

《机能实验学》

图书基本信息

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内容概要

《机能实验学(第2版)(英文版)》主要包括三部分内容，一是较系统地介绍机能学实验基本知识、动物学实验基本技术、科研基本方法以及实验室安全规则等，强调了对实验基本知识和技术方法的掌握；第二部分为生理学、病理生理学和药理学的一些经典实验内容，共由34个实验项目组成，主要用于促进对医学理论知识的理解；第三部分由综合性实验、探索性实验、病例讨论、高水平论文分析等内容组成，主要用于训练和提高学生的综合实验能力和科研素质。《机能实验学(第2版)(英文版)》在形式上以英文为主，对章节段落的标题及少数较难的专业词汇则插入中文注释。本教材涉及大量的医药学基础与临床专业英语词汇，因此除可作为生理学、病理生理学和药理学等实验双语教材外，还可作为各专业学生学习医学专业英语的良好课外读物。

书籍目录

- chapter 1. an introduction of functional experimentation
- chapter 2. basic knowledge and theory
 - section 1. biological characteristics and application of commonly used laboratory animals
 - section 2. biological data acquisition systems
 - section 3. selection and design principles of medical scientific research topics
 - section 4. medical information retrieval
 - section 5. writing methods of scientific papers and lab reports
 - section 6. laboratory safety and rules
- chapter 3. basic methods of animal experiments
 - section 1. animal capture and restraint
 - section 2. animal numbering
 - section 3. drug administration for laboratory animals
 - section 4. anesthesia of laboratory animals
 - section 5. unhairing of laboratory animals
 - section 6. blood collection of laboratory animals
 - section 7. euthanasia methods of laboratory animals
- chapter 4. basic techniques in experimental animal surgical operation
 - section 1. traditional surgical instruments
 - section 2. technique of animal catheterization
 - section 3. haemostasis and technique of knots making
 - section 4. technique of wound sutures (stitches) and sutures out
- chapter 5. basic experiments
 - experiment 1. the nature of muscle contraction
 - experiment 2. measurement of conduction velocity of action potential and excitability from neural trunk
 - experiment 3. determination of hemoglobin content and red blood cell osmotic fragility
 - experiment 4. premature contraction and compensatory pause
 - experiment 5. chemicals on the regulation of ex vivo heart activities
 - experiment 6. measurement of human arterial blood pressure
 - experiment 7. recording of human electrocardiogram
 - experiment 8. pulmonary function tests
 - experiment 9. regulation of respiratory movements
 - experiment 10. physiological properties of the isolated gastrointestinal smooth muscle
 - experiment 11. factors that influencing urine formation
 - experiment 12. damage effects of unilateral labyrinth and cochlear

potential induction from guinea pigs

experiment 13. examination of visual fields and scotornas

experiment 14. analysis of reflex arc and the basic features of the reflex activities

experiment 15. experimental pulmonary edema in rabbits

experiment 16. effect of different factors on hypoxic tolerance

experiment 17. influence of ph of body fluids on drug absorption

experiment 18. one-compartment open model and calculation of the pharmacokinetic parameters

experiment 19. two-compartment open model and calculation of the pharmacokinetic parameters

experiment 20. determination of medial lethal dose (LD_{50}) of drug

experiment 21. the antergic experiments of drng-the binding assay of radio-ligand and receptor

experiment 22. intoxication and detoxication of organophosphates

experiment 23. effects of drugs by different dosage forms

experiment 24. effects of drugs by different routes of administration

experiment 25. basic effects of drugs

experiment 26. factors influencing drug effects

experiment 27. observation of analgesic action of drugs with writhing method

experiment 28. anticonvulsant effect of the drug

experiment 29. effects of drugs on learning and memory of animal (mice step-down experiment. rat shuttle box experiment. morris water maze experiment)

experiment 30. effects of hydrocortisone on mice ear swelling induced by xylol

experiment 31. anti-inflammatory effects of dexamethasone on rat paw edema

experiment 32. effects of cardiac glycosides on heart failure

experiment 33. antibacterial experiment of antibacterial agents in vitro

experiment 34. antibacterial experiment of antibacterial agents in vivo

chapter 6. comprehensive experiments ()

experiment 1. different types of hypoxia

experiment 2. hyperkalemia in rabbits

experiment 3. disseminated intravascular coagulation in rabbit

experiment 4. disorders of acid-base balance and its experimental

therapy in rabbits

experiment 5. ischemia and reperfusion injury in intestine

experiment 6. acute endotoxic shock

experiment 7. hemorrhagic shock and alterations of microcirculation in rabbit

experiment 8. regulation of the cardiovascular system and acute cardiac failure

experiment 9. effects of experimental pneumothorax on respiration. circulation and acid-base balance in rabbits

experiment 10. acute respiratory distress syndrome and pharmacotherapy

experiment 11. hepatic encephalopathy and its treatment

experiment 12. determination of endogenous creatinine clearance rate and excretion fraction of sodium filtration in acute renal failure

experiment 13. reproduction of multiple organ dysfunction syndrome

experiment 14. the effect of drug and bioactivator on the isolated tracheal strips of cavy

experiment 15. determination of the pharmacokinetic parameters of sulfa drugs in rabbits with renal failure

chapter 7. exploratory experiments

chapter 8. case discussion and paper analysis

references

appendix

章节摘录

版权页：插图： In the 19th century, physiological knowledge began to accumulate at a rapid rate, particularly with the appearance of the Cell theory of Matthias Schleiden and Theodor Schwann in 1838. But in that time, doctors based their theories on metaphysical (形而上学) ideology, and personal experience often dictated their clinical decisions. Science-based medicine was largely absent. It was not until French physiologist Claude Bernard (1813- 1878) began to perform a series of rigorous laboratory investigations and animal experimentation, that the old medicine had begun to enter scientific modern times. Bernard's most notable discoveries are the role of the pancreas in digestion, and the liver's ability to make sugar. Bernard's masterpiece was his book entitled "An Introduction to the Study of Experimental Medicine", published in 1865. In his book, Bernard argued that progress in medicine could not be achieved without the application of experimental physiology. Therefore, Claude Bernard is acknowledged as the father and founder of experimental medicine. Physiology is the study of normal, healthy bodily function (as opposed to anatomy, which is the study of normal structure). When something disrupts normal physiological processes, it enters the realm of pathophysiology. Pathophysiology (病理生理学) is the study of the changes of normal mechanical, physical, and biochemical functions, caused by a disease, or resulted from an abnormal syndrome. More formally, it is the branch of medicine which deals with any disturbances of normal body functions, caused by disease or prodromal (前兆病状) symptoms. There is substantial overlap between "pathology" and "pathophysiology." Pathology as a general term refers to the causes and consequences of a disease that leads to a specific diagnosis. It can also refer specifically to a tissue diagnosis. Pathophysiology refers more to the actual changes in organ systems that lead to the manifestation of the disease as can be observed as symptoms or measurable organ system changes. Pharmacology (药理学) is the study of how drugs exert their effects on living systems. The two main areas of pharmacology are pharmacodynamics (药效学) and pharmaco-kinetics (药物代谢动力学). The former studies the effects of the drugs on biological systems, and the latter the effects of biological systems on the drugs. In broad terms, pharmacodynamics discusses the interactions of chemicals with biological receptors, and pharmacokinetics discusses the absorption, distribution, metabolism, and excretion of chemicals from the biological systems. Pharmacology deals with how drugs interact within biological systems to affect function. Pharmacologists work to identify drug targets in order to learn how drugs work. Pharmacologists also study the ways in which drugs are modified within organisms.

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精彩短评

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