

Endocrinology, Diabetes, and Metabolism

Certification Examination Blueprint

Purpose of the exam

The exam is designed to evaluate the knowledge, diagnostic reasoning, and clinical judgment skills expected of the certified endocrinologist in the broad domain of the discipline. The ability to make appropriate diagnostic and management decisions that have important consequences for patients will be assessed. The exam may require recognition of common as well as rare clinical problems for which patients may consult a certified endocrinologist.

Exam content

Exam content is determined by a pre-established blueprint, or table of specifications. The blueprint is developed by ABIM and is reviewed annually and updated as needed for currency. Trainees, training program directors, and certified practitioners in the discipline are surveyed periodically to provide feedback and inform the blueprinting process.

The primary medical content categories of the blueprint are shown below, with the percentage assigned to each for a typical exam:

Medical Content Category	% of Exam
Adrenal Disorders	10%
Pituitary Disorders	10%
Lipids, Obesity, and Nutrition	12%
Female Reproduction	7%
Male Reproduction	7%
Diabetes Mellitus and Hypoglycemia	24%
Calcium and Bone Disorders	15%
Thyroid Disorders	15%
	100%

Exam questions in the content areas above may also address clinical topics in internal medicine, including some general pediatrics with an emphasis on adolescent medicine, that are important to the practice of endocrinology.

Exam format

The exam is composed of multiple-choice questions with a single best answer, predominantly describing patient scenarios. Questions ask about the work done (that is, tasks performed) by physicians in the course of practice:

- Making a diagnosis
- Ordering and interpreting results of tests
- Recommending treatment or other patient care
- Assessing risk, determining prognosis, and applying principles from epidemiologic studies
- Understanding the underlying pathophysiology of disease and basic science knowledge applicable to patient care

Clinical information presented may include various media illustrating relevant findings, such as diagnostic imaging studies, continuous glucose monitoring tracings, radiographic studies, or patient photographs. The certification exam may include the following adrenal imaging studies and procedures:

- Differentiate among imaging techniques for adrenal disease, including computed tomography, magnetic resonance imaging, meta-iodobenzylguanidine scintigraphy, indium-labeled pentetreotide scintigraphy, fludrodeoxyglucose positron emission tomography, and 68-Ga-DOTATATE positron emission tomography.
- Interpret imaging phenotype to predict the histologic type of adrenal disease— including: benign adenoma, pheochromocytoma, adrenocortical carcinoma, and adrenal metastases.
- Identify indications for computed tomography–guided adrenal fine-needle aspiration biopsy.
- Identify indications for adrenal venous sampling for aldosterone.
- Interpret results from adrenal venous sampling (with or without cosyntropin stimulation).

The following pituitary imaging studies and procedures may be included on the exam:

- Interpret typical imaging phenotypes on magnetic resonance imaging for primary pituitary tumors, pituitary cysts, pituitary hyperplasia, metastatic lesions to the pituitary, pituitary stalk lesions, and hypothalamic masses.
- Identify indications for inferior petrosal sinus sampling for corticotropin.
- Interpret results from inferior petrosal sinus sampling.

A tutorial including examples of ABIM exam question format can be found at <http://www.abim.org/certification/exam-information/endocrinology-diabetes-metabolism/exam-tutorial.aspx>.

The blueprint can be expanded for additional detail as shown below. Each of the medical content categories is listed there, and below each major category are the content subsections and specific topics that *may* appear in the exam. Please note: actual exam content may vary.

Adrenal Disorders	10% of Exam
Glucocorticoids	4%
Cushing syndrome	
Management of glucocorticoid therapy	
Adrenal insufficiency	
Glucocorticoid resistance	
Mineralocorticoids	2%
Hyperaldosteronism	
Hypoaldosteronism	
Adrenal androgens	<2%
Congenital adrenal hyperplasia	
Adrenal incidentaloma	<2%
Adrenal medulla	<2%
Pheochromocytoma and paraganglioma	
Neurofibromatosis type 1	
von Hippel-Lindau syndrome	
Multiple endocrine neoplasia (MEN) types 2A and 2B	
Familial paraganglioma syndromes	
Familial paraganglioma-pheochromocytoma syndromes	
Adrenal cancer	<2%
Pituitary Disorders	10% of Exam
Prolactin	<2%
Hyperprolactinemia	
Normoprolactinemic galactorrhea	
Growth hormone	2%
Acromegaly	
Deficiency	
Thyroid-stimulating hormone (TSH)	<2%
TSH-secreting adenoma	
Hyperplasia secondary to longstanding primary hypothyroidism	
TSH deficiency	
Gonadotropins	<2%
Gonadotroph pituitary tumors	
Hypogonadotropic hypogonadism	

Nonsecreting pituitary tumors	<2%
Adrenocorticotrophic hormone (ACTH)	<2%
Cushing disease	
ACTH deficiency	
Hypopituitarism	<2%
Clinical presentation	
Causes	
Tumors	
Pituitary apoplexy	
Sheehan syndrome	
Hemochromatosis	
Lymphocytic hypophysitis	
Sarcoidosis	
Traumatic brain injury	
Iatrogenic (radiation, surgery)	
Treatment	
Adjustment of growth hormone according to insulin-like growth factor-1 (IGF-1) levels	
Monitoring of thyroid with free thyroxine (T4)	
Clinical adjustment of glucocorticoids	
Empty sella syndrome	<2%
Antidiuretic hormone (ADH)	<2%
Diabetes insipidus	
Syndrome of inappropriate antidiuretic hormone secretion (SIADH)	
Craniopharyngioma	<2%
Pituitary incidentaloma	<2%

Lipids, Obesity, and Nutrition	12% of Exam
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Hypercholesterolemia	<2%
Primary disorders	
Familial hypercholesterolemia	
Familial defective apolipoprotein B-100	
Lipoprotein(a)	
Elevated high-density lipoprotein cholesterol	
Secondary disorders	
Hypertriglyceridemia	<2%
Primary disorders	
Familial hypertriglyceridemia	
Apoprotein/lipase disorders	
Secondary disorders	
Chylomicronemia syndrome	

Elevated triglycerides and low-density lipoprotein cholesterol	2.5%
Primary disorders	
Familial combined hyperlipidemia	
Familial dysbetalipoproteinemia (type III)	
Hypobetalipoproteinemia (Low LDL-c)	
Secondary disorders	
Hypolipidemia	<2%
Primary disorders	
Secondary disorders	
Treatment of lipid disorders	2.5%
Diet	
Drugs	
Lifestyle	
Indications for treatment	
Obesity and nutrition	3%
Genetic disorders	
Secondary disorders	
Comorbidities	
Treatment of obesity	
Diet	
Drugs	
Lifestyle	
Surgery	
Indications for treatment	
General nutrition	<2%
Energy requirements	
Vitamin deficiency	
Enteral nutrition	
Counseling	<2%

Female Reproduction	7% of Exam
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Amenorrhea	<2%
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Primary	
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Androgen insensitivity syndrome	
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Turner syndrome	
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Congenital gonadotropin-releasing hormone (GnRH) deficiency	
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Secondary	
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Hyperandrogenism	<2%
Polycystic ovary syndrome	
Non-polycystic ovary syndromes	
Hyperthecosis	
Ovarian tumors	
Adrenal tumors	
Nonclassic congenital adrenal hyperplasia	
Pregnancy-associated	
Anabolic steroids	
Premenstrual syndrome and premenstrual dysphoric disorder	<2%
Endocrine causes of infertility	<2%
Anovulation	
Age-associated infertility (diminished ovarian reserve)	
Hormonal contraception	<2%
Combined estrogen–progestin contraceptives	
Progestin-only contraception	
Perimenopause and menopause	<2%
Perimenopause	
Menopause	
Estrogen–progestin therapy	
Sexual differentiation	<2%
Gender dysphoria	
Female-to-male transition management	

Male Reproduction	7% of Exam
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Hypogonadism	2%
Testosterone in hypogonadism	
Sex hormone binding globulin (SHBG)–dependent changes in testosterone	
Primary hypogonadism	
Secondary hypogonadism	
Genetic disorders of androgen production and action	
Testosterone therapy	
Gonadotropins	
Infertility	<2%
Causes	
Cryptorchidism	
Klinefelter syndrome	
Cystic fibrosis and cystic fibrosis gene mutations	
Drug-induced infertility	

Obstructive azoospermia	
Idiopathic oligozoospermia	
Y-chromosome microdeletions	
Treatment	
Gonadotropins	
Testicular sperm extraction	
Intracytoplasmic sperm injection	
Gynecomastia	<2%
Causes	
Drug-induced gynecomastia	
Testicular tumors (Sertoli and Leydig cell tumors)	
Extratesticular tumors	
Androgen deprivation therapy for prostate cancer	
Hyperthyroidism	
Pubertal gynecomastia	
Idiopathic and other rare causes of gynecomastia	
Treatment	
Tamoxifen	
Aromatase inhibitors	
Mammoplasty and mastectomy	
Erectile dysfunction	<2%
Causes	
Smoking	
Diabetes mellitus	
Hypertension	
Hyperlipidemia	
Peyronie disease	
Pelvic and prostate surgery	
Obesity	
Diagnostic tests	
Treatment	
Phosphodiesterase-5 and nonspecific phosphodiesterase inhibitors	
Prostaglandin E1, intraurethral and intracavernosal	
Alpha-adrenergic blockers	
Penis pump (penile vacuum device)	
Penile implant	
Testosterone in aging men	<2%
Abuse of androgens and anabolic steroids	<2%
Sexual differentiation	<2%
Gender dysphoria	
Male-to-female transition management	
Ejaculatory dysfunctions	<2%
Premature ejaculation	

Diabetes Mellitus and Hypoglycemia	24% of Exam
Prediabetes	2%
Impaired fasting glucose	
Impaired glucose tolerance	
Screening	
Diabetes prevention	
Monitoring glycemic control	2%
Hemoglobin A _{1c}	
Fructosamine and 1,5-anhydroglucitol	
Conventional glucose monitoring	
Ketone testing	
Continuous glucose monitoring (CGM)	
Type 1 diabetes mellitus	3.5%
Ketoacidosis	
Recent-onset type 1 diabetes	
Latent autoimmune diabetes of the adult (LADA)	
Hyperglycemia in type 1 diabetes	
Hypoglycemia due to insulin management	
Hypoglycemia unawareness	
Pathogenesis of type 1 diabetes	
Type 2 diabetes mellitus	4.5%
Hyperosmolar nonketotic state	
Hyperglycemia in type 2 diabetes	
Hypoglycemia due to oral agents and insulin management	
Pathogenesis of type 2 diabetes	
Additional types of diabetes	<2%
Monogenic diabetes	
Ketosis-prone diabetes (KPD)	
New-onset diabetes after transplant (NODAT)	
[post-transplant diabetes mellitus (PTDM)]	
Pancreatic diabetes	
Cystic fibrosis–related diabetes	
Drug-induced diabetes	
Recognition and management of associated conditions	<2%
Hypertension	
Dyslipidemia	
Obesity	
Sleep apnea	
Fatty liver	

Thyroid disease	
Celiac disease	
Polycystic ovary syndrome	
Eating disorders	
Pregnancy	<2%
Gestational diabetes	
Pre-gestational diabetes	
Diabetes mellitus complications	4.5%
Microvascular	
Retinopathy	
Nephropathy	
Neuropathy	
Macular edema	
Mononeuropathies	
Macrovascular	
Coronary artery disease	
Heart failure	
Peripheral vascular disease	
Diabetic foot	
Skin disorders	
Lipohypertrophy	
Lipoatrophy	
Necrobiosis lipoidica	
Acanthosis nigricans	
Neuropsychiatric	
Islet cell and pancreas transplantation	<2%
Hypoglycemia independent of diabetes mellitus	2%
Insulinoma	
Noninsulinoma	
Inpatient diabetes mellitus management	<2%
Intensive care unit	
Non-intensive care unit	

Calcium and Bone Disorders	15% of Exam
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Hypercalcemia	3%
Parathyroid hormone-mediated	
Primary hyperparathyroidism	
Familial hypocalciuric hypercalcemia	
Lithium-induced	

Non–parathyroid hormone–mediated	
Hypercalcemia of malignancy	
Milk-alkali syndrome	
Sarcoidosis, tuberculosis, and other granulomatous diseases	
Vitamin D intoxication	
Post-rhabdomyolysis	
Adynamic bone disease	
Myeloma	
Acute adrenal insufficiency	
Vitamin A	
Hypocalcemia	2.5%
Hypoparathyroidism	
Parathyroid hormone (PTH) resistance	
Hypomagnesemia	
Hyperphosphatemia	
Celiac disease	
Hypocalcemia (general)	
Osteoporosis	4%
In female	
In male	
Post-transplantation and glucocorticoid-induced	
Renal, hepatic, and gastrointestinal disease–related	
Paget disease of bone	<2%
Hypovitaminosis D	<2%
Dietary deficiency	
Limited sun exposure	
Malabsorption	
Liver failure	
Renal insufficiency	
Vitamin D–dependent rickets types I and II	
Vitamin D–resistant rickets	
Drug-induced	
Bone disease	
Nonskeletal disorders	
Osteomalacia and rickets	<2%
Chronic hypophosphatemia	
Inhibitors of mineralization	
Renal osteodystrophy	<2%
Nephrolithiasis	<2%
Osteogenesis imperfecta and bone dysplasias	<2%

Fibrous dysplasia and other dysplastic syndromes	<2%
Calciophylaxis	<2%
Hypophosphatemia	<2%
Renal losses	
Gastrointestinal malabsorption	
Internal redistribution	
Rare bone diseases	<2%
Hypophosphatasia	
Fibrodysplasia ossificans progressiva	
Osteopetrosis	

Thyroid Disorders	15% of Exam
Hyperthyroidism	3.5%
Graves disease	
Toxic adenoma and multinodular goiter	
Inappropriate thyroid-stimulating hormone (TSH) syndromes	
TSH-secreting tumor	
Resistance to thyroid hormone and thyroid hormone action	
Artifactual TSH “derangements”	
Thyrotoxicosis with low radioactive iodine uptake	
Thyroiditis	
Factitious, accidental, and iatrogenic thyrotoxicosis	
Iodine-induced	
Struma ovarii	
Complicated thyrotoxicosis	
Subclinical hyperthyroidism	
Hypothyroidism	2.5%
Primary	
Secondary	
Subclinical hypothyroidism	
Complicated hypothyroidism	
TSH resistance	
Therapy	
Nontoxic solitary nodules and multinodular goiter	3%
Fine-needle aspiration/cytology and genetic test interpretation	
Roles of ultrasonography and radionuclide scanning	
Treatment	
Surgery	
Radioactive iodine	
Minimally invasive and noninvasive treatments	

Thyroid cancer	3.5%
Well-differentiated epithelial cancers	
Hürthle cell cancer	
Anaplastic cancer	
Lymphoma	
Medullary cancer	
Thyroid test abnormalities without thyroid disease	<2%
Euthyroid hypothyroxinemia	
Euthyroid hyperthyroxinemia	
Effect of drugs on thyroid function tests	
Euthyroid sick syndrome	
Thyroid hormone antibodies	
Antibody interferences with TSH measurement	
Thyroid diseases in pregnancy	<2%
Hypothyroidism	
Hyperthyroidism	
Thyroid nodule and cancer	

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