
3.10 Diabetes and pregnancy
3.11 Modern methods of diabetes control; Continuous glucose monitoring.

4. Thyroid Diseases

4.1. Anatomy and physiology of the thyroid gland
4.2. Methods of examination of patients with thyroid diseases
4.2.1. Physical Methods
4.2.2. Laboratory methods
4.2.3. Instrumental Methods
4.3. Classification of thyroid diseases
4.4. Graves' disease
4.5. Endocrine ophthalmopathy
4.6. Hypothyroidism
4.6.1. Acquired hypothyroidism
4.6.2. congenital hypothyroidism
4.7. Thyroiditis
4.7.1. Autoimmune thyroiditis
4.7.1.1. Chronic autoimmune thyroiditis
4.7.2 Postpartum, painless, cytokine-induced thyroiditis
4.7.3 Subacute thyroiditis
4.7.4. Rare thyroiditis
4.8. Nodular and multinodular euthyroid goiter
4.9. Iodine deficiency diseases
4.10 Diffuse euthyroid goiter
4.11 Functional autonomy of the thyroid gland
4.12 Mental and physical development disorders associated with iodine deficiency
4.13 Amiodarone-induced thyroid disorders
4.14 Thyroid cancer

5. Parathyroid Diseases
5.1. Anatomy and physiology of the parathyroid glands
5.2. Examination methods for diseases of the parathyroid glands
5.2.1. Physical Methods
5.2.2. Laboratory methods
5.2.3. Instrumental Methods
5.3. Primary hyperparathyroidism
5.4. Secondary hyperparathyroidism
5.5. Hypoparathyroidism
5.6. Osteoporosis

6. Adrenal Disorders
6.1. Anatomy and physiology of the adrenal glands
6.2. Methods of examination of patients with diseases of the adrenal glands
6.2.1. Physical Methods
6.2.2. Laboratory methods
6.2.3. Instrumental Methods
6.3. Classification of diseases of the adrenal glands
6.4. Cushing's syndrome and Cushing's disease
6.5. Hypocorticism
6.6. Hyperaldosteronism
6.7. Pheochromocytoma
6.8. Incidentaloma (accidentally detected mass formation)

7. Hypothalamo-Pituitary Disorders
7.1. Anatomy and physiology of the hypothalamic-pituitary system
7.2. Methods of examination of patients with hypothalamic-pituitary pathology

7.2.1. Physical Methods
7.2.2. Laboratory methods
7.2.3. Instrumental Methods
7.3. Hormonally inactive formations and infiltrative processes of the hypothalamus pituitary region
7.4. Acromegaly and Gigantism
7.5. hypopituitarism
7.6. diabetes insipidus