**How to use the textbook – 16th edition**

When I list ‘Terms To Know’ you are to search the entire book to know and understand those terms/names/words.

Let’s open up the Fox Human Physiology textbook (16th edition), Page 1.

Then skip to the bold-face typed words….”**peer-reviewed journals**”. Read and understand this paragraph and the next two paragraphs. It is important to understand that real science is published in a recognized ‘peer-reviewed journal’ and not everything on the internet is valid science. To look for and find real, proven scientific information you need to find it in a recognized peer-reviewed journal. Also in Chapter 1, skip everything except know: “epithelial tissue” and know “An Example of an Organ: Skin and know “Stem Cells” and know “Systems” and know “Body-Fluid Compartments”. End with Chapter 1.

Now to Chapter 2. Simply, know everything in this chapter. Know every **bold-faced** term and structures.

Chapter 3: Know everything except you may SKIP: Cilia and Flagella; SKIP: RNA interference; SKIP: Ubiquitin; SKIP: Proteosome; SKIP: Cyclins but do not skip p53; SKIP: Caspases; SKIP: Meiosis (we will cover this at the end of the semester when we talk about male and female reproduction) and finally SKIP: Epigenic Inheritance.

Chapter 4: SKIP: figure 4.1; SKIP: The entire section 4.3.

Chapter 5: SKIP: ‘Coupling of Electron Transport to ATP Production’; SKIP: Figure 5.9; For the ‘ATP Balance Sheet’ and the ‘Detailed Accounting’ and ‘Table 5.1’, you can read it over once but the counting of ATP’s will be done in class and I will use the ‘in class’ numbers of ATP produced on any quiz or exam; SKIP: Brown Adipose Tissue.

Who is this: A person wearing glasses

Description automatically generated with low confidence and who is the Cori Cycle named after? And why is this a bit of a trick question?

Chapter 6: SKIP: transcellular transport; paracellular transport; junctional complexes; Figure 6.22; Figure 6.28; paracrine signaling; synaptic signaling; endocrine signaling; receptor proteins; Figure 6.29; Figure 6.30;.

Section 6.1->Chapter 2. Section 6.2->Chapter 2. Section 6.3->facilitated diffusion and active transport->Chapter 2 however Section 6.3->Na+/K+ pump->nervous system. Section 6.4->nervous system. Section 6.5->endocrine system chapter.

Chapter 7: Skip for now: G-protein-coupled channels->endocrine chapter. Skip: Three different types of neurons. Skip: Regeneration of a Cut Axon. Skip: Neurotrophins. Skip: Functions of Astrocytes- (Regarding Astrocytes-know lecture notes). Skip: Refractory Periods. Skip: Cable properties of Neurons. Skip: SNARE Complex. Skip: Second Messengers-cAMP. Skip: nigrostriatal dopamine system and mesolimbic dopamine system and NMDA receptors and AMPA receptors and kainite receptors. SKIPS: Polypeptides as neurotransmitters. SKIP: Endogenous Opioids. SKIP: Neuropeptide Y. SKIP: Endocannabinoids as Neurotransmitters. SKIP: Gases as Neurotransmitters. SKIP: ATP and Adenosine as Neurotransmitters. SKIP: Synaptic Integration. SKIP: Synaptic Plasticity. SKIP: Synaptic Plasticity. SKIP: Synaptic Inhibition.

Chapter 8: Terms To Know: dyskinesia; Huntington’s disease; Parkinson’s disease; Broca’s area; Wernicke’s area; hippocampus; ataxia; reflex arc.

For all 12 pairs of Cranial Nerves: Know the names/functions/how to test/how to identify deficiency.

Chapter 9: Terms To Know: cholinergic; adrenergic; catecholamines; alpha and beta adrenergic receptors; beta blockers.

Know: Figure 9.8 and Figure 9.9.

Chapter 10: Terms To Know: chemoreceptors; photoreceptors; thermoreceptors; mechanoreceptors; nociceptors;

nystagmus; vertigo; cataract; glaucoma; macular degeneration.

Know Section 10.6 – THE EYES AND VISION; Know Section 10.7 – RETINA although you can skip: Neural Pathways from the Retina; Skip: Neural Control of Eye Movements;.

Skip: 10.8 NEURAL PROCESSING OF VISUAL INFORMATION.

Chapter 11: Skip: Priming Effects; Desensitization and Downregulation; Mechanism of Steroid Hormone Action; Figure 11.7; Figure 11.11; Stress and the Adrenal Gland; Pineal Gland; Gastrointestinal Tract; Continue to Skip: Gonads and Placenta; Skip: 11.7 PARACRINE AND AUTOCRINE REGULATION; Skip: Examples of paracrine and autocrine regulation; Skip: prostaglandins.

Include information from Chapter 6-> Section 6.5. Include information on ‘renin-angiotensin-aldosterone system’ from chapter 14 and 17. Know ‘atrial natriuretic peptide’ from chapter 14. Know from chapter 19: ‘insulin’ and ‘glucagon’ and ‘adrenal hormones’ and ‘thyroxine’ and ‘growth hormone’ and ‘1,25-dihydroxyvitamin-D3’. Know from the end of Chapter 20 (reproduction) ‘prolactin’ and ‘oxytocin’.

Chapter 12: Know Sections 12.1; 12.2; 12.3; 12.4 but skip the books explanation of ‘Slow- and Fast-Twitch Fibers’, understand my lecture notes on ‘slow and fast twitch fibers’ only; Skip in Section 12.4: ‘Adaptations of Muscles to Exercise Training’; Skip: ‘Muscle Damage and Repair’; Skip: Section 12.5 except know ‘The Monosynaptic Stretch Reflex’; Know: Section 12.6.

Chapter 13: You do not need to memorize Table 13.1. Skip: ‘Regulation of Leukopoiesis’; ‘Regulation of Erythropoiesis’; Figure 13.4 except know the reticulocyte matures into the erythrocyte; ferroportin; Table 13.5. Continue to Skip: rivaroxaban; hepcidin. Regarding Table 13.4 and Figure 13.9: know lecture notes for exam. Skip: HCN channels. Skip: Types of Capillaries. Skip: C-reactive protein.

Chapter 14: Skip: chronotropic effect; Table 14.1; Skip: Anrep effect; Figure 14.7. Skip: Extrinsic control of contractility. Skip: PARACRINE REGULATOIN of BLOOD FLOW. Skip: INTRINSIC REGULATION of BLOOD FLOW. Skip: 14.4 BLOOD FLOW TO THE HEART AND SKELETAL MUSCLES. Skip: 14.5 BLOOD FLOW TO THE BRAIN AND SKIN. Skip: Table 14.9; 14.10; 14.11; 14.12.

Chapter 15: skip: ‘Activation of Innate Immunity’; know: phagocytosis; know: ‘fever’; know: ‘interferons’; know: ‘Adaptive Immunity’; know: ‘lymphocytes and lymphoid organs’; know: ‘local inflammation’; Know: 15.2; Know: 15.3 but skip: ‘perforins’ and ‘granzymes’ and ‘lymphokines’; skip: ’15.4’; skip: ’15.5’; skip: ’15.6’.

Chapter 16: skip: ‘Boyle’s Law’; skip: ‘surface tension’; skip: ‘Law of Laplace’; skip: ‘Dalton’s Law’; skip: ‘calculation of Po2’; skip: ‘partial pressures of gases in blood’; skip: ‘blood gas measurements’; skip: ‘disorders caused by high partial pressures of gases’; in 16.5 only know: ‘effects of blood Pco2 and pH on ventilation’ and ‘chemoreceptors in the medulla’; skip: ‘effect of 2,3-DPG on oxygen transport’; skip: ‘muscle myoglobin’; skip: ‘the chloride shift’; skip: ‘the reverse chloride shift’; skip: ’16.9’.

Chapter 17: skip: ‘control of micturition’; skip: ‘effects of urea’; skip: ’17.4’; skip: ‘potassium secretion’; skip: ‘relationship between Na+, K+, and H+’; skip: ‘reabsorption of bicarbonate and secretion of H+’.

Chapter 18: skip: ‘ghrelin’; skip: ‘pepsin and hydrochloric acid secretion’; skip: ‘Paneth cells’ and ‘antimicrobial peptides’ and ‘intestinal stem cells’; skip: ‘slow waves’ and ‘interstitial cells of Cajal’; skip: ‘GALT’; skip: ‘CFTR’; skip: ’18.6 – only know the function of CCK’.

Chapter 19: skip: ‘free radicals and antioxidants’; skip: ’19.2 – only know ‘BMI’ and ‘BMR’; skip: ‘effects of glucose and amino acids’; skip: ‘effects of autonomic nerves and somatostatin’; skip: ‘effects of intestinal hormones’; skip: ‘somatomedins’; skip: ‘FGFR3’; skip: ‘M-CS’; skip: ‘RANK’ and ‘RANKL’; skip: ‘osteocalcin’; skip: ‘negative feedback control of calcium and phosphate balance’.

Chapter 20: skip: ‘alleles and genomic imprinting’; skip: ‘development of accessory sex organs and external genitalia’; skip: ‘disorders of embryonic sexual development’; skip: ‘ICSH’; skip: ‘kisspeptins’; skip: ‘leptin’; skip: ‘pineal gland’; skip: ‘FAS ligand’; skip: ‘ABP’; skip: ‘nitric oxide’; skip: ‘cGMP’s role in the ovarian cycle’; skip: ‘luteolysin’; skip: ‘effects of pheromones, stress, and body fat’; skip: ‘contraceptive methods’; skip: ’20.6 – except know about prolactin and oxytocin’.

The End.