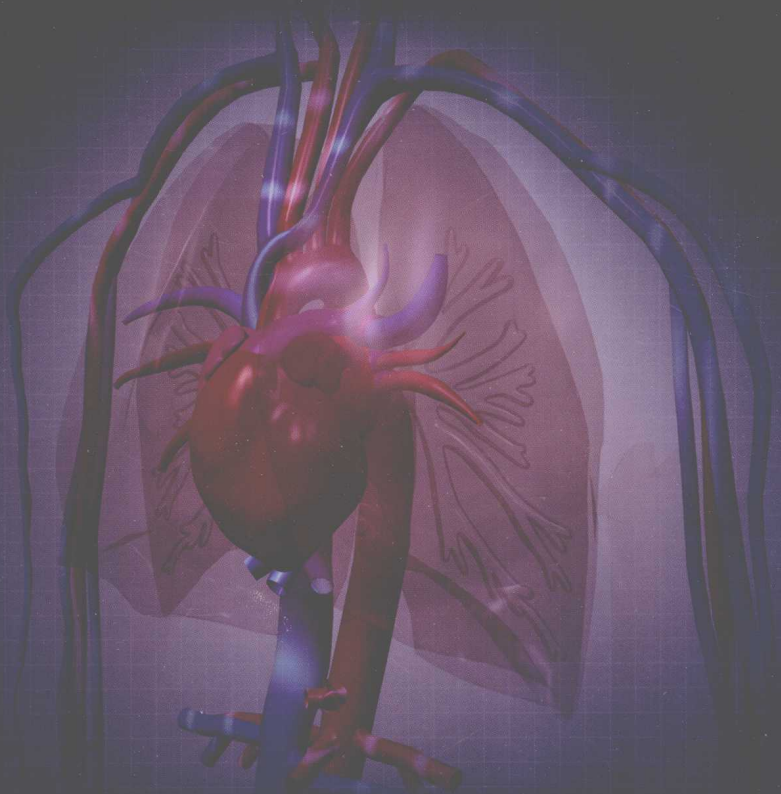
主　编　车向新
副主编　汪华侨　潘爱华　刘德明

精要双语

人体解剖学

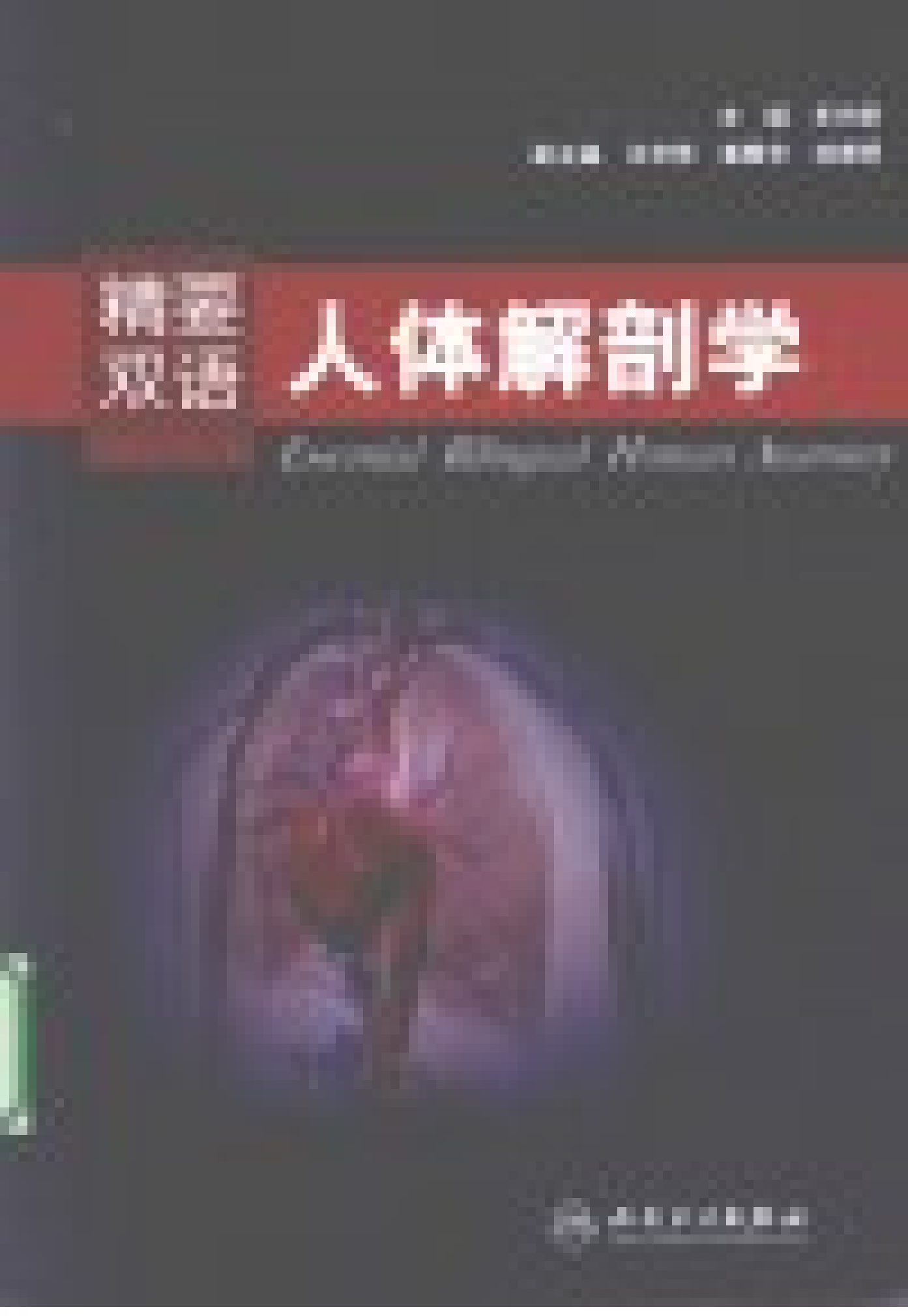
Essential Bilingual Human Anatomy



人民卫生出版社
PEOPLE'S MEDICAL PUBLISHING HOUSE

精品双语

人体解剖学



精要双语人体解剖学

Essential Bilingual Human Anatomy

主　编　车向新

副主编　汪华侨　潘爱华　刘德明

编　者（以姓氏笔画为序）

车向新（九江学院基础医学院）　　许晓源（九江学院基础医学院）

刘文庆（绍兴文理学院医学院）　　李立新（九江学院基础医学院）

刘学政（辽宁医学院）　　汪华侨（中山大学医学院）

刘曾旭（南昌大学医学院）　　曹小明（九江学院基础医学院）

刘德明（南昌大学医学院）　　黄小林（九江学院基础医学院）

向维聂（九江学院医学部）　　曾文学（九江学院基础医学院）

江会勇（九江学院基础医学院）　　潘爱华（中南大学湘雅医学院）

审　阅

曾志成（中南大学湘雅医学院）

杨耀防（九江学院医学部）

人民卫生出版社

图书在版编目（CIP）数据

精要双语人体解剖学/车向新主编. —北京：人民卫生出版社，2010.1

ISBN 978-7-117-12491-1

Ⅰ.精… Ⅱ.车… Ⅲ.①人体解剖学-汉、英 Ⅳ.①R322

中国版本图书馆 CIP 数据核字（2009）第 228285 号

精要双语人体解剖学

主　　编：车向新
出版发行：人民卫生出版社（中继线 010-67616688）
地　　址：北京市丰台区方庄芳群园 3 区 3 号楼
邮　　编：100078
E - mail：pmph @ pmph.com
购书热线：010-67605754　010-65264830
印　　刷：潮河印业有限公司
经　　销：新华书店
开　　本：787×1092　1/16　　**印张：**18.5
字　　数：461 千字
版　　次：2010 年 1 月第 1 版　　2010 年 1 月第 1 版第 1 次印刷
标准书号：ISBN 978-7-117-12491-1/R · 12492
定　　价：36.00 元

preface

With the increasing number of China's foreign exchange as well as the rapid development of medical technology, human anatomy courses in English-Chinese bilingual teaching in the rapid development; "Essential Bilingual Human Anatomy" have been completed by Professor Che Xiang Xin and six medical institutions of higher long been engaged in teaching human anatomy professor. Really "know good rain season, when spring is here." Therefore, I feel very happy.

The content of this book there are many innovations in layout and form:

1. The system knowledge of anatomy and regional anatomy integrated into each unit, such as: abdominal wall related to skeletal muscle, artery, vein lymphatic flow, nerve control, local structures, and so on.

2. Each unit of skeletal muscle, nerve, vascular, etc. were described in accordance with their respective characteristics. Such as: sternocleidomastoid (SCM), according to Origin (start), Insertion (stop point), Action (the role), Innervation, Notes in the order described; vagus, then according to their Source, Branches, Motor (movement), Sensory (feeling), the corresponding arteries, veins, lymph nodes, and so on. Notes for expression.

3. Closely integrated with clinical emphasis. After the brief introduction of each unit of clinical common and frequently occurring concepts, and recognized the diagnosis and treatment technologies and means, and the contents of each unit correspond.

Publication of this book will be students of medical institutions to study human anatomy and regional anatomy of great help, but also important reference book clinicians.

Would like to add followed by the rapid development of science and technology, continuing success, further, more excellent work.

Central South University Xiangya School of Medicine

Zeng Zhicheng（曾志成）

2009-10-28

前 言

随着我国对外交流的日益增多以及医药科技的迅速发展，专业英语在医药相关人员学习与工作中的重要性日益受到重视。教育部在《关于加强高等学校本科教学工作，提高教学质量的若干意见》中提出："为适应经济全球化和科技革命的挑战，本科教育中要创造条件使用英语等外文进行公共课和专业课教学"。人体解剖学是重要的基础医学课程之一，人体解剖学名词构成医学名词的重要组成部分。目前，国内近 1/3 的高等医药院校开设了人体解剖学课程的英汉双语教学或全英文教学；同时，许多院校还招收了来自东南亚地区的留学生学习医学。根据笔者的教学体会及对学生的调查，发现在人体解剖学课程双语或全英文教学中，学生对解剖学基本知识点的理解与掌握难以达到预期的目标。正是基于以上原因，本人于五年前开始组织编写 "Essential Bilingual Human Anatomy"《精要双语人体解剖学》。

为满足广大读者的需求，在人民卫生出版社的大力支持下，由六所高等医药院校长期从事人体解剖学教学的专家编写了这本《精要双语人体解剖学》。本书可供基础医学、临床医学、口腔医学、麻醉学、医学影像学、护理学等专业的本科生、研究生和留学生使用，也可为医学院校教学人员和临床医护人员参考。

为有助于读者对英汉双语教学或英语教学内容的学习与理解，本书在内容编排和形式上有以下特点：

1. 将人体按头部、颈部、胸部、腹部、盆部、背部、上肢与下肢的顺序编排，每个部分又分为若干个相对独立又相互联系的单元。

2. 将系统解剖和局部解剖知识结合到每个单元内，如：腹壁相关的骨骼肌、动脉供应、静脉淋巴回流、神经支配、局部结构等，自成体系，突出英文描述。

3. 每个单元内的骨骼肌、神经、脉管等，分别根据其各自特性进行英文解释。如：sternocleidomastoid muscle（胸锁乳突肌），按 Origin（起点）、Insertion（止点）、Action（作用）、Innervation（神经支配）、Notes（备注）的顺序叙述；vagus nerve（迷走神经），则按其 Source（来源）、Branches（分支）、Motor（运动）、Sensory（感觉）、Notes（备注）进行表述，体现 "精要" 特色。

4. 注重与临床紧密结合。每个单元后简要介绍了临床常见病、多发病的概念，以及公认的诊疗技术与手段，与每个单元的内容相呼应。

5. 书末附有英汉索引，便于读者查阅。充分体现了科学性、系统性、创新性与实用性。

本书的编写参考了《Gross Anatomy》(Berger 教授主编,2002 年),《Anatomical Terminology: International Anatomical Terminology》(Federative Committee on Anatomical Terminology, 1998 年),《人体解剖学名词》(全国自然科学名词审定委员会审定公布,1991 年),以及《Gray's Anatomy》(1995 年)和《Last's Anatomy: Regional and Applied》(2000 年)等。

感谢中南大学湘雅医学院曾志成教授的支持与鼓励。由于水平有限,本书在编写中可能存在不足之处,诚请广大读者批评指正,以便在再版时完善。

车向新

2009 年 10 月

Contents

Introduction ····· 001

1. Head & Neck 头部与颈部 ····· 008

1.1 Anterior Triangle of the Neck 颈前三角 ····· 008
1.2 Posterior Triangle of the Neck 颈后三角 ····· 018
1.3 Skull & Brain 颅与脑 ····· 024
1.4 Carotid Sheath, Pharynx & Larynx 颈动脉鞘、咽与喉 ····· 034
1.5 Face 面部 ····· 047
1.6 Infratemporal Fossa 颞下窝 ····· 052
1.7 Submandibular Region, Nasal & Oral Cavities 下颌下区、鼻腔与口腔 ····· 058
1.8 Ear 耳 ····· 065
1.9 Eye 眼 ····· 069

2. Thorax 胸部 ····· 076

2.1 Pectoral Region 胸区 ····· 076
2.2 Thoracic Wall, Pleura & Pericardium 胸壁、胸膜与心包 ····· 081
2.3 Heart 心脏 ····· 091
2.4 Lungs & Superior Mediastinum 肺、上纵隔 ····· 098
2.5 Posterior Mediastinum 后纵隔 ····· 105

3. Abdomen 腹部 ····· 114

3.1 Abdominal Wall 腹壁 ····· 114
3.2 Inguinal Region 腹股沟区 ····· 126
3.3 Peritoneal Cavity & Intestines 腹膜腔与肠 ····· 133
3.4 Stomach & Spleen 胃、脾 ····· 141
3.5 Duodenum, Pancreas, Liver & Biliary System 十二指肠、胰、肝与胆道系统 ····· 145

3.6 Kidneys & Retroperitoneum 肾与腹膜后区 …… 152

4. Pelvis 盆部 …… 162

4.1 Pelvis Cavity and Its Contents 盆腔及其内容 …… 162
4.2 Pelvic Wall & Floor 骨盆壁与骨盆底 …… 168
4.3 Perineum & External Genitalia 会阴与外生殖器 …… 174

5. Back 背部 …… 187

5.1 Superficial Back 背部浅层 …… 187
5.2 Deep Back & Spinal Cord 背部深层、脊髓 …… 192

6. Lower Limb 下肢 …… 201

6.1 Superficial Structures of the Lower Limb 下肢浅层结构 …… 201
6.2 Anterior & Medial Thigh 股前区与股内侧区 …… 205
6.3 Hip & Posterior Thigh 臀区与股后区 …… 210
6.4 Leg 小腿 …… 215
6.5 Foot 足 …… 220
6.6 Joints of Lower Limb 下肢的连结 …… 226

7. Upper Limb 上肢 …… 231

7.1 Shoulder & Superficial Upper Limb 肩与上肢浅层 …… 231
7.2 Axilla, Arm & Cubital Fossa 腋窝、手臂与肘窝 …… 236
7.3 Forearm & Wrist 前臂与手腕 …… 242
7.4 Hand 手 …… 252
7.5 Joints of the Upper Limb 上肢的连结 …… 259

Indexs …… 262

Introduction

The human anatomy is the science which describes the normal morphology and structures of human body. It's one of the most fundamental courses in medical education, and one third of the medical terms come from it. Through learning human anatomy, the students understand the important structures of normal human body, which is the basis for understanding of the pathologic and clinic problems. To serve the needs of medical bilingual teaching, surgeons, physicians and other medical special workers, Essential Bilingual Human Anatomy must be analysis of human structures perfectly and sufficiently.

I NAMING BODY SEGMENTS

Usually, the anatomist divided the body into several parts, including the head & neck, thorax, abdomen, pelvis, back, upper limb and lower limb. Every part has its bone & joint & muscle, and nerve & artery & vein & lymph, fascia & viscera & topographic anatomy, clinical terms, etc.

II TERMS OF DIRECTION

1. General Considerations

Anatomists have special terms for discussing where things are positioned in the body. These terms enable one to describe unequivocally the location of lesion, or where to place a stethoscope, or where to feel for a tumor in a patient whether that person is standing, sitting, lying, or upside down. Therefore, one must learn these terms of direction well.

2. Anatomical Position

In order to describe human body in a standard position, human body is supposed to be in the erect posture, with upper limbs at the sides, the face, palms, and feet pointing directly forward.

3. Planes

In order to understand directional terms, it is helpful to consider the "planes" (平面) of the body. The names of planes describe the independent ways you can separate a person into two parts. There are three kinds of planes often used in human anatomy:

(1) Sagittal Plane (矢状面)

If you slice a person from top to bottom, separating the right half of the body from the left half, the knife is said to have passed through the median sagittal plane and to have made a median sagittal section (正中矢状切面). There are an infinite number of possible sagittal sections both to the right and to the left of the median sagittal plane.

(2) Coronal Plane(冠状面)

If you slice a person from top to bottom, separating the back of the body from its front, the knife is said to have passed through a coronal plane and to have made a coronal section. Also, there are an infinite number of coronal planes all parallel to one another and all separating some fraction of the back part of the body from the remaining front part.

(3) Horizontal Plane(水平面)

If you slice a person from side to side, separating the top of the body from its lower portion, the knife is said to have passed through a horizontal plane and can also called transverse plane.

4. Directions

(1) Anterior(前) or ventral(腹侧) means the location of this part near the front of the body, while posterior(后) or dorsal(背侧) means its location near the back of the body. There are often used to describe nearer or farther from the center of the body cavity or hollow viscera. The phrase "in front of" is an acceptable substitute for "anterior to"; the word "behind" is an acceptable substitute for "posterior to".

(2) Superior(上) and Inferior(下). Superior means the nearer a structure lies toward the top of the head, the more superior it is. The nearer a structure lies toward the soles of the feet, the more inferior it is. The word "above" is an acceptable substitute for "superior to"; the word "below" is an acceptable substitute for "inferior to". Within the trunk, cranial may replace superior and caudal may replace inferior sometimes.

(3) Medial(内侧) and lateral(外侧) means structure nearer or farther from the median plane. So, the thumb is lateral to the little finger in the anatomical position.

(4) Superficial(浅) and deep(深) means in any section of the body, some structures will be closer to the external environment and others will lie more toward the center of the section. The closer to the external environment a structure is, the more superficial it is said to be; the closer to the center of the section lays a structure, the deeper it is said to be. External may replace superficial, and internal may replace deep. The word "overlies" is an acceptable substitute for "is superficial to"; the word "beneath" is an acceptable substitute for "deep to".

(5) Proximal(近侧) and distal(远侧). For a limb, the closer a structure lies to the site where that limb attaches to the trunk, the more proximal that structure is said to be. The further out along the limb is that structure, the more distal it is said to be.

(6) Ipsilateral(同侧) and Contralateral(对侧). It is said that two structures are ipsilateral to one another if they are the same side (right or left) of the body. Structures are said to be contralateral to one another if they are on opposite sides (right or left) of the body. Thus, damage to the left side of the spinal cord can cause ipsilateral paralysis (i.e.,paralysis of muscles on the left side of the body), whereas damage to the left side of the brain causes paralysis of contralateral muscles (those on the right side of the body).

III JOINTS AND MOVEMENTS

1. General consideration

In order to serve the purposes of protection and movement, the bone must be jointed

together one another by connective tissue at different parts of their surface, and such connections are named joint or articulation (关节或连接). A functional definition of a joint is "a gap between two bones developed for the purpose of permitting motion between them". In a few instances the gap is completely filled with connective tissue. However by far the most common type of motion-permitting gap between bones is a space occupied by lubricating fluid and surrounded by a fibrous capsule.

2. Movements

The movements of any one body segment relative to another have specific names. When naming a movement, the anatomical position is designated as the starting point. The movement itself is described in reference to the one of the planes of the body.

(1) Flexion and Extension These two antagonistic movement are performed on the coronal axis. The movement of any part of the body from its location in the anatomical position to a more anterior location is called flexion (屈). The opposite movement to flexion is extension (伸). Except for the ankle joint, which has dorsiflexion (背屈,extending the foot at the ankle) and plantarflexion (跖屈,flexing the foot at the ankle). It is worth emphasizing that any movement bringing a part of the body that is already flexed back toward the "neutral" anatomical position is also called extension, just as a movement from the extended state back to the neutral is called flexion.

(2) Abduction and Adduction The movement of any part of the body from its location in the anatomical position to a new location further away from the median sagittal plane is called abduction (展). Such a movement occurs around an anteroposterior axis and in a coronal plane. The opposite movement to abduction is adduction (收).

(3) Rotation Movement of any part of the body around a central longitudinal axis is called rotation (旋转). The trunk, neck, and head may rotate so that a person faces more to the right or more to the left. If a limb segment is rotated so that its anterior border moves medially from where it lay in the anatomical position, this is medial rotation. On the contrary, it is lateral rotation. Everybody refers to medial rotation of the forearm as pronation (旋前); lateral rotation of the forearm is called supination (旋后).

IV DEFINITIONS OF MUSCLE ACTION AND MUSCLE ATTACHMENTS

The skeletal muscles usually attached to the bone, fascia or skin. Muscles are able to shorten and thereby produce movement, or they can resist being lengthened and thereby prevent (or retard) movement. The action of a muscle is defined as those motions produced by its shortening.

Each muscle has at least two attachments to some part of the skeleton or mucous membrane or skin. For purpose of description, most muscles are commonly having an origin (起点) is usually a fixed attachment in the end of muscles, and the insertion (止点) may be movable one. However, some muscle may act in both directions in different circumstances.

V SOME FUNDAMENTAL CONCEPTS RELATED TO THE NERVOUS SYSTEM

1. Central versus Peripheral Nervous System

The brain (脑) and spinal cord (脊髓) compose the central nervous system (CNS). All the

nerves that emanate from the CNS, their branches, and interconnections constitute the peripheral nervous system (PNS). Nerves that exit directly from the brain are said to be cranial nerves. Nerves that exit directly from the spinal cord are said to be spinal nerves.

The PNS consists of the cranial and spinal nerves (with their branches) and that part of the autonomic nervous system (自主神经系统) associated with spinal nerves.

A detailed consideration of brain and spinal cord structure is the province of neuroanatomists. Gross anatomists are concerned with the PNS. An understanding of the innervation of specific organs is one of the most clinically important tasks facing a student of medicine.

2. Efferent versus Afferent, Motor Versus Sensory

The difference between the efferent and afferent, or motor and sensory, portions of the nervous system is defined functionally. Any nerve fiber that carries information from the CNS out to other tissues of the body is defined as an efferent fiber (传出纤维), and along with its cell body it constitutes an efferent neuron. Any nerve fiber that carries information from other tissues of the body into the CNS is defined as an afferent fiber (传入纤维), and along with its cell body it constitutes an afferent neuron. Most efferent neurons are concerned with innervating glands and muscles-the motor tissues of the body. This large subset of efferent neurons comprises the motor (运动) portion of the peripheral nervous system. Most afferent information coming into the CNS is capable of reaching consciousness. Touch, temperature, pressure, vibration, stretch, and pain are sensory modalities familiar to all of us. The large subset of afferent neurons carrying information that can reach consciousness comprises the sensory (感觉) part of the peripheral nervous system.

3. Visceral Versus Somatic Neurons

Among the motor tissues of the body a major distinction can be made between striated voluntary muscle, on the one hand, and smooth muscle, cardiac muscle, and glands, on the other. Striated voluntary muscle composes the so-called somatic motor tissue of the body. Smooth muscle, cardiac muscle, and glands constitute the visceral motor tissue. More generally, any dissectible structure formed largely of visceral motor tissue is said to be a visceral structure. All other structures, whether formed of striated voluntary muscle or simply connective tissue, are said to be somatic structures. Most of the body wall is composed of somatic structures, only its vasculature, arrector pili muscles, sweat glands, and sebaceous glands being visceral. On the other hand, all the internal organs of the body are visceral structures. Nerve fibers that stimulate striated muscle tissue are said to be somatic motor fibers (躯体运动纤维). Innervation of smooth muscle, cardiac muscle, and glands is accomplished by visceral motor fibers (内脏运动纤维). The sensation that originates in visceral structures is called visceral sensation, and it is transmitted along visceral sensory fibers (内脏感觉纤维). Sensation arising from all other structures is somatic sensation, transmitted by somatic sensory fibers (躯体感觉纤维). There are certain nerve bundles that carry only visceral nerve fibers. There are certain regions of the CNS that contain only visceral neurons.

4. Autonomic Nervous System

The entire ensemble of visceral motors fibers is said to compose the autonomic nervous

system.

VI LAYERS OF THE BODY

In any section of the body, as one passes from the most superficial aspect to the deepest point, several well-defined layers are encountered.

1. Skin (Epidermis and Dermis)

The most superficial layer of the body is the epidermis (表皮). Sweat glands and hair are derivatives of the epidermis. It is virtually impossible to dissect the epidermis from the next deepest layer, the dermis (真皮). The name for the combined epidermis and dermis is skin. Within the dermis are the small arteries that supply nutrients and oxygen to its own cells and to the epidermis. Also within the dermis are, obviously, the small veins draining blood from the skin, and also lymphatic channels. The final major structures passing within the dermis are the nerves that carry sensory input from the skin and motor output to it. These are the cutaneous nerves, which both motor and sensory. The smooth muscle cells require motor innervation to contract, and the sweat glands require motor innervation to secrete. The motor fibers within cutaneous nerves are part of the sympathetic portion of the autonomic nervous system. In some regions of the body, excessive activity in these fibers may lead to cutaneous vasospasm (血管痉挛) and, thus, necrosis of skin. In other regions of the body excessive activity in these fibers may lead to cutaneous vasodilatation (血管舒张) and, thus, flushing. In all regions excess sympathetic activity causes profuse sweating (hyperhidrosis, 多汗), whereas damage to the sympathetic fibers that enter cutaneous nerves will cause absent sweating (anhidrosis, 无汗症).

2. Superficial Fascia

Superficial fascia (浅筋膜) beneath the skin, it is a layer of loose irregular connective tissue. It is a repository of fat cells everywhere, although these cells are few in the areola, nipple, scrotum, penis, and clitoris. Collagen fibers bind the subcutaneous layer both to the overlying dermis and to the next underlying layer (deep fascia), but in most places superficial fascia is itself sufficiently loose to allow the skin to slide on deeper structures. Only in the scalp, palms of the hands, and soles of the feet does the collagen content of the subcutaneous layer become so dense that the skin itself is effectively bound to deeper structures.

3. Deep Fascia

The striated muscles of the body lie deep to superficial fascia. These striated muscles have a clearly defined dense irregular connective tissue sheath that histologists call the epimysium (肌外膜), but anatomists call deep fascia (深筋膜). The deep fascial sheath of one muscle is loosely bound by collagen fibers to the deep fascial sheaths of adjacent muscles. Often one finds major nerves and vessels running in the deep fascial interval between two muscles. These nerves and vessels give branches to each other, and to muscles and deep fascia. Sometimes, after muscular branches are given off, the remainder of the nerve or vessel will move superficially and enter the subcutaneous layer to distribute to the skin.

4. Specializations of the Deep Fascia of Limbs

The epimysium on the outer surface of a superficially placed limb muscle blends with the

epimysium on the outer surfaces of its neighbors to form a deep fascial sleeve (深筋膜鞘) that envelops the whole limb. More distally in a limb segment, where the muscles themselves are represented mainly by tendons, the integrity of this deep fascial sleeve is maintained despite the fact that it no longer serves as epimysium. At some locations, muscle fibers actually arise from the sleeve of deep fascia, giving it a tendinous quality. At other locations, the deep fascial sleeve of a limb may be strengthened by fibers sweeping off a tendon that has its primary insertion onto bone. Such tendons are then said to have expansions into deep fascia. Finally, there are sites in both the upper and lower limbs where the deep fascial sleeve is strengthened by the addition of transverse fibers to create retinacula that serve the purpose of holding tendons close to the surfaces of joints.

5. Bones

Bones are usually surrounded by the muscle layer of the body. The periosteum of the bone intervenes between osseous tissue and the epimysium of surrounding muscles. Sometimes a bone will have no muscle on its superficial surface, in which case its periosteum contacts superficial fascia. Such a bone is said to have a subcutaneous surface.

6. The Body Wall

The layers we have discussed so far, i.e., skin, subcutaneous layer, deep fascia with its enclosed muscles, and bone, are said to form the body wall (体壁). The limbs develop as outgrowths of the body wall and contain only these layers. In the trunk, head, and neck, there are other structures deep to the body wall. These structures are said to reside in the body cavity.

7. Structures Deep to the Body Wall

Deep to the body wall, within the body cavities of the trunk, head and neck, are the internal organs. Additionally, deep to the body wall of the trunk is a fluid-filled sac (the coelomic sac, 体腔), the walls of which are composed of connective tissue lined on its inner surface by serous mesothelial cells. Over most of the surface of the coelomic sac, its wall is immediately subjacent to the body wall. The connective tissue of the coelomic wall is then loosely bound by bridging collagen fibers to the deep fascia of the overlying muscles. At some sites, internal organs will exist in the space between the coelomic wall and the body wall. At yet other sites, an internal organ will invaginate the connective tissue wall of the coelomic sac, encroaching on, but not actually entering, the fluid-filled coelomic cavity. When this happens, the connective tissue wall of the coelomic sac forms the outer sheath of such an invaginating internal organ, and it is not possible to dissect away cleanly the wall of the sac from the parenchyma of the organ. The deeply placed fluid-filled coelomic sac is divided into three portions in the chest-two pleural sacs and one pericardial sac-and these are separate from a single peritoneal sac of the abdomen and pelvis.

VII LYMPH

There is a net movement of water and plasma proteins (mainly albumin) out of blood capillaries into surrounding tissues. The lymphatic system returns these items to the blood. Lymphatic vessels begin as highly permeable blind capillaries situated between the cells of a

tissue. The water and proteins that enter these capillaries constitute the lymph. In the bowel, absorbed fat also enters lymphatic capillaries. Fatty lymph is called chyle (乳糜). Lymphatic capillaries join to form larger vessels, which in turn join to form dissectible lymphatic trunks. The trunks empty their contents into large veins in the neck. Along the path of certain lymph vessels are lymph nodes-encapsulated collections of lymphocytes that represent a line of defense against bacteria and cancer cells that can readily enter lymphatic capillaries.

1. Head & Neck
头部与颈部

1.1 Anterior Triangle of the Neck 颈前三角

1.1.1 Osteology 骨学

mandible 下颌骨

mental protuberance 颏隆凸 forms bone of chin anteriorly.

hyoid 舌骨

body of hyoid 舌骨体 articulates with greater horns via cartilage and lesser horn via fibrous joint (Greek, hyoid = U-shaped);

greater horns (cornua) of hyoid 舌骨大角 articulate with body and lesser horns anteriorly; origin of middle pharyngeal constrictor and hypoglossus;

lesser horns of hyoid 舌骨小角 articulate at junction of body with greater horns; inferior attachment of stylohyoid ligament.

cricoid cartilage 环状软骨 inferior & posterior cartilage of larynx; arch is narrow anteriorly, lamina is broad posteriorly; connected: above to thyroid cartilage via inferior horn of thyroid cartilage, above to conus elasticus, above (on lamina) to arytenoid cartilages below to the 1st tracheal ring via cricotracheal ligament (Greek, cricoid = a ring form).

occipital 枕骨 the bone forming the posterior surface of the skull; it articulates superolaterally with the parietal bones through the lambdoid suture, anteroinferiorly with the temporal bone and anteriorly with the body of the sphenoid bone.

jugular notch 颈静脉切迹 located in the manubrium of the sternum in the fossa between the sternal heads of the SCM; the suprasternal space and jugular venous arch are located superior to the jugular notch.

temporal bone 颞骨 the bone forming the lateral side of the skull; temporal refers the passage of time, which is marked by the appearance of gray hair on the side of the head.

mastoid process 乳突 the process located posteroinferior to the external acoustic meatus; it projects inferiorly from the junction of the petrous and squamous parts of the temporal bone; it contains the mastoid air cells that open into tympanic cavity through the mastoid antrum