

TOPICAL PLAN

of practical lessons in Endocrinology for the 6th year students Sub-Residency
«General Clinical Practice» of the Medical Faculty for International
Students at the Department of Endocrinology in the fall semester of
2025/2026 academic year

1. Diabetes. Classification and diagnosis of diabetes mellitus. Obesity

World Health Organization (WHO) classification of diabetes mellitus (2019).
Modern algorithm for diagnosing disorders of carbohydrate metabolism. Differential
diagnosis of diabetes mellitus types 1 and 2, features of clinical manifestations.
Features of the diagnosis of diabetes mellitus in childhood.

Gestational diabetes mellitus: diagnostic criteria, principles of treatment and
management of pregnancy.

Chronic complications of diabetes mellitus: diabetic neuropathy and diabetic
foot syndrome, diabetic nephropathy, retinopathy (classification, diagnosis,
treatment).

Obesity: definition, classification, modern methods of diagnosis and
treatment. Features of diagnosis and treatment of obesity in children. Place of
bariatric surgery in the treatment of obesity and type 2 diabetes.

2. Principles of evidence-based treatment of diabetes. Emergency conditions in diabetes

A modern algorithm for managing patients with type 2 diabetes mellitus.
Lifestyle modification as a component of type 2 diabetes therapy. Current
possibilities of drug therapy for type 2 diabetes mellitus and obesity (metformin,
sulfonylurea derivatives, sodium glucose cotransporter 2 inhibitors, incretin
mimetics, dipeptyl peptidase-4 inhibitors, insulin and insulin analogues, daily
monitoring of glycemia). Complex therapy (multifactorial correction) of type 2
diabetes mellitus, aimed at preventing cardiac mortality.

Insulin therapy in type 1 diabetes mellitus: types of insulins and principles
for calculating the daily dose, insulin therapy regimens, complications of insulin
therapy, insulin pumps.

Principles of management of patients with somatic diseases in diabetes
mellitus. The choice of antihyperglycemic drug depending on comorbid pathology.
Monitoring of diabetes mellitus in the outpatient setting and self-monitoring at
home.

Secondary and tertiary prevention of diabetes mellitus.

Hyperglycemic coma: ketoacidotic, hyperosmolar, hyperlactacidemic -
differences in pathogenesis, clinical manifestations, principles of treatment. Stages
of medical care.

Hypoglycemic coma: etiopathogenesis, clinical manifestations, diagnosis,
principles of emergency care at various stages. Prevention of emergency conditions
in diabetes mellitus.

3. Diseases of the thyroid gland and parathyroid glands. Emergency conditions in diseases of the thyroid and parathyroid glands

Nodular pathology of the thyroid gland: clinical forms and manifestations. Principles of differential diagnostic search in the presence of nodular goiter: examination sequence; TI-RADS stratification system for signs of malignancy of thyroid nodules; indications and contraindications for fine-needle puncture biopsy. Principles of monitoring and treatment of nodular pathology of the thyroid gland depending on the nosological form of goiter. Indications and contraindications for surgical treatment of nodular goiter.

Acute and subacute thyroiditis: definition, etiology, pathogenesis, clinical presentation, diagnosis, differential diagnosis, principles of treatment.

Hypothyroidism syndrome: classification, epidemiology, etiology, pathogenesis, main clinical symptoms, differential diagnosis, examination algorithm and principles of treatment.

Subclinical hypothyroidism: the concept and criteria for verification, the impact on the risk of developing somatic pathology and the rationale for the expediency of treatment depending on the age of disease manifestation.

Hypothyroid coma: etiology, pathogenesis, clinical presentation, diagnosis, treatment.

Thyrotoxicosis syndrome: causes, clinical manifestations and differential diagnosis, examination algorithm and principles of treatment with thyrostatic therapy. Methods of radical treatment: indications and contraindications. Subclinical hyperthyroidism: the concept and criteria for verification, the impact on the risk of developing somatic pathology and the rationale for the expediency of treatment depending on the age of disease manifestation.

Thyrotoxic crisis: etiology and pathogenesis, clinical manifestations, diagnosis, emergency medical care at various stages. Prevention of thyrotoxic crisis.

Primary and secondary hyperparathyroidism: etiology and pathogenesis, features of clinical manifestations, diagnosis, differential diagnosis, principles of treatment. Hyperparathyroid crisis: etiology, pathogenesis, clinical manifestations, diagnosis, treatment.

Hypoparathyroidism: etiology, pathogenesis, clinical picture, diagnosis, differential diagnosis, principles of treatment. Hypocalcemic crisis: etiology and pathogenesis, clinical manifestations, diagnosis, emergency medical care, prevention.

4. Diseases of the adrenal glands and the hypothalamic-pituitary system. Emergency conditions in diseases of the adrenal glands

Syndromes of hypercortisolism and hypocortisolism: classification, etiology, pathogenesis, clinical picture, diagnosis, differential diagnosis, principles of treatment.

Differential diagnosis of primary and secondary hyperaldosteronism: etiology, pathogenesis, clinical picture, diagnosis, principles of treatment.

Hypersomatotropism syndrome: definition, epidemiology, etiology, pathogenesis, clinical picture (features depending on the age of manifestation of the disease), diagnostic and therapeutic tactics.

Arterial hypertension of endocrine origin. Features of its clinical manifestations in pheochromocytoma, hyperaldosteronism, hypersomatotropism.

Acute adrenal insufficiency and adrenal crisis: etiology and pathogenesis, clinical manifestations, diagnosis, emergency medical care at various stages.

Principles of prevention of Addisonian crisis in chronic adrenal insufficiency. Sympathoadrenal crisis: provoking factors, clinical manifestations, differential diagnosis, complications, treatment.

5. Endocrine aspects of reproductive health in different age periods

Polycystic ovary syndrome: insulin resistance and other causes of the disease. Modern methods of diagnostics, differential diagnostics, non-drug and drug treatment in patients with this pathology.

Congenital dysfunction of the adrenal cortex: definition, etiopathogenesis, clinical forms and their manifestations, diagnosis, differential diagnosis, principles of treatment.

Physiological and pathological causes of hyperprolactinemia. Modern methods of diagnosis and treatment of this pathology.

Hypogonadism in men and women: causes, clinical manifestations in different age periods, diagnosis, differential diagnosis, determination of expediency and principles of replacement therapy.

Causes of short stature, etiology, growth hormone deficiency (congenital, acquired), pathophysiology. The main symptoms characteristic of congenital growth hormone deficiency. Short stature diagnosis. Treatment of short stature, indications and contraindications for treatment with recombinant human growth hormone, prognosis.