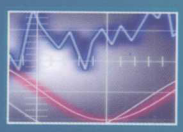
普通高等教育“十一五”立项教材

总主编　冯艳荣

实用医学英语教程

主 编　张桂英 姜雪艳 董洪兰 王　艳

Practical Medical English Course

吉林大学出版社
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Jilin University Press

图书在版编目（CIP）数据

实用医学英语教程/冯艳荣等主编．—长春：吉林大学出版社，2009.1
（渤大外语系列）
ISBN 978-7-5601-4010-0

Ⅰ．实… Ⅱ．冯… Ⅲ．医学—英语—医学院校—教材
Ⅳ．H31

中国版本图书馆 CIP 数据核字（2009）第 003048 号

书　名：渤大外语系列
　　实用医学英语教程
作　者：冯艳荣　张桂英　姜雪艳　董洪兰　王　艳　主编

责任编辑、责任校对：孟亚黎
吉林大学出版社出版、发行
开本：787×1092 毫米　1/16
印张：18　　字数：635 千字
ISBN 978-7-5601-4010-0

封面设计：张沐沉
长春大学印刷厂印刷
2009 年 1 月第 1 版
2009 年 1 月第 1 次印刷
定价：39.60 元

社址：长春市明德路 421 号　邮编：130021
发行部电话：0431—88499826
网址：http://www.jlup.com.cn
E-mail:jlup@mail.jlu.edu.cn

前　言

进入21世纪以来，随着我国对外交往和学术交流的不断深入，社会对专业技术人员的外语水平要求也越来越高。在这种形式下，我国对大学英语教学进行了一系列改革和创新，取得了很大的成绩。但是应用提高阶段的专业英语，尤其是医学专业英语的教学还很薄弱，其中一个重要原因就是医学专业英语教材的改革和创新与时代的发展和需要不太适应。为了深化医学英语的教学改革，使广大医学院校的本科生、研究生等尽快掌握新世纪迫切需要的、在一定专业领域内以英语为工具进行信息交流的能力，我们根据以往专业英语的教学实践和当前大学生掌握英语的实际能力，以及教育部颁发的《大学英语教学大纲(修订版)》对专业英语教学的具体要求，编写了这本《实用医学英语教程》。

作为专业英语教材，首先应当与医学教学的实际相结合。当前的医学发展，正面临崭新的前景。传统的医学模式作为医学的基础仍然占据着重要的地位，同时，医学又日益与心理学、社会学、伦理学等学科结合，呈现出前所未有的广度和深度。

本教材在编写过程中注意突出时代性和实用性。本书的选材有代表性地涉及病理医学的各个主要领域，临床实用性很强，涵盖了呼吸，消化，心血管，神经，血液，内分泌，免疫等人体各个系统的常见病症。为了兼顾学生继续提高英语语言水平和熟悉医学英语的双重需要，兼顾对医学一般知识的了解和阅读专业文献的不同要求，本书每个单元均包括两篇文章(In－class Reading and After－class Reading)和一篇 Material Reference，彼此之间构成一种内容一致、语言风格互相补充的关系。本教材共10个单元，书后附有练习答案，In－class Reading 和 Material Reference 的译文和词汇表，以更好地满足大家的学习需要。

本书的练习安排全面突出教育部《大学英语教学大纲(修订版)》对专业英

语教学在听、说、读、写、译方面的要求，设有阅读理解、词汇运用、听说互动以及英汉互译。此外，根据医学英语的特点，还专设了构词基础项目。每个练习项目紧扣课文，既是对课文从语言到内容的复习，又是课文内容的有机延伸。比如，阅读理解练习有选择、是非、简答等形式，有针对性而无繁琐。词汇运用部分所用例句均与医学内容相结合，为学生提供运用重点词汇的范例。听说互动以听写为基础，材料由浅入深，要求从易到难，为学生逐步掌握用听、说进行交流的能力打基础。英汉互译突出对医学英语常用语法结构的熟悉和运用，这也是为医学英语写作所做的最基本、最实际的训练。构词基础简明扼要地介绍医学英语构词的基本特点，并提供最常用的词素和实例。

考虑到当前各医学院校专业英语教学在学时和要求等具体问题上的不统一，我们建议使用本教材的教师根据各自的实际情况，决定使用方法。例如，可将一部分内容作课堂教学，另一部分布置学生自学，进行必要的检查；或可选择性地重点使用听说部分或翻译部分。总之，专业英语的教学，特别是医学英语的教学，还尚无很成熟的经验。我们欢迎使用本书的教师和同学能为我们提出宝贵的意见和建议，使本教程能在使用中得到不断地更新和完善。我们预表衷心的谢意。

编　者

Contents

Unit 1 Respiratory System

In-class Reading

Pneumonia

To better understand pneumonia, it is important to understand the basic anatomic features of the respiratory system first. The human respiratory system begins at the nose and mouth, where air is breathed in (inspired) and out (expired). The air tube extending from the nose is called the nasopharynx. The tube carrying air breathed in through the mouth is called the oropharynx. The nasopharynx and the oropharynx merge into the larynx. The oropharynx also carries swallowed substances, including food, water, and salivary secretion which must pass into the esophagus and then the stomach. The larynx is protected by a trap door called the epiglottis. The epiglottis prevents substances which have been swallowed, as well as substances which have been regurgitated, from heading down into the larynx and toward the trachea. A useful method of picturing the respiratory system is to imagine an upside-down tree. The larynx flows into the trachea, which is the tree trunk, and thus the broadest part of the respiratory tree. The trachea divides into two tree limbs, the right and left bronchi. Each one of these branches off into multiple smaller bronchi, which course through the tissue of the lung. Each bronchus divides into tubes of smaller and smaller diameter, finally ending in the terminal bronchioles. The air sacs of the lung, in which oxygen-carbon dioxide exchange actually takes place, are clustered at the ends of the bronchioles like the leaves of a tree. They are called alveoli. The tissue of the lung which serves only a supportive role

for the bronchi, bronchioles, and alveoli is called the lung parenchyma.

The main function of the respiratory system is to provide oxygen, the most important energy source for the body's cells. Through the lungs we breathe in oxygen and breathe out carbon dioxide. The normal, healthy human lung is sterile. There are no normally resident bacteria or viruses. There are multiple safeguards along the path of the respiratory system. These are designed to keep invading organisms from leading to infection. Pneumonia is an infection of the lung, and can be caused by nearly any class of organisms known to cause human infections. The list of organisms which can cause pneumonia is very large, and includes nearly every class of infecting organisms: viruses, bacteria, bacteria-like organisms, fungi, and parasites. Different organisms are more frequently encountered by different age groups. Viruses cause the majority of pneumonias in young children. Adults are more frequently infected with bacteria. Pneumonia in older children and young adults is often caused by the bacteria-like mycoplasma pneumoniae. Pneumonia is suspected in any patient who has fever, cough, chest pain, shortness of breath, and increased respirations (number of breaths per minute). Fever with a shaking chill is even more suspicious. Many patients cough up clumps of sputum, commonly known as spit. These secretions are produced in the alveoli during an infection or other inflammatory condition. Severe pneumonia results in the signs of oxygen deprivation. This includes blue appearance of the nail beds or lips. The patient breathes faster and faster, in an effort to bring in more oxygen and blow off more carbon dioxide. Consolidation, a feature of bacterial pneumonias, occurs when the alveoli, which are normally hollow air spaces within the lung, instead become solid, due to quantities of fluid and debris. Viral pneumonias and mycoplasma pneumonias do not result in consolidation. These types of pneumonia primarily infect the walls of the alveoli and the parenchyma of the lung.

For the most part, diagnosis is based on the patient's report cf symptoms, combined with examination of the chest. Listening with a stethoscope will reveal abnormal sounds, and tapping on the patient's back (which should yield a resonant sound due to air filling the alveoli) may instead yield a dull thump if the alveoli are filled with fluid and debris. Laboratory diagnosis can be made of some bacterial pneumonias by staining sputum with special chemicals and looking at it under a microscope. Identification of the specific type of bacteria may require culturing the sputum. X-ray examination of the chest may reveal certain abnormal changes associated with pneumonia. Localized shadows obscuring areas of the lung may indicate a bacterial pneumonia, while streaky or patchy appearing changes in the X-ray picture may indicate viral or mycoplasma pneumonia. These changes on X-ray, however, are known to lag in time behind the patient's actual symptoms.

Prior to the discovery of penicillin antibiotics, bacterial pneumonia was almost always fatal. Today, antibiotics, especially given early in the course of the disease, are very effective against bacterial causes of pneumonia. Erythromycin and tetracycline improve recovery time for symptoms of mycoplasma pneumonia. They do not, however, eradicate all the causative organisms.

Prognosis varies according to the type of microorganism causing the infection. Recovery following pneumonia with mycoplasma pneumoniae is nearly 100%. Staphylococcus pneumoniae has a death rate of 30%~40%. Similarly, infections with a number of gram-negative bacteria have a high death rate of 25%~50%. Streptococcus pneumoniae, the most common organism causing pneumonia, produces a death rate of about 5%. More complications occur in the very young or very old individuals who have multiple areas of the lung infected simultaneously. Individuals with other chronic illnesses including cirrhosis of the liver, congestive heart failure,

individuals without a functioning spleen, and individuals who have other diseases that result in a weakened immune system, experience complications. Patients with immune disorders, various types of cancer, transplant patients, and AIDS patients also experience complications.

Because many bacterial pneumonias occur in patients who are first infected with the influenza virus (the flu), yearly vaccination against influenza can decrease the risk of pneumonia for certain patients. This is particularly true of the elderly and people with chronic diseases such as asthma, other lung or heart diseases, diabetes, kidney disease, and forms of cancer. A specific vaccine against streptococcus pneumoniae is very protective, and should also be administered to patients with chronic illnesses. To some extent, that can help them avoid pneumonias.

New Words and Expressions

anatomic [ˌænə'tɔmik]	adj. 解剖的，解剖学上的
respiratory [ris'paiərətəri]	adj. 呼吸的
inspired [in'spaiəd]	adj. 吸入的
expired [iks'paiəd]	adj. 呼出的
nasopharynx [ˌneizəu'færiŋks]	n. 鼻咽
oropharynx [ˌəurə'færiŋks]	n. 口咽
merge [mə:dʒ]	v. 合并，并入，结合，融合
larynx ['læriŋks]	n. 喉
salivary ['sælivəri]	adj. 唾液的，分泌唾液的
secretion [si'kri:ʃən]	n. 分泌，分泌物(液)
esophagus [i(:)'sɔfəgəs]	n. 食道
trap door	活板
epiglottis [ˌepi'glɔtis]	n. 会厌
regurgitate [ri(:)'gə:dʒiteit]	v. 反流，流回
trachea [trə'ki:ə]	n. 气管
limb [lim]	n. 肢体，分支
bronchus ['brɔŋkəs]	n. (pl. bronchi ['brɔŋki]) 支气管
diameter [dai'æmitə]	n. 直径
bronchiole ['brɔŋkiəul]	n. 细支气管
terminal bronchiole	终末支气管

air sac ['ɛə 'sæk] n. 气囊
cluster ['klʌstə] v. 簇集，成群
alveoli [æl'viəlai] n. 肺泡
parenchyma [pə'reŋkimə] n. 实质，软组织
sterile ['sterail] adj. 无菌的
resident ['rezidənt] adj. 常驻的
virus ['vaiərəs] n. 病毒
safeguard ['seif,gɑ:d] n. 防御机制，安全装置，保护措施
organism ['ɔ:gənizəm] n. 生物体 [pl.] 微生物群落
infection [in'fekʃən] n. 感染，传染
parasite ['pærəsait] n. 寄生虫，食客
mycoplasma [,maikəu'plæzmə] n. 支原体，支原菌
mycoplasma pneumonia [nju(:)'məunjə] n. 支原体肺炎
mycoplasma pneumoniae [nju(:)məu'ni:] n. 支原体肺炎菌
chill [tʃil] n. 寒战
clump [klʌmp] n. 细菌凝块
sputum ['spju:təm] n. 唾液，痰
spit [spit] n. 咳痰，唾液，唾沫
inflammatory [in'flæmətəri] adj. 发炎的，引起炎症的，易红肿的

sign [sain] n. 症状
deprivation [,depri'veiʃən] n. 缺乏，丧失
blue [blu:] adj. (人的脸色、肤色)发青紫色的
nail beds 甲床
consolidation [kən,sɔli'deiʃən] n. 肺实变
debris ['debri:, 'deib-] n. 碎片，残骸
viral ['vairəl] adj. 病毒的
viral pneumonia 病毒性肺炎
wall [wɔ:l] n. (空心物的) 内壁
diagnosis [,daiəg'nəusis] n. 诊断
symptom ['simptəm] n. 症状，征兆
examination [ig,zæmi'neiʃən] n. 检查，细查，考试
stethoscope ['steθəskəup] n. 听诊器
abnormal [æb'nɔ:m(ə)l] adj. 异常的，变态的
resonant ['rezənənt] adj. 有回声的；共振的
thump [θʌmp] n. 砰砰声
stain [stein] v. 着[变，染]色，弄脏
microscope ['maikrəskəup] n. 显微镜
culture ['kʌltʃə] v. 培养(细菌)
streaky ['stri:ki] adj. 条纹状的

patchy ['pætʃi] adj. 斑片状的
lag [læg] v. 滞后，落后
penicillin [ˌpeni'silin, ˌpə'ni-] n. 青霉素
antibiotic [ˌæntibai'ɔtik] n. 抗生素
fatal ['feitl] adj. 致命的，不幸的，毁灭性的
erythromycin [iˌriθrəu'maisin] n. 红霉素（抗生素的一种）
tetracycline [tetrə'saiklin, -lain] n. 四环素
eradicate [i'rædikeit] v. 根除
causative organisms ['kɔ:zətiv 'ɔ:gənizəmz] n. 致病微生物
prognosis [prɔg'nəusis] n. (pl. prognoses) 预后
staphylococcus [ˌstæfiləu'kɔkəs] n. 金葡菌，葡萄状球菌
staphylococcus pneumoniae 肺炎金葡菌
negative ['negətiv] adj. 阴性的
gram negative bacteria 革兰氏阴性菌
streptococcus [ˌstreptəu'kɔkəs] n. 链球菌
streptococcus pneumoniae 肺炎链球菌
simultaneously [ˌsiməl'teinjəsli] adv. 同时地
chronic ['krɔnik] adj. 慢性的，延续很长的
cirrhosis [si'rəusis] n. 硬化
liver ['livə(r)] n. 肝脏
congestive [kən'dʒestiv] adj. 充血的
spleen [spli:n] n. 脾
immune [i'mju:n] adj. 免疫的
complication [ˌkɔmpli'keiʃ(ə)n] n. 并发症
disorder [dis'ɔ:də] n. (身心机能的) 失调，小病，不适
transplant [træns'plɑ:nt] n. 移植
vaccination [ˌvæksi'neiʃən] n. 接种疫苗
vaccine ['væksi:n] n. 疫苗
asthma ['æsmə] n. 哮喘
diabetes [ˌdaiə'bi:ti:z, -ti:s] n. 糖尿病，多尿症
administer [əd'ministə] v. 用药；实施
resistance [ri'zistəns] n. 抵抗力

Study and Practice

I. Reading Comprehension Questions

1. This article begins with _____.
   A) the features of respiratory diseases
   B) the description of respiratory system
   C) the causes of pneumonia

D) the structure of the lung

2. The respiratory system is compared to _____ in the passage.
   A) two tree limbs B) the falling tree leaves
   C) an upside-down tree D) a strong tree trunk
3. What is the main function of the respiratory system?
   A) To protect people from getting pneumonia.
   B) To divide the lungs into two parts.
   C) To provide oxygen to the body.
   D) To absorb carbon dioxide.
4. The exchange of oxygen and carbon dioxide takes place _____.
   A) in the air tube B) at the mouth
   C) in the larynx D) in the alveoli of the lung
5. Normally there are _____ in healthy human lungs.
   A) no resident bacteria or viruses B) no safeguards at all
   C) various organisms D) fungi and parasites
6. Pneumonia is _____.
   A) a class of infecting organism
   B) an infection of the lung
   C) a means of treatment of lung disease
   D) a main organ of respiratory system
7. All the following except _____ can cause pneumonia.
   A) viruses B) parasites C) bacteria D) spit
8. There are more bacterial pneumonia in _____.
   A) children B) adults C) males D) females
9. The symptoms of pneumonia are _____.
   A) fever and cough B) chest pain
   C) shortness of breath D) all of above
10. Which of the following is true about pneumonia?
   A) Pneumonia used to cause death easily.
   B) So far there is not effective antibiotics to deal with pneumonia.
   C) Mycoplasma pneumoniae has a death rate of 30~40%.
   D) Yearly vaccination against influenza can make people immune to pneumonia.

II. Words to Practice

A. Fill in the blanks with the words or expressions given below. Change the form where necessary.

consolidation	expire	limb	resident	disorder
at high risk of	chronic	blue	immune	encounter

1. Cells lining the respiratory tract produce several types of _____ substances which protect against various organisms.
2. You inspire oxygen and _____ carbon dioxide when you breathe.
3. Men and women have four _____, two arms and two legs.
4. A feature of bacterial pneumonia is _____ when the alveoli become solid.
5. Normally, there are some _____ bacteria in human bodies that don't necessarily cause diseases.
6. Viral pneumonia is more frequently _____ by young children according to the report.
7. Your lips seem to become _____ with cold.
8. Patients who have decreased immune resistance are _____ infections.
9. Regular exercises do help many patients with _____ diseases by improving their resistance.
10. Too much stress may lead to mental _____.

B. Listening Practice

Listen to the short talk carefully, and fill in the blanks with what you hear.

New research suggests that very young babies who are with other children are less likely to _____ the breathing disease asthma. Asthma is a disease in which small air passages in the lungs become temporarily _____. This causes difficulty breathing.

Day care centers are places where babies and children are cared for while their parents are at work. Researchers studied babies of different ages in day care centers. They found that babies up to six months old _____ from asthma. They were only about half as likely to have asthma at age thirteen as babies who did not attend day care until later.

Babies who entered day care after the age of six months also received some protection from asthma. But they did not get as much protection as the younger babies. Children who entered day care after the age of one _____ protection against the disease. The study also found that children with two or more older brothers or sisters at home also _____ for asthma. Scientists believe early experiences with _____ may help develop a baby's defense system against disease.

The asthma study provides _____ for the idea that keeping a baby in an environment almost _____ may cause problems later in life.

III. Translation

A. Translate the following sentences into Chinese.

1. In recent years this virus, which is called HIV(Human Immunodeficiency Virus)

has caused a huge increase in the incidence of pneumonia because it results in a general decreased effectiveness of many aspects of the immune system.

2. Inspired air contains the oxygen and travels down the respiratory track to the alveoli. The oxygen is exchanged within the alveoli for the waste product of human metabolism, carbon dioxide. This gas leaves the body during expiration.

B. Translate the following sentences into English.

1. 保持清洁是抵御任何疾病的必要防护措施。(safeguard)
2. 随着科技的发展，五十年前一些致命的疾病如今已可以治愈了。(fatal)
3. 下个星期你才能得到胸部的X光片的检查结果。
4. 约翰和他的双胞胎弟弟同时感染上了这种奇怪的病毒。
5. 肺炎是各种类型手术最常见的感染综合症之一。

After-class Reading

Asthma

Asthma is a chronic inflammatory disease of the airways in the lungs. This inflammation periodically causes the airways to narrow, which produces wheezing and breathlessness, sometimes to the point where the patient gasps for air. The changes that take place in the lungs of asthmatics make the bronchi and the smaller bronchioles hyper-reactive to many different types of stimuli that don't affect healthy lungs. In an asthma attack, the muscle tissue in the walls of the bronchi go into spasm, and the cells that line the airways swell and secrete mucus into the air spaces. Both these actions cause the bronchi to narrow, a change that is called bronchoconstriction. As a result, an asthmatic person has to make a much greater effort to breathe.

Asthma usually begins in childhood or adolescence, but it also may first appear in adult life. While the symptoms may be similar, certain important aspects of asthma are different in children and adults. When asthma begins in childhood, it often does so in a child who is likely, for