

Chapter 14

PERIPHERAL NERVOUS SYSTEM: Cranial Nerves and Spinal Nerves

CHAPTER OVERVIEW: This chapter discusses the parts of the peripheral nervous system and their relative positions in the body, including their attachments to the CNS and the structures each nerve innervates.

OUTLINE (two or three fifty-min. lectures):
Seeley, A&P, 5/e

Chapt. Object.	Topic Outline, Chapter 14	Figures & Tables	Transparency Acetates
	I. Cranial Nerves, p. 434	Table 14.1, p.435-440 Fig. 14.1, p.434 Clinical Focus, p.441	TA-279
1	A. General Information 1. 12 Pairs 2. Indicated by Roman Numerals - Anterior to Posterior		
2	B. Grouped by Function 1. Sensory Only a. Olfactory Nerve (I) b. Optic Nerve (II) c. Vestibulocochlear Nerve (VIII)	Table 14.2, p.440 Table 14.1, p.435 Table 14.1, p.435 Table 14.1, p.438	TA-279 TA-279 TA-282
3	2. Somatomotor and Proprioception a. Trochlear Nerve (IV) b. Abducens Nerve (VI) c. Accessory Nerve (XI) d. Hypoglossal Nerve (XII)	Table 14.1, p.436 Table 14.1, p.437 Table 14.1, p.439 Table 14.1, p.440	TA-280 TA-281 TA-284 TA-284
4	3. Somatomotor, Proprioception, and Sensory a. Trigeminal Nerve (V)	Table 14.1, p.436 Clinical Note, p.442	TA-281
	1). Ophthalmic Branch 2). Maxillary Branch 3). Mandibular Branch		
5	4. Somatomotor, Proprioception, and Parasympathetic a. Oculomotor Nerve (III)	Table 14.1, p.435	TA-280

		Predict Quest. 1	
6	E. Somatomotor, Proprioception, Sensory, and Parasympathetic		
	a. Facial Nerve (VII)	Table 14.1, p.437	TA-282
	b. Glossopharyngeal Nerve (IX)	Table 14.1, p.438	TA-283
	c. Vagus Nerve (X)	Table 14.1, p.439	TA-283
		Predict Quest. 2, 3	
7	II. Spinal Nerves, p. 442	Fig. 14.2, p.443	TA-286
	1. Dorsal Root and Dorsal Root Ganglion	Fig. 14.3, p.444	TA-287
	2. Ventral Root	Predict Quest. 4	
8	3. Dermatomes	Fig. 14.4, p.446	
10	4. Rami	Fig. 14.2a, p.443	TA-286
9	a. Dorsal Ramus		
	b. Ventral Ramus		
11	5. Nerve Plexuses		
12	A. Cervical Plexus	Fig. 14.5, p.447	TA-288
	a. Roots from C1-C4		
	b. Phrenic Nerve from C3-C5	Predict Quest. 5	
13	B. Brachial Plexus	Fig. 14.6, p.448	TA-289
	a. Roots from C5-T1	Clinical Note, p.446	
	b. Trunks (3 total)		
	c. Divisions (6 total)		
	d. Cords (3 total)		
14	e. Branches (5 Nerves)		
	1). Axillary Nerve	Fig. 14.7, p.449	TA-290
	2). Radial Nerve	Fig. 14.8, p.450	TA-291
		Clinical Note, p.446	
		Predict Quest. 6	
	3). Musculocutaneous Nerve	Fig. 14.9, p.451	TA-292
	4). Ulnar Nerve	Fig. 14.10, p.452	TA-293
		Clinical Note, p.447	
	5). Median Nerve	Fig. 14.11, p.453	TA-294
		Clinical Focus, p.449	
	6). Other Nerves of the Brachial Plexus	Fig. 14.6, p.448	TA-289
		Clinical Note, p.451	
	C. Lumbar and Sacral Plexuses		
	a. Roots from L1-S4 - Lumbosacral Plexus	Fig. 14.12, p.454	TA-295
	1). Lumbar Plexus		

		(L1-L4)		
		2). Sacral Plexus (L4-S4)		
		b. Anterior & Posterior Divisions		
15		c. Major Nerves		
		1). Obturator Nerve	Fig. 14.13, p.455	TA-296
		2). Femoral Nerve	Fig. 14.14, p.456	TA-297
16		3). Tibial and Common Fibular Nerves	Fig. 14.15, p.457	TA-298
			Clinical Note, p.453	
			Fig. 14.16, p.453	TA-299
		5). Other	Fig. 14.12, p. 454	TA-295
		Lumbrosacral Nerves		
		a). Iliohypogastric Nerve		
		b). Ilioinguinal Nerve		
		c). Genitofemoral Nerve		
		d). Cutaneous Femoral Nerve		
		e). Pudendal Nerve	Clinical Note, p. 456	
17	D. Coccygeal Plexus - Roots of S4-S5	Ventral Rami		

IMPORTANT CONSIDERATIONS: If this material is to be covered in two lectures, the obvious logical break is to address the cranial nerves in one session and the spinal nerves in the second session. If three sessions are available, the discussion of the spinal nerves can be given two sessions, with greater emphasis on functional differences among the nerves. As with most anatomical material, much of this may be best grasped by students in the laboratory where they can directly relate the diagrams of the text with three-dimensional models and specimens.

SEE INSTRUCTOR'S MANUAL AND COURSE SOLUTIONS MANUAL FOR ADDITIONAL RESOURCES.