

Resident Rotation in Endocrinology, Metabolism and Lipids

Medicine Residents Rotating In Endocrinology And Metabolism

Welcome to your subspecialty rotation in Endocrinology, Metabolism, and Diabetes! On the reverse side of this page please schedules specific to your facility. We feel confident your month will provide you with clinical experience dealing with the most commonly encountered issues in Endocrinology. In addition, you will be exposed to current research in Endocrinology; research pursued here at Emory, and research within the literature. You will be guided in your experience, usually by a clinical fellow in Endocrinology, and always by an Endocrinology Attending Physician. **At the conclusion of your rotation you will be asked to complete the accompanying evaluation form.**

Educational Goals And Objectives Of Your Rotation

1. Principles of in-, and outpatient management for diabetes mellitus.
2. Principles of diagnosing and treating hyper-, and hypothyroidism
3. Diagnosis and treatment of adrenal insufficiency, Cushing's Syndrome, and primary hyperaldosteronism
4. Diagnosis and management of a pituitary tumor, and pan-hypopituitarism.
5. Differential diagnosis and management of hypercalcemia.
6. Completion of the attached selected bibliography.
7. PGY 1, 2, and 3 residents do not have different goals during this rotation because there is only one month of resident rotation in Endocrinology Elective offered during Internal Medicine Training.

During this rotation you are not allowed to work more than 80 hours a week. You must have one day in seven off of work. Please let your attending know if you are assigned overnight call as an additional duty during your Endocrinology rotation. If so, you should go home the morning after being on call after brief follow-up of the endocrinology service patients. Problems with scheduling or with your rotation should be directed to your attending or Dr. Mark Nanes, Program Director, Endocrinology Training Program, 404-321-6111, ext 2069, or mnanes@emory.edu.

**Emory University School of Medicine
Division of Endocrinology and Metabolism**

Grady Hospital					
	<i>Mon</i>	<i>Tues</i>	<i>Wed</i>	<i>Thurs</i>	<i>Fri</i>
7:30 AM		Grand Rounds (EUH)			
8:30 AM	*Inpatient rounds		*Inpatient rounds	*Inpatient rounds	*Inpatient rounds
9:00 AM		VA Diabetes Clinic			
		v			
		v			
		v			
		v		Adult/Peds Endo Conf	
Noon				(4th fl Education bld)	
1:00 PM	Attending Rounds	*Inpatient rounds		Endocrine Clinic	
				(Clinic bld section J)	
				v	
				v	
				v	
				v	
4:00 PM	Pathophysiology (WMRB 1001)	Attending Rounds	Attending Rounds	v	Attending Rounds
				v	
5:00 PM	Division Conference (WMRB 1001)			Attending Rounds	
	*schedule inpatient rounds with attending				

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Emory Clinic					
	<i>Mon</i>	<i>Tues</i>	<i>Wed</i>	<i>Thurs</i>	<i>Fri</i>
7:30 AM		Grand Rounds (EUH)			
8:30 AM	Endocrine Clinic	Endocrine Clinic	Endocrine Clinic	Endocrine Clinic	Endocrine Clinic
9:00 AM	v	v	v	v	v
	v	v	v	v	v
	v	v	v	v	v
	v	v	v	v	v
Noon				Adult/Peds Endo Conf (4th fl Education bld)	
1:00 PM	Endocrine Clinic	Endocrine Clinic	Endocrine Clinic	Grady Endocrine Clinic	Endocrine Clinic
	v	v	v	v	v
	v	v	v	v	v
	v	v	v	v	v
	v	v	v	v	v
	v	v	v	v	v
4:00 PM	Pathophysiology (WMRB 1001)	v	v	v	v
		v	v	v	v
5:00 PM	Division Conference (WMRB 1001)				

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VA Medical Center					
	<i>Mon</i>	<i>Tues</i>	<i>Wed</i>	<i>Thurs</i>	<i>Fri</i>
7:30 AM		Grand Rounds (EUH)			
8:30 AM	Diabetes Clinic v	Diabetes Clinic v	Lipid Clinic v	Endocrine Clinic (optional) v	Thyroid Biopsy Clinic v
9:00 AM	v	v	v	v	v
	v	v	v	v	v
	v	v	v	v	v
	v	v	v	v	v
Noon				Adult/Peds Endo Conf (4th fl Education bld)	
1:00 PM	*Inpatient Rounds	Endocrine Clinic v	*Inpatient Rounds	Grady Endocrine Clinic v	*Inpatient Rounds
		v		v	
		v		v	
		v		v	
		v		v	
		v		v	
4:00 PM	Pathophysiology (WMRB 1001)	v v		v v	
5:00 PM	Division Conference (WMRB 1001)				
	*Schedule rounds with attending				

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Emory Hospital Rotation					
	<i>Mon</i>	<i>Tues</i>	<i>Wed</i>	<i>Thurs</i>	<i>Fri</i>
7:30 AM		Grand Rounds (EUH)			
8:30 AM	*Inpatient Rounds	*Inpatient Rounds	*Inpatient Rounds	*Inpatient Rounds	*Inpatient Rounds
9:00 AM					
Noon				Adult/Peds Endo Conf (4th fl Education bld)	
1:00 PM				Grady Endocrine Clinic	
				v	
				v	
				v	
				v	
				v	
4:00 PM	Pathophysiology (WMRB 1001)			v	
				v	
5:00 PM	Division Conference (WMRB 1001)				
	*Schedule rounds with attending				

Evaluation of Endocrinology Rotation

The attending was available to see patients with me: never usually always

This rotation I learned: nothing some a lot

I was directed to literature sources when I inquired: never usually always

My attending was a role model for me: yes no

I worked more than 80 hours/week: yes no

I got at least two days off/month: yes no

Comments about the rotation:

Positive aspects of this rotation:

Things in need of repair in this rotation:

Endocrinology Rotation Selected Bibliography

Diabetes mellitus:

- 1) The effect of intensive treatment of diabetes on the development and progression of long-term complications in insulin-dependent diabetes mellitus. The Diabetes Control and Complications Trial Research Group. *NEJM* 329(14):977-86,1993
- 2) Intensive insulin therapy prevents the progression of diabetic microvascular complications in Japanese patients with non-insulin dependent diabetes mellitus: a randomized prospective 6-year study. Ohkubo, et al, *Diabetes Research and Clinical Practice* 28:103-117, 1995
- 3) Intensive blood-glucose control with sulphonylureas or insulin compared with conventional treatment and risk of complications in patients with type 2 diabetes (UKPDS 33), UK Prospective Diabetes Study (UKPDS) Group, *Lancet* 352:837-853,1998
- 4) Silent myocardial ischemia in patients with diabetes. Janand-Delenne, et al. *Diabetes Care* 22:1396-1400, 1999
- 5) Perioperative glycemic control and the risk of infectious complications in a cohort of adults with diabetes. Golden, et al. *Diabetes Care* 22:1408-1414, 1999
- 6) Glucose transporters and insulin action. Shepherd, P.R. and Kahn, B.B. *NEJM* 341(4):248-257,1999
- 7) Nephropathy in patients with type 2 diabetes mellitus. Ritz, E and Orth, R *NEJM* 341(15):1127-1133,1999
- 8) Treatment of diabetic retinopathy. Ferris, et al *NEJM* 341(9):667-678,1999

Adrenal Disorders:

Cushing's Syndrome

- 9) Newer diagnostic techniques and problems in Cushing's disease. Findling, JW and Raff, H. *Endocrinol Metab Clin North Am.* 28:191-210, 1999
- 10) Cavernous sinus sampling is highly accurate in distinguishing Cushing's disease from ectopic adrenocorticotropin syndrome and in predicting intrapituitary tumor location. Graham, et al *J Clin Endocrinol Metab.* 84:1602-1610,1999
- 11) Late-night salivary cortisol as a screening test for Cushing's syndrome. Raff, et al. *J Clin Endocrinol Metab.* 83:2681-2686,1999

Adrenal Insufficiency

- 12) Steroid therapy for adrenal disorders—getting the dose right. Kleerekoper, et al *J Clin Endocrinol Metab.* 82:3923-3925,1997
- 13) Perioperative glucocorticoid coverage: a reassessment 42 years after emergence of a problem. Salem, et al *Annals of Surgery* 219(4):416-425,1994
- 14) Clinical Review 93: Autoimmune polyglandular syndrome type 1. Betterle, et al *J Clin Endocrinol Metab.* 83:1049-55,1998

Endocrine Hypertension

- 15) Glucocorticoid-remediable aldosteronism. Dluhy, et al *J Clin Endocrinol Metab.* 84:434-4,1999
- 16) Pheochromocytoma and primary aldosteronism: Diagnostic approaches. *Endocrinol Metab Clin North Am.* 26:801-827,1997
- 17) Hyperaldosteronism: Sampling the adrenal veins. *Radiology* 198:309, 1996
- 18) Disorders of aldosterone biosynthesis and action. White, PC *NEJM* 331:250-258,1994

Nonfunctioning adrenal mass

- 19) Adrenal incidentaloma: An overview of clinical and epidemiological data from the National Italian Study Group. Angeli, et al. *Horm Res.* 47:279-283, 1997

Congenital adrenal hyperplasia

20) Congenital adrenal hyperplasia. Pang, S. *Endocrinol Metab Clin North Am.* 26:853-891,1997

Gonadal disorders

21) Polycystic ovary syndrome. Taylor, AE *Endocrinol Metab Clin North Am.* 27(4):877-902,1998

22) Hypogonadotropic hypogonadism. Hayes, et al *Endocrinol Metab Clin North Am.* 27(4):739-763,1998

23) Gonadal function in men with chronic illness. Turner, et al. *Clin Endocrinol* 47:379,1997

Hypothalamic-pituitary disorders

24) Pituitary surgery. Laws, et al. *Endocrinol Metab Clin North Am.* 28:119-131,1999

25) Recovery of hypopituitarism after neurosurgical treatment of pituitary adenomas. Webb, et al. *J Clin Endocrinol Metab.* 84:3696-3700,1999

26) Pathogenesis of pituitary tumors. Melmed, S. *Endocrinol Metab Clin North Am.* 28:1-12,1999

Prolactinoma

27) Diagnosis and treatment of prolactinomas. Molitch, ME. *Adv. Intern Med* 44:117-153,1999

28) Long-term treatment of prolactin-secreting macroadenomas with pergolide. Freda, et al *J Clin Endocrinol Metab.* 85:8-13,2000

Acromegaly

29) Evaluation of disease status with sensitive measure for growth hormone secretion in 60 postoperative patients with acromegaly. Freda, et al. *J Clin Endocrinol Metab.* 83:3808-3816,1998

30) Long-term mortality after transsphenoidal surgery and adjunctive therapy for acromegaly. Swearingen, et al. *J Clin Endocrinol Metab.* 83:3419-3426,1998

31) Medical therapy for acromegaly. Newman, CB. *Endocrinol Metab Clin North Am.* 28:171-190,1999

32) Cabergoline in the treatment of acromegaly. A study in 64 patients. Abs, et al *J Clin Endocrinol Metab.* 83:374-378,1998

33) A comparison of lanreotide and octreotide LAR for treatment of acromegaly. Turner, et al *Clin Endocrinol* 51:275-280,1999

34) Treatment of acromegaly with the growth hormone-receptor antagonist pegvisomant. Trainer, et al. *NEJM* 342:1171-1177,2000

35) Outcome of radiotherapy for acromegaly using normalization of insulin-like growth factor I to define cure. Powell, et al. *J Clin Endocrinol Metab.* 85:2068-2071,2000

Cushing's disease

36) Risk factors and long-term outcome in pituitary-dependent Cushing's disease. Sonino, et al *J Clin Endocrinol Metab.* 81:2647-2652,1996

37) Long-term mortality after transsphenoidal surgery for Cushing disease. Swearingen, et al. *Ann Int Med* 130:821-824,1999

38) Medical therapy for Cushing's disease. Sonino, et al. *Endocrinol Metab Clin North Am.* 28:211-222,1999

39) The long-term outcome of pituitary irradiation after unsuccessful surgery in Cushing's disease. Estrada, et al. *NEJM* 336:172-177,1997

Non-functioning adenomas

40) Anterior pituitary function in patients with nonfunctioning pituitary adenoma: results of longitudinal follow-up. Tominaga et al. *Endocrine J* 42:421-427,1995

41) Audit of selected patients with nonfunctioning pituitary adenomas treated without irradiation-a follow-up study. Turner, et al. *Clin Endocrinol* 51:281-284,1999

Hypopituitarism

42) Mutation of the POU-specific domain of Pit-1 and hypopituitarism without pituitary hypoplasia. Pfäffle, et al *Science* 257:1118, 1992

43) Mutations in PROP-1 cause familial combined pituitary hormone deficiency. Wu, et al. *Nature Genetics* 18:147, 1998

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44) The effect of hypopituitarism on life expectancy. Bates, et al J Clin Endocrinol Metab. 81:1169-1172,1996

Diabetes insipidus

45) Diabetes insipidus. Roberston, GL. Endocrinol Metab Clin North Am. 24:549-572,1995

46) Diabetes insipidus, diabetes mellitus, optic atrophy and deafness (DIDMOAD) caused by mutations in a novel gene (wolframin) coding for a predicted transmembrane protein. Strom, et al. Hum Mol Genet 7:2021-2028,1998

47) Prevalence, predictors, and patterns of postoperative polyuria and hyponatremia in the immediate course after transsphenoidal surgery for pituitary adenoma. Hensen, et al. Clin Endocrinol 50:431-439,1999

Hypo/Hyponatremia

48) Adroge J, Madias NE, Hyponatremia. New Engl J Med 342 (20):1493 2000.

49) Hyponatremia: epidemiology, pathophysiology, and therapy. Curr Opin Nephrol Hyperten 2:635-652,1993

50) Acute hyponatremia in the perioperative period: insights into its pathophysiology and recommendations for management. Clinical Nephrol 50:352-359,1998

51) V2-vasopressin receptor antagonists-Mechanism of effect and clinical implications in hyponatremia. *Nephrol Dial Transplant* 14:2559-2563,1999

Misc

52) Endocrine changes in liver disease. Bayraktar, et al. The Endocrinologist 5:403,1995

53) Acute and prolonged critical illness as different neuroendocrine paradigms. Van den Berghe, et al. J Clin Endocrinol Metab. 83:1827,1998

Thyroid

54) Klein and Ojamma: Thyroid hormone and cardiovascular system, NEJM:344(7): 501

55) Hak et al, Subclinical hypothyroidism is an independent risk factor for atherosclerosis and myocardial infarction in elderly women, Ann Int Med 2000 132:270-278

56) Surks and Sievert, Drugs and Thyroid function, NEJM1995 333:1688

57) Chopra, Euthyroid Sick Syndrome: Is it a misnomer? JCEM1997 82 (1):329

58) Weetman, Graves Disease, NEJM, 343 no 17:1236

59) Ortiz et al, Effect of early referral to an endocrinologist on efficiency and cost of evaluation and development of treatment plan in patients with thyroid nodule. JCEM 1998; 83:3803

60) Haugen et al, A comparison of recombinant human thyrotropin and thyroid hormone withdrawal for the detection of thyroid remnant or cancer. JCEM 1999; 84:3877

61) Mazzaferri and Kloos, Current approaches to primary therapy for papillary and follicular thyroid cancer. JCEM 2000; 86:1447

Bone & Mineral Disorders

62) Favus, MJ, ed. Primer on Metabolic Bone Diseases and Disorders of Mineral Metabolism, Fourth Ed. Lippincott-Raven, Philadelphia, 1999

Endocrinology texts including the Primer on Bone and Mineral Metabolism are available for loan.