Endocrinology Curriculum

The Educational Purpose

Endocrinology is the subspecialty of internal medicine dealing with the endocrine glands and hormones and their roles in health and diseases. The goal of the resident is to gain a general knowledge of the major conditions specific to the endocrine system, be able to interpret basic endocrinologic diagnostic tests, and be able to diagnose and manage a variety of common endocrinolgic disorders, making referrals when appropriate.

(Modified from the American College of Physicians Subspecialty Websit

Patient Care

Goal #1: Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

Objective #1: Residents must be able to gather essential and accurate patient information to assess patient concerns, with special attention to the following presentations:

Place a check mark indicating your achievement of the learning objective.

PGY-1		Fatigue		Hypertension
		Weight change/ Obesity		Hypotension
		Exophthalmos		Hyperglycemia
PGY-2		Abnormal growth		Goiter
		Hypoglycemia		Acromegaly
		Abnormalities in electrolytes, including calcium, phosphate		
PGY-3		Abnormal menstruation / Amenorrhea		Breast discharge / Galactorrhea
		Impotence / Infertility		Hirsutism
		Gynecomastia		

Objective #2: Residents will be able to develop and carry out patient management plans by making informed decisions on diagnostic and therapeutic interventions, counseling and educating patients and their families, and preventing health problems or maintaining health based on patient information and preferences, up-to-date scientific evidence, and clinical judgment with special attention to the following illnesses or conditions:

Place a check mark indicating your achievement of the learning objective.

PGY-1		Bone disorders: osteopenia and osteoporosis		Lipid disorders
		Diabetes mellitus: Type I		Thyroid disorders: Hyperthyroidism, hypothyroidism and thyroiditis
		Diabetes mellitus: Type II / Insulin resistance and the metabolic syndrome		Thyroid disorders: thyroid nodules, toxic multinodular goiter and toxic adenomas

PGY-2		Diabetic ketoacidosis and Hyperosmolar coma		Secondary hypertension
		Adrenal disorders: Cushing's syndrome, hyperaldosteronism, Addison's disease		Adrenal disorders: congenital adrenal hyperplasia
		Pituitary disorders: diabetes insipidus, panhypopituitarism		Pituitary tumors: prolactinoma, Cushing's disease, acromegaly, incidentalomas
		Pheochromocytoma		Disorders of the parathyroid gland and of calcium metabolism
		Menopause		
PGY-3		Hypogonadism / impotence		Thyroid storm
		Polycystic ovarian syndrome		Adrenal crisis / adrenal insufficiency
		Multiple endocrine disorders		Metabolic bone disease: Paget's and renal osteodystrophy
Objective #3: Residents must competently perform and interpret the results of all diagnostic and therapeutic medical and invasive procedures considered essential after obtaining informed consent, with confidence and minimal discomfort to patients: **Place a check mark indicating your achievement of the learning objective.**				
PGY-1		Fingerstick blood sugar testing		
Objective #4: Residents must communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families. **Place a check mark indicating your achievement of the learning objective.**				
PGY-1		Basic dietary counseling for diabetes, hyperlipidemia, and obesity.		Education for patients on the disease course of diabetes and rationale of treatment to decrease
PGY-2		Obesity counseling and options.		

Medical Knowledge				
Goal #2: Residents must demonstrate knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care.				
Objective #2: Residents must know and apply the basic and clinical supportive sciences applicable to Endocrinology with special attention to: **Place a check mark indicating your achievement of the learning objectives below.**				
PGY-1		Interpretation of dexamethasone suppression test		Interpretation of home blood glucose monitoring logs
		Interpretation of cosyntropin stimulation test		Pharmacology of various insulin preparations
		Pharmacology of oral hypoglycemics		
PGY-2		Interpretation of thyroid function tests		Interpretation of thyroid nuclear scans
PGY-3		Interpretation of sex hormone levels		

Practice-Based Learning and Improvement				
Goal #3: Residents must be able to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices.				
Objective #4: Residents must be able to analyze practice experience and perform practice-based improvement activities using a systematic methodology.				
Place a check mark indicating your achievement of the learning objectives below in the area of Endocrinology.				
PGY-1		Residents should participate in practice based improvement to ensure adequate diabetic control		
Objective #5: Residents must be able to obtain and use information about their own population of patients and the larger population from which their patients are drawn.				
Place a check mark indicating your achievement of the learning objectives below in the area of Endocrinology.				
PGY-1		Residents must recognize demographic and cultural differences in risk for diabetes and obesity		

Systems Based Practice				
Goals #6: Residents must demonstrate both an understanding of the contexts and systems in which health care is provided and the ability to apply this knowledge to improve and optimize patient care.				
Objective #1: Residents must demonstrate an understanding of, and the ability to access and utilize the resources, providers, and systems necessary to provide optimal care.				
Place a check mark indicating your achievement of the learning objectives below in the area of Endocrinology.				
PGY-1		Residents should recognize the importance of working as a multidisciplinary team to help patients with chronic endocrinologic diseases such as diabetes, hyperlipidemia and obesity.		
Objective #3: Residents must demonstrate the ability to use cost-conscious strategies which are evidence-based in prevention, diagnosis, and disease management.				
Place a check mark indicating your achievement of the learning objectives below in the area of Endocrinology.				
PGY-1		Screening for diabetes mellitus and hyperlipidemia.		Monitoring for obesity.
		Screening for osteoporosis		

The Teaching Methods

Endocrinology Elective Rotatio

Endocrinology clinic at the VA

Endocrinology Suggested Reading List

1) Expert Committee on the Diagnosis and Classification of Diabetes Mellitus. Report of the expert committee on the diagnosis and classification of diabetes mellitus. Diabetes Care. 2003; 26:S5-20.

2) Nathan, DM, Buse, JB, Davidson, MB, et al. Management of Hyperglycemia in Type 2 Diabetes: A Consensus Algorithm for the Initiation and Adjustment of Therapy: A consensus statement from the American Diabetes Association and the European Association for the Study of Diabetes. Diabetes Care 2006; 29:1963.

3) Bakris, GL, Williams, M, Dworkin, L, et al. Preserving renal function in adults with hypertension and diabetes: a consensus approach: National Kidney Foundation Hypertension and Diabetes Executive Committees Working Group. Am J Kidney Dis 2000; 36:646.
4) Buse, JB, Ginsberg, HN, Bakris, GL, et al. Primary prevention of cardiovascular diseases in people with diabetes mellitus: a scientific statement from the American Heart Association and the American Diabetes Association. Circulation 2007; 115:114.
5) Yusuf, S, Sleight, P, Pogue, J, et al. Effects of an angiotensin-converting-enzyme inhibitor, ramipril, on cardiovascular events in high-risk patients. The Heart Outcomes Prevention Evaluation Study Investigators. N Engl J Med 2000; 342:145.
6)Third Report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III) final report. Circulation 2002; 106:3143.
7) McTigue, KM, Harris, R, Hemphill, B, et al. Screening and interventions for obesity in adults: summary of the evidence for the U.S. Preventive Services Task Force. Ann Intern Med 2003; 139:933.
8) Snow, V, Barry, P, Fitterman, N, et al. Pharmacologic and surgical management of obesity in primary care: a clinical practice guideline from the American College of Physicians. Ann Intern Med 2005; 142:525.
9) Marx, S.J. "Hyperparathyroid and Hypotarathyroid disorders." New England Journal of Medicine. 343 (25) : 1863-75, 2000 Dec 21.
10) Weetman, A.P. "Grave's Disease." New England Journal of Medicine. 343 (17): 1236-48, 2000 Oct 26

11) Cooper, D.S. Clinical Practice: Subclinical Hypothyroidism. New England Journal of Medicine. 345 (4) 260-5, 2001 Jul 26.

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