医学英语导论

主编　田耘　李伟彬

Thermometer Gauze Masks Bandage Test tube Outpatient Building Masks Pregnancy tests

Introduction to Medical English

Saline First aid kit Bandage Test tube

Scissors Emergency Room Outpatient Building

ZHEJIANG UNIVERSITY PRESS
浙江大学出版社

医学英语导论

AN INTRODUCTION TO ENGLISH FOR MEDICAL SCIENCE

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An Introduction to English for Medical Science

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前 言

《医学英语导论》是根据2007年国家教育部颁布的《大学英语教学的基本要求》精神和当前医学英语教育的最新情况对原《医学专业英语》进行改编而成的。本书以大学英语四级为起点，供医学本科专业高年级学生、医学研究生和医药英语专业学生使用。

教育部2007年颁布的《大学英语教学要求》指出：教学模式的改变不仅仅是教学活动或教学手段的转变，而是教学理念的转变，是实现从以教师为中心、单纯传授语言知识和技能的教学模式，向以学生为中心、既传授一般的语言知识与技能，又注重培养语言运用能力和自主学习能力的教学模式的转变。

众所周知，英语学习的目的在于应用，如果在修读完基础英语后，没有后继的专业英语学习，实在难以使用英语为本专业服务。英语是国际政治、经济、文化和科学技术等方面交流的重要工具，新世纪医学科学的迅猛发展和日益频繁的国际医药技术交流要求医学学生必须具备本专业英语的听、说、读、写、译的能力。

培养学生的听、说、读、写、译能力是大学英语教学的重要目标。要使医学生能在今后工作和社会交往中有效地进行口头信息交流，就必须加强听说训练，特别是专业知识的口头表达训练。“读”，就是要培养医学学生获取专业书面信息的能力，掌握各种医学文体的基本结构，用英语快速、准确地从各个信息渠道收集所需的医学知识和技能。“写”的能力这里主要是指专业英语的书面表达能力，要求医学学生能用英语撰写医学专业的技术报告、论文、摘要以及日常工作和学习所需的应用文体。医学翻译的能力主要是指能借助工具书翻译有一定难度的国外专业资料，能把我国的最新医学成就或中国传统医学用英语介绍到国外。按照科学的发展观，在听、说、读、写、译等五项能力培养要协调发展的同时，要着重培养学生的专业阅读和专业写作能力。

全书共10个单元，可供54学时的教学使用。在体例、内容和编排上突破了传统医学英语教材内容的科普性，而以人体解剖系统作为本书的主要线索。同时加强了口语和写作训练，适当淡化了传统意义上的语法内容，加强了认知能力培养与实用目的的内容，如医学英语构词法及其创造性使用。注重英语应用文写作，扩大常规写作形式，同时扩大了学生的阅读视野，训练学生口头运用医学英语的能力。每一个单元包

括医学会话表达、精读课文、生词表和课文练习。在课文练习中，包括针对课文的阅读理解、医学术语的构成、术语英译、模拟套写、医学英语知识、课外阅读和课后讨论等几部分。同时，还对学生进行职业医学英语相关的技能训练，包括因特网医学信息初步检索、医学科普文章阅读与复述、医学文献翻译技巧、英语门诊对话、英语病史汇报与临床双语教学演示。使学生公共英语的听读译写能力得到全面的应用，初步掌握职业医学英语的素质要求。

真实、实用是本书的主要特点。医学英语教学的主要目的就是使医学学生完成从英语学习到英语使用的过渡。为此，本书在编写时使内容尽量包括常见的疾病和医学专业词汇。附有样文的各类写作能满足医学生和医学工作者的实际需要。

《医学专业英语》由田耘、李伟彬教授担任主编，向冰、许有平、邓敏、闵晓梅、邓家齐、冯梅老师参与了全书部分课文的编写、翻译和校对工作。医学专家、硕士生导师曾晓荣教授担任全书的审稿工作。

在本书的出版过程中得到了浙江大学出版社领导、编辑以及编者所在单位许多领导和专家的大力支持和指导，在此深表谢意。本书在编写过程中参考大量的医学英语书籍，均在参考书目中一一列出，在此，我们向这些书籍的作者和出版社表示衷心的感谢！

为了满足医学生和专业英语学生学习医学英语的迫切需要，从教学实际出发，为提升医学学生英语水平，我们在有限的时间内完成了本书的编写工作。由于时间紧迫和编者的水平有限，本书中的不足之处在所难免，恳请读者和专家指正。

编　者

2010 年 5 月

CONTENTS

Unit One

Human Body

Useful Clinic-related Expressions

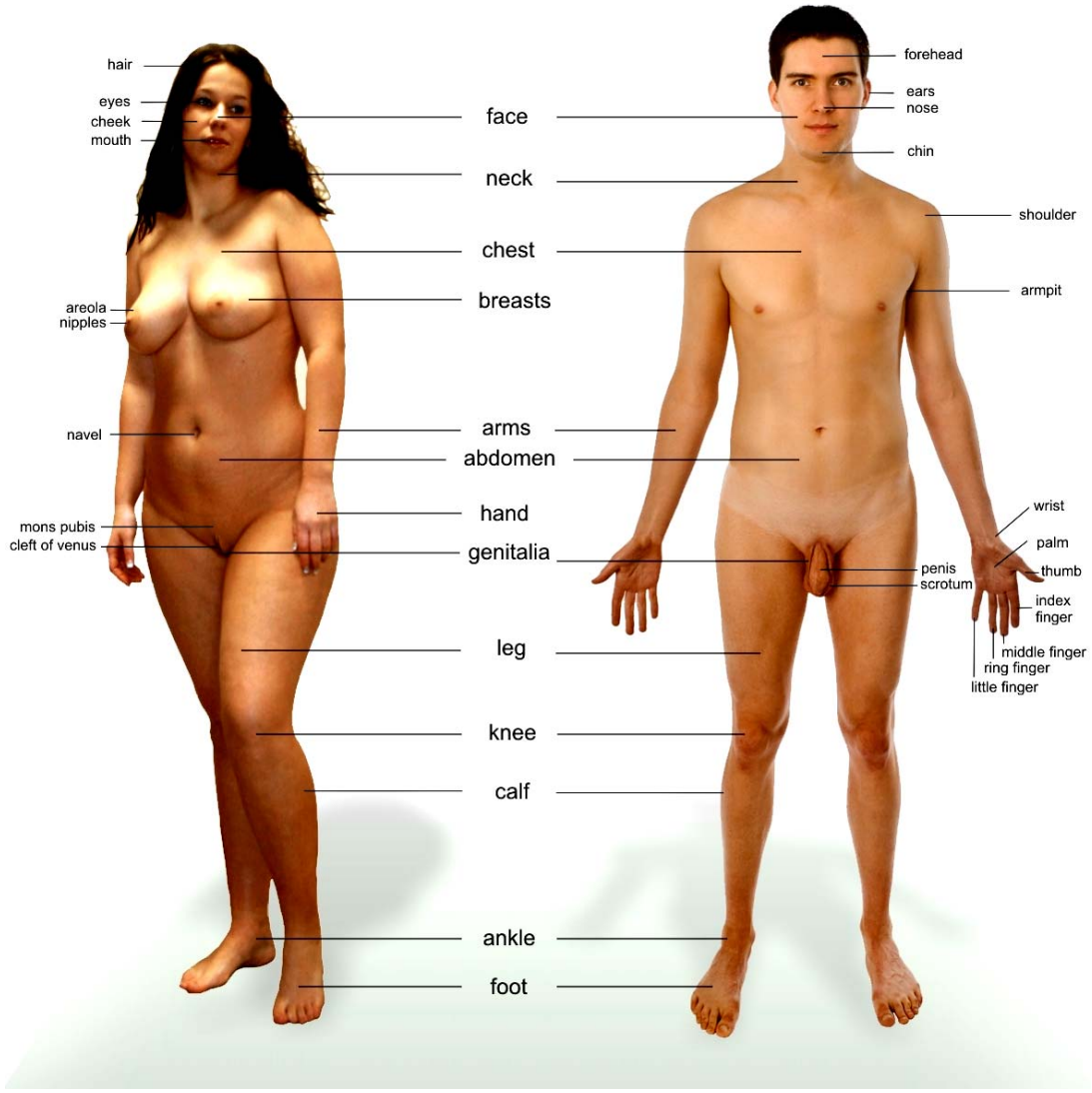
Read the following expressions carefully, get familiar with them and then use them to make proper conversations.

(About Personal Data)

What's your name, please?
May I know your name?
What's your first/given/Christian name?
What's your last/family/surname?
Do you have a middle name?
How do you spell your name?
How old are you?
Your age, please.
May I know your age?
Will you please tell me his age?
Where are you living?
What's your address?
What's your permanent/temporary address?
What's your telephone number?
Please give me your phone number.
Would you please tell me something about your education?
What's your hobby?
Do you smoke?
Do you drink alcohol?
How many cigarettes do you smoke a day?
Do you have a family?
Are you married/still single?
Would you mind telling about your family diseases, if any?
What's your job?
How many hours do you work every day?

Text

Human Body



To understand the human body it is necessary to understand how its parts are put together and how they function. The study of the body's structure is called anatomy; the study of the body's function is known as physiology. Other studies of human body include biology, cytology, embryology, histology, endocrinology, hematology, immunology, psychology, etc.

Anatomists find it useful to divide the human body into ten systems, that is, the skeletal system, the muscular system, the circulatory system, the respiratory system, the digestive

system, the urinary system, the endocrine system, the nervous system, the reproductive system and the skin. The principal parts of each of these systems are described and illustrated in this article.

The skeletal system The skeletal system is made of bones, joints between bones, and cartilage. Its function is to provide support and protection for the soft tissues and the organs of the body and to provide points of attachment for the muscles that move the body. There are 206 bones in the human skeleton. They have various shapes—long, short, cube-shaped, flat, and irregular. Many of the long bones have an interior space that is filled with bone marrow, where blood cells are made.

The mus cular system The muscular system allows the body to move, and its contractions produce heat, which helps maintain a constant body temperature. Striated muscles can be consciously controlled. The ends of these muscles are attached to different bones by connective tissue bands so that when the muscle contracts, one bone moves in relation to the other. This makes it possible to move the whole body, as when walking, or to move just one part of the body, as when bending a finger.

Contractions of the heart and smooth muscles are not under conscious control. Smooth muscles are found in the walls of organs such as the stomach and the intestines and serve to move the contents of these organs through the body.

The ci rculatory s ystem All parts of the body must have nourishment and oxygen in order to function and grow, and their waste products must be removed before they accumulate and poison the body. The circulatory system distributes needed materials and removes unneeded ones. It is made up of the heart, blood vessels, and blood, which together make up the cardiovascular system. The blood is also part of the body's defense system. It has antibodies and white blood cells that protect the body against foreign invaders.

The heart is a muscle that is divided into two nearly identical halves: one half receives blood from the lungs and sends it to the rest of the body, the other half sends blood that has traveled through the body back to the lungs. When the heart muscle contracts, the blood is forced out into arteries and enters small capillaries. Blood returns to the heart through veins.

The r espiratory system The respiratory system takes in oxygen from the air and expels carbon dioxide and water vapor. Air enters the nose and mouth and travels through the larynx, and trachea. The trachea divides to enter each of the two lungs and then divides more than 20 times to form a very large number of small air spaces. Oxygen from the air enters the blood through capillaries in the walls of these air spaces, and the blood releases carbon dioxide into the air spaces to be exhaled.

The di gestive sy stem The digestive system consists of a tube extending from the mouth to the anus. In it, food and fluids are taken in, moved through the body, and broken down into small molecules that are absorbed into the circulatory system. This breakdown, known as digestion, is both a mechanical and a chemical process.

Food enters through the mouth, where chewing and saliva start to break it up and make it easier to swallow. Next, the food travels down through the esophagus to the stomach. Contractions of the stomach's muscular wall continue to break down the food mechanically, and chemical digestion continues when acid and enzymes are secreted into the stomach cavity.

The liquefied food gradually passes into the small intestine. In the first part of the small intestine, called the duodenum, enzymes from the pancreas are added. These enzymes complete the chemical breakdown of the food. The digestion of fat is aided by bile, which is made in the liver and stored in the gall bladder. The small intestine of an adult is about 21 feet (6.4 meters) long. Most of its length is devoted to absorbing the nutrients released during these digestive activities.

The liquid remainder of the food enters the large intestine, or colon, which is about 1.5 meters long. It is more than twice as wide as the small intestine. In the large intestine most of the fluid is absorbed, and the relatively dry residues are expelled.

The u rinary system The urinary system maintains normal levels of water and of certain small molecules such as sodium and potassium in the body. It does this by passing blood through the kidneys, two efficient filtering organs that get rid of any excess of various molecules and conserve those molecules that are in short supply.

The fluid that leaves the kidneys, known as urine, travels through a tube called the ureter to the bladder. The bladder holds the urine until it is voided from the body through another tube, the urethra.

The endocrine system The two systems that control body activities are the endocrine system and the nervous system. The former exerts its control by means of chemical messengers called hormones. Hormones are produced by a variety of endocrine glands, which release the hormones directly into the blood stream.

A major gland is the pituitary, which is located under the brain in the middle of the head. It produces at least eight hormones, which affect growth, kidney function, and development of the sex organs. Another gland, the thyroid, is located between the collarbones. Its hormone controls the rate of the body's metabolism.

The nervous system The nervous system—the brain, the spinal cord, and the nerves—also controls body activities. The lower parts of the brain control basic functions such as breathing and heart rate as well as body temperature, hunger, and thirst. Above these regions are the centers for sight, sound, touch, smell, and taste, and the regions that direct voluntary muscular activities of the arms and legs. Performed here are the higher functions of integrating and processing information.

The brain receives and sends information by means of nerves, many of which lie partly in the spinal cord. The spinal cord is protected by the spinal column. Nerves enter and leave the spinal cord at each level of the body, traveling to and from the arms, legs, and trunk. These nerves bring information from the various sense organs. The information is processed by the

brain, and then messages are carried back to muscles and glands throughout the body.

The reproductive system The reproductive system is constructed differently for males and females. The male reproductive system is responsible for producing, transporting and maintaining viable sperm (the male sex cell). It also produces the male sex hormone, testosterone, which regulates the development of a beard, pubic hair, a deep voice and other bodily characteristics of the adult male.

The female reproductive system is responsible for producing and transporting ova (the female sex cells), eliminating ova from the body when they are not fertilized by sperm, nourishing and providing a place for growth of an embryo when an ovum is fertilized by sperm, and nourishing a newborn child. The female reproductive system also produces the female sex hormones, estrogen and progesterone, which regulate the development of breasts and other bodily characteristics of the mature female.

The skin The skin is a complete layer that protects the inner structures of the body, and it is the largest of the body's organs. It keeps out foreign substances and prevents excessive water evaporation. The nerves in the skin provide tactile information. The skin also helps keep the body's temperature close to 98.6°F (about 37℃): heat is conserved by reducing blood flow through the skin or is expended by increasing blood flow and by evaporation of sweat from the skin. Hair and nails are accessory structures of the skin.

New Words and Expressions

anatomy /əˈnætəmi/ *n.* 解剖学
physiology /ˌfiziˈɔlədʒi/ *n.* 生理学
cytology /saiˈtɔlədʒi/ *n.* 细胞学
embryology /ˌembriˈɔlədʒi/ *n.* 胚胎学
histology /hisˈtɔlədʒi/ *n.* 组织学
hematology /ˌhemәˈtɔlədʒi/ *n.* 血液学
immunology /ˌimjuˈnɔlədʒi/ *n.* 免疫学
skeletal /ˈskelitl/ *a.* 骨骼的
circulatory /sәːkjuˈleitәri/ *a.* 循环的
respiratory /risˈpaiәrәtәri/ *a.* 呼吸的
urinary /juәˈrinәri/ *n.* 泌尿的
endocrine /ˈendәukrain/ *a.* 内分泌的
reproductive /ˈriːprәˈdʌktiv/ *a.* 生殖的
cartilage /ˈkɑːtilidʒ/ *n.* 软骨
bone marrow / bәun ˈmærәu/ 骨髓
smooth muscle /ˈsmuːð ˈmʌsl/ 平滑肌
striated muscle /ˈstraieitid ˈmʌsl/ 条纹肌

intestine /in'testin/ *n.* 肠
nourishment /'nʌriʃmənt/ *n.* 营养
cardiovascular /ˌkɑːdiəu'væskjulə/ *a.* 心血管的
antibody /'ænti,bɔdi/ *n.* 抗体
artery /'ɑːtəri/ *n.* 动脉
capillary /kə'piləri/ *n.* 毛细血管
vein /vein/ *n.* 静脉
larynx /'læriŋks/ *n.* 喉管
trachea /trə'kiːə/ *n.* ([复] tracheae /trə'kiːiː/) [单]气管
anus /'einəs/ *n.* 肛门
molecule /'mɔlikjuːl/ *n.* 分子
breakdown /'breikdaun/ *n.* 分解
saliva /sə'laivə/ *n.* 唾液
esophagus /i(ː)'sɔfəgəs/ *n.* 食管
enzyme /'enzaim/ *n.* 酶
duodenum /ˌdjuːəu'diːnəm/ *n.* 十二指肠
pancreas /'pænkriəs/ *n.* 胰腺
bile /bail/ *n.* 胆汁
gall bladder /gɔːl 'blædə/ 胆囊
colon /kəu'ləun/ *n.* 结肠
residue /'rezidjuː/ *n.* 残余物
sodium /'səudiəm/ *n.* 钠
kidney /'kidni/ *n.* 肾
urine /'juərin/ *n.* 尿液
ureter /juə'riːtə/ *n.* 输尿管
bladder /'blædə/ *n.* 膀胱
void /vɔid/ *v.* 使排空
pituitary /pi'tjuːitəri/ *n.* 垂体
thyroid /'θairɔid/ *n.* 甲状腺
urethra /juə'riːθrə/ *n.* 尿道
hormone /'hɔːməun/ *n.* 激素
gland /glænd/ *n.* 腺体
collarbone /'kɔləbəun/ *n.* 锁骨
metabolism /me'tæbəlizəm/ *n.* 新陈代谢
spinal cord /'spainl kɔːd/ 脊髓
integrate /'intigreit/ *v.* 整合
spinal column /'spainl 'kɔləm/ 脊柱
viable /'vaiəbl/ *a.* 能存活的

sperm /spəːm/ *n.* 精子
testosterone /tesˈtɔstərəun/ *n.* 睾酮
pubic hair /ˈpjuːbik hɛə/ 阴毛
ovum /ˈəuvəm/ *n.* 卵子
estrogen /ˈestrədʒən/ *n.* 雌激素
progesterone /prəuˈdʒestərəun/ *n.* 孕酮
tactile /ˈtæktail/ *a.* 触觉的
accessory /ækˈsesəri/ *a.* 附属的

Exercises

I. Reading Comprehension

Exercise 1 *Choose the best answers according to the text.*

1. Which of the following parts is NOT included in the skeletal system?
   A. Bones. B. Joints between bones.
   C. Cartilage. D. Striated muscles.
2. The breakdown of food, known as digestion, is _____.
   A. a mechanical process B. a chemical process
   C. a psychological process D. both A and B
3. Which of the following is NOT true about the functions of skin?
   A. It keeps the body's temperature consistent.
   B. It prevents excessive water evaporation.
   C. It makes our human beings look beautiful.
   D. It keeps out foreign substances.
4. Which element regulates the bodily characteristics of the adult male?
   A. Embryo. B. Testosterone.
   C. Muscle. D. Viable sperm.
5. The endocrine system controls body activities by means of _____.
   A. hormones B. adrenalin
   C. nerves D. enzymes

II. Word Building

体区系统常见术语构词特点

Morpheme	Origin	Meaning	Terminology
corpus somat(o)-; -some-	Latin Greek	body 体	tinea corporis 体癣；corpse 尸体 chromosome 染色体；somatic 躯体形的
capi(o)-; cephal(o)-	Latin Greek	head 头	capitate 头状的；decapitation 断头术 cephalitis 脑炎；cephalalgia 头痛
faci(o)- prosop(o)-	Latin Greek	face 面	facioplegia 面神经麻痹 prosopoplegia 面神经麻痹
ment(o)- geni(o)-	Latin Greek	chin 下巴	mentoplasty 颏成形术 genioplasty 颏成形术
cervix-; cervic- trachel(o)	Latin Greek	neck 颈	cervicothoracic 颈胸的 trachelagra 颈痛风
acr(o)-; mel(o)-	Greek	limb 肢	acromegaly 肢端肥大症；melodalgin 下肢痛
acromi-; om-	Greek	shoulder 肩	acromioclavicular 肩锁的；omodynia 肩痛
brachi(o)-; brachium	Latin	arm 臂	brachioradialis 肱桡肌；brachialgia 臂痛
carp(o)-	Greek	wrist 腕	carpitis 腕关节炎；carpoptosis 腕下垂
manus; man(o) cheir(o)-	Latin Greek	hand 手	maneuver 手法；maniphalanx 手指骨 cheiragra 手痛风
digit(o)- dactyl(o)-	Latin Greek	finger 指	digital 指/趾的；digitate 指突出的 dactylitis 指炎
coax-; cox(o)-	Latin	hip 臀	coxarthritis 髋关节炎；coxofemoral 髋股的
femor(o)-	Latin	thigh 股	Femorocele 股疝
pes-; ped(o)-; pedi- pod(o)-	Latin Greek	foot 足	pedopathy 足病；pedicare 足疗 podiatry 足医术
pect(o)- thorax-; thorac(o)-	Latin Greek	chest 胸腔	pectoral 胸的；angina pectoris 心绞痛 thoracoscopy 胸腔镜检查
mamm(o)- mast(o)-	Latin Greek	breast 乳房	mammalgia 乳房痛 mastitis 乳腺炎
abdomen; abdomin(o) venter-; ventr(o)-	Latin Greek	belly 腹	abdominal 腹部的 ventral 腹的
lumbus; lumb(o)-	Latin	loin 腰	lumbago 腰痛；lumbar 腰的

Exercise 2 *Work out the meanings of the following words with the help of medical morphemes you've just learned.*

a. cephalin	1) 乳腺病
b. acrodynia	2) 核糖体
c. prosopospasm	3) 足病医生
d. dactylogram	4) 脑磷脂
e. podiatrist	5) 肢端痛
f. thoracostomy	6) 神经痉挛
g. mastopathy	7) 指纹
h. ribosome	8) 腹外侧的
i. ventrolateral	9) 腰背的
j. lumbodorsal	10) 胸廓造口术

III. Translation

Exercise 3 *Translate the following into English.*

心血管疾病	消化不良	生殖系统	呼吸困难	血液循环
抗体	性激素	脑垂体	毛细血管	泌尿系统

IV. Simulated Writing 模拟套写

Medical Correspondence（医疗通信）

医疗通信是医药从业人员间的有关医药事宜的通信联系。这类信函常见的包括：医疗会诊函(letters for diagnostic consultation)、病案咨询函(letters for referring a patient)、医疗岗位申请函(letters for applying for a medical post)、个人简历(curriculum vitae)、推荐信(letters for recommendation)等。限于篇幅，我们在这里主要讨论医疗会诊函和个人简历。

医疗会诊函是指为诊断和治疗某一病例而向专家求助会诊的函件。这类函件信体包括：信头(heading)、称谓(salutation)、正文(body)、信尾(complimentary close)和签名(signature)。值得注意的是，信头只需书写日期，信体时态用一般用现在时，如果提及到病人，则用过去时或完成时。

下面就是一篇医疗会诊函范文，供学习者参考。

Sample 1

May 22, 2004

Dear Dr. Jefferson,

We have just admitted a patient, and we have suspected that he has caught cancer of corpus pancreatis. But some evidences are against our diagnosis and we cannot reach other judgments. We would appreciate it greatly if you kindly agree to come to our hospital at ten

o'clock tomorrow morning to discuss this case together with us. Thanks.

Sincerely Yours,
Bill Brown

个人简历是求职者向未来雇主提供的有关自己受教育情况、工作经历以及个人其他情况。其主要信息包括：个人资料(如：姓名、性别、地址、出生日期、婚姻状况、健康状况、国籍、身高、体重等)、所求岗位、工作经历、教育情况、特殊技能、科研成果、获奖情况、资料索取等。书写简历时要做到言简意赅，通常省略主语“I”和动词“be”。

下面是一篇个人简历范文：

Sample 2

CURRICULUM VITAE

Personal Data

Name:	Jinyang Li
Sex:	Female
Address:	35 Jiangyang Road, Chengdu, Sichuan Province, 610041, P.R.C.
Date of birth:	May 18, 1978
Marital status:	Single
Health:	Excellent
Nationality:	Chinese
Height:	178 cm
Weight:	60 kg

Job Objective

Seeking a position as a surgeon in the United States.

Work Experience

2003—present	Surgeon. Sichuan Provincial Hospital. Responsible for teaching surgery to interns and operations.
2001—2003	Resident. No. 1 Hospital of Mianyang District. Assisted the doctors to treat the patients. Took actions according to the doctors' advice.

Education

1996—2001	Studied at Dept. of Clinical Medicine, Luzhou Medical College, Sichuan Province. Basic courses included advanced maths, biochemistry, English, anatomy, physiology, embryology, histology, pharmacology, medicine ethics, etc. Professional courses included diagnostics, internal medicine, surgery, imaging, obstetrics-gynecology, pediatrics, otolaryngology.
1993—1996	Studied in No. 3 High School of Chengdu.