

卫生部规划教材

高等医药院校教材

供医学、中医、儿科、口腔、卫生类专业用

英 语

第 二 册

第 三 版

邵循道 主编
周璐玲

人 民 卫 生 出 版 社

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人 民 卫 生 出 版 社

图书在版编目 (CIP) 数据

英语(二)/邵循道 周璐玲 主编. - 3 版. - 北京:人民卫生出版社,1995

ISBN 7-117-00243-3

I. 英… II. 邵… III. 英语-语言教学-教材 IV. H319

中国版本图书馆 CIP 数据核字(95)第 14651 号

英 语 第 二 册

主 编:邵循道 周璐玲

出版发行:人民卫生出版社(中继线 67616688)

地 址:(100078)北京市丰台区方庄芳群园 3 区 3 号楼

网 址:[http://www. pmph. com](http://www.pmph.com)

E - mail: [pmph @ pmph: com](mailto:pmph@pmph.com)

印 刷:北京人卫印刷厂

经 销:新华书店

开 本:787×1092 1/16 印张:16.75

字 数:388 千字

版 次:1984 年 4 月第 1 版 2001 年 9 月第 3 版第 34 次印刷

印 数:1 394 116—1 399 115

标准书号:ISBN 7-117-00243-3/R·244

定 价:13.80 元

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三 版 前 言

本教材自1982年发行第二版至今已历时十余载。现根据广大医药卫生人员使用及教学工作的需要，对此教材进行修订。

这次修订的原则是保持原教材自成体系的特点和风格，一、二册的基本框架不变，第一册仍侧重于一般性及医学科普性文章，第二册为医学基本知识，少量课文作了修改和变更，使之成为内容更新颖、难易度与目前学生水平相当的医学英语教科书。这两册供一般医药院校学生及在职人员使用。第三册在内容和文字方面有较大的变动。原来二、三册文字水平坡度不够，现有意提高文字难度，内容更接近临床医学及一些新的边缘学科。第三册可作为通过四级考试后的专业英语教材。一、二、三册配有《英语练习答案及参考译文》一书。

本教材修订小组的成员有：西安医科大学邵循道教授（主编），北京医科大学周璐玲教授（主编），同济医科大学刘炎南教授、刘应宏教授，上海第二医科大学华仲乐副教授，上海医科大学梁正溜副教授，华西医科大学柯吉贵教授，中山医科大学董丽明副教授。参加本教材第一册修订工作的有：刘炎南（负责全书初稿定稿）、刘应宏、董丽明及周璐玲等同志；参加第二册修订工作的有：华仲乐（负责全书初稿定稿）、梁正溜及柯吉贵等同志。参加第三册修订工作的有：刘炎南、刘应宏、董丽明、华仲乐、梁正溜、柯吉贵、周璐玲。

本教材修订时间仓促，又限于编者水平，书中缺点和错误在所难免，欢迎批评指正。

1990.10

第二册使用说明

本册共 20 课，供 80~100 学时使用，每课约 4~5 学时。课文以医学科普和医学基础知识方面的内容为主。文章多采自国外原著，略加删节或改写。全册单词约 1,600 个。

本册的目的在于：进一步扩大和加深第一册所学的英语语法和句型结构方面的知识和实际运用能力；简单介绍英语构词法；用英语注释生词，以帮助学生积累词汇；继续进行听、说、读、写的训练，逐渐提高阅读质量与速度。这些，都是为今后阅读英语医学书刊打下更好的语言基础。

每课虽未配有语法专题，但在练习中均有目的地安排有一定的语法重点，主要通过句型变换和汉译英等方式，来加深理解和提高运用能力。练习形式注意多样化，其中有机械模仿的，也有综合运用的，教师可根据学生的实际水平选用，有的可作为课堂口头练习，有的可留作课外书面作业。但要注意课文是每课的中心，学生必须在掌握课文的基础上再做练习，以取得良好的练习效果。

本册大部分解释采用英语，在教学过程中教师应多带领学生用英语实践，以培养学生用英语表达的习惯。

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LESSON ONE

TEXT

Medicine As A Science

Medicine in part is a branch of applied biology. The substance of biologic science underlies most of the medical progress of the past half century which has so remarkably advanced the ability of the physician to intervene in illness. Much of this progress has been in fundamental or "basic" science, conducted in the pursuit of truth for its own sake. Significant progress has also resulted from research conducted by physician-scientists with a specified clinical goal in mind—for example, the explanation of a disease mechanism. Advances in medicine also continue to occur simply by careful clinical observations concerning patients and their illnesses, but these are now the exceptions.

The present bioscientific character of medical practice is a relatively recent development. Throughout most of recorded history medicine was anything but scientific. Diagnoses were inexact, causes of diseases poorly understood, and therapies often ineffective.

Signs of change emerged slowly in the early nineteenth century, as new principles of physics and chemistry were applied to medicine. Physiologists stressed functions of organs and tissues. Pathologists, led by Virchow (1821-1902), stressed the critical study of normal and abnormal tissues and the correlation of features of disease with precise anatomic observations. Bacteriologists, with Pasteur (1822-1895) and Koch (1843-1910) in the vanguard, began to identify the microorganisms and to implicate specific organisms in specific diseases. The groundwork for future therapies was being laid by these great scientists.

Slowly, specific therapies or specific immunizations appeared. But it was not until the decade 1935-1945 that the entry of sulfonamides and penicillin into clinical medicine made curable a large number of previously lethal and untreatable diseases^①. It is customary to date the beginnings of modern medicine from these relatively recent events.

The language of contemporary biologic science has become increasingly biochemical. The compositions of organs, tissues, cells, and membranes have been defined. The regulation of body processes has been described at progressively finer levels, and in chemical language. Many pharmacologic agents are now understood in terms of specific loci and mechanisms of action. The expansion of new knowledge continues at a pace that is bewildering to all but experts in a given field. Current advances are particularly rapid in immunology, molecular biology, and peptide research.

We have entered a molecular age of basic biologic science, and molecular biology is now a recognized discipline. The molecular influence pervades all the traditional disciplines underlying clinical medicine.

Medicine is not only a branch of applied biology, however. It also includes many aspects of psychology, sociology, anthropology, and economics. These disciplines, too long neglected, are now increasingly recognized as closely related to medicine as a discipline and the practice of medicine as a profession^②.

WORDS AND EXPRESSIONS

underlie [ˌʌndəˈlai] *vt.* to form the basis of (a theory, of conduct, behaviour, doctrine) 为(理论, 行为, 举止, 宗旨)的基础

remarkably [riˈmɑ:kəbli] *ad.* unusually, noticeably 不平常地, 显著地

intervene [ˌintəˈvi:n] *vt.* to interfere with sth. so as to prevent it from happening 干扰, 阻挠

pursuit [pəˈsjut] *n.* act of pursuing 追求

for one's sake; for the benefit of; because of an interest in or desire for; for the purpose of 为了…的缘故, 为…目的

result from: be caused by; happen because of 由…引起, 因…而发生

specify ['spesɪfaɪ] *vt.* to state or name definitely 指定; 详细说明

concerning [kənˈsɜ:nɪŋ] *prep.* about, with regard to 关于

exception [ɪkˈsepʃən] *n.* sb. or sth. that is not included 例外

anything but; far from; not at all 远非, 根本不是

ineffective [ˌɪniˈfektɪv] *a.* not producing the effects desired 无效的, 不起作用的

stress [stres] *vt.* to emphasize, put emphasis on 强调

emerge [ɪˈmɜ:dʒ] *vi.* to come into view; appear, become known 出现, 显示

physiologist [ˌfɪziˈɒlədʒɪst] *n.* expert in physiology 生物学家

pathologist [pəˈθɒlədʒɪst] *n.* a specialist in pathology 病理学家

Virchow [ˈvɜ:tʃau] *n.* 魏尔啸 (德国病理学家)

critical [ˈkrɪtɪkəl] *a.* of or related to the work of a critic 批评(性)的; 评论(性)的

correlation [ˌkɒrɪˈleɪʃən] *n.* mutual relationship 相互关系, 关连

precise [priˈsaɪs] *a.* exact, free from error 精确的

anatomic [ˌænəˈtɒmɪk] *a.* of or related to anatomy 解剖的, 结构上的

bacteriologist [ˌbæktəriˈɒlədʒɪst] *n.* expert in bacteriology 细菌学家

Koch [kɔ:k] *n.* 科克 (德国医生及细菌学家)

vanguard [ˈvæŋɡɑ:d] *n.* advance part of an army, etc. as a guard against surprise attack 先锋, 先头部队

implicate [ˈɪmpleɪkɪt] *vt.* to show that sb. has a share (in a crime, etc.) 使(某人)牵连 (于罪行等之中), 显示(某人)和…有牵连

groundwork [ˈɡraʊndwɜ:k] *n.* foundation, basis 基础, 根基

immunization [ˌɪmjʊnaɪˈzeɪʃən] *n.* 免疫法, 免疫作用
 entry [ˈentri] *n.* coming or going in 进入
 sulfonamide [ˌsʌlfəʊˈnæmɪd] *n.* 磺胺, 磺胺药物
 curable [ˈkjʊərəbl̩] *a.* that can be cured 可治愈的
 previous [ˈpri:vjəs] *a.* coming earlier in time or order 先的, 前的, 以前的 ~ly *ad.*
 lethal [ˈli:θəl] *a.* causing death, fatal 致命的
 customary [ˈkʌstəməri] *a.* usual; according to custom or habitual 通常的, 习惯的
 date [deɪt] *vt. & vi.* to give a date to 鉴定…的时代
 contemporary [kənˈtempərəri] *a.* of the time or period to which reference is being made;
 belonging to the same time 当代的, 同时代的
 progressively [prəˈgresɪvli] *ad.* gradually 逐渐地
 chemical [ˈkemɪkəl] *a. & n.* of, made by, chemistry; substance used in, or obtained by,
 chemistry 化学的; 化学物
 pharmacologic [fɑ:məkəˈlɒdʒɪk] *a.* of or related to pharmacology 药理学的, 药物学的
 agent [ˈeɪdʒənt] *n.* substance that produces an effect (化学) 剂
 in terms of: concerning, with regard to 从…方面(来说); 根据, 按照
 locus [ˈləʊkəs] *n. pl. loci* [ˈləʊsaɪ] exact place of sth. 所在地, 病灶
 expansion [ɪksˈpænfən] *n.* expanding or being expanded 扩大, 膨胀
 pace [peɪs] *n.* rate of walking or running, or (fig.) progress 走或跑的速度, (喻) 进步
 的速度
 bewildering [biˈwɪldərɪŋ] *a.* puzzling, confusing, 使迷惑的
 immunology [ˌɪmjʊˈnɒlədʒi] *n.* the medical study of immunity 免疫学
 molecular [məʊˈlekjʊlə] *a.* of or related to molecules 分子的
 peptide [ˈpeptaid] *n.* 肽
 discipline [ˈdɪsɪplɪn] *n.* branch of knowledge; subject of instruction 学科, 科目
 psychology [saɪˈkɒlədʒi] *n.* science, study, of the mind and its processes 心理学
 sociology [ˌsəʊsiˈɒlədʒi] *n.* science of the nature and growth of society 社会学
 anthropology [ˌænθrəˈpɒlədʒi] *n.* science of man, esp. of the beginning, development,
 customs, and beliefs of mankind 人类学
 economics [ˌi:kəˈnɒmɪks] *n.* science of the production and distribution of goods 经济学
 neglect [nɪˈɡlekt] *vt.* to pay no attention to; give no or not enough care to 忽略, 疏忽

NOTES TO THE TEXT

1. But it was not until the decade 1935-1945 that the entry of sulfonamides and penicillin into clinical medicine made curable a large number of previously lethal and untreatable diseases.

然而, 直到1935~1945年间, 当磺胺、青霉素进入临床治疗之后, 许多以前致命的和无法治疗的疾病才得以治愈。

It was not until... that... 是强调句型。例如,

It was not until the next day that I learned the truth.

(I did not learn the truth until the next day.)

made curable a large number of...中的 curable 是宾语 a large number of...的补语, 因为宾语太长, 所以将宾语和宾语补语倒置。例如,

Many people consider impossible what really is possible.

He has proved wrong the forecasts made by the country's leading economic experts.

2. These disciplines, too long neglected, are now increasingly recognized as closely related to medicine as a discipline and the practice of medicine as a profession.

这些长期被忽视的学科, 现在已愈来愈被认为与作为一门学科的医学和作为一项职业的医疗实践密切相关。

过去分词短语 too long neglected 作定语, 修饰 disciplines; as a discipline 和 as a profession 都为介词短语, 分别修饰 medicine 和 practice of medicine.

COMPREHENSION

I. Answer the following questions.

1. Why is medicine in part a branch of applied biology?
2. What has contributed to the medical advances in the past half century?
3. Is it still common to make new discoveries by careful clinical observations now?
4. What was medicine like throughout most of recorded history?
5. How and why did signs of change emerge in the early 19th century?
6. Do you know anything about the scientists mentioned in the text?
7. When did modern medicine begin?
8. What achievements have been made in medicine?
9. In what fields are rapid advances being made?
10. What disciplines are now increasingly recognized as closely related to medicine?

II. Supply the missing words without looking back at the text. When finished, check your answers by referring to it.

Medicine in _____ is a branch of _____ biology. The substance of biologic science _____ most of the medical progress of the past half century _____ has so remarkably _____ the ability of the physician to _____ in illness. Much of this progress _____ been in fundamental or _____ science, conducted in the _____ of truth for its own _____.

Significant progress has also _____ from research _____ by physician-scientists with _____ specified clinical goal _____ mind, for example, the _____ of a disease mechanism. Advances in medicine also _____ to occur simply _____ careful clinical observations _____ patients and their illnesses, but these are now the _____.

III. Choose the one word or phrase below each sentence that is similar in meaning to the part in italics.

1. The medical progress of the past half century has so remarkably advanced the ability of the physician to *intervene in* illness.
 - a. predict
 - b. diagnose
 - c. involve in
 - d. prevent or cure
2. It is *customary* to date the beginnings of modern medicine from these relatively recent events.
 - a. usual
 - b. exact
 - c. basic
 - d. specific
3. Throughout most of recorded history medicine was *anything but* scientific.
 - a. more or less
 - b. quite
 - c. to a certain degree
 - d. not at all
4. Signs of change *emerged* slowly in the early nineteenth century.
 - a. gathered
 - b. existed
 - c. appeared
 - d. advanced
5. Physiologists *stressed* functions of organs and tissues.
 - a. identified
 - b. emphasized
 - c. described
 - d. explained
6. Pathologists stressed the critical study of normal and abnormal tissues and the correlation of features of disease with *precise* anatomic observations.
 - a. serious
 - b. complete
 - c. careful
 - d. exact
7. The language of *contemporary* biologic science has become increasingly biochemical.
 - a. fashionable
 - b. practical
 - c. modern
 - d. fundamental
8. The expansion of new knowledge continues at a pace that is *bewildering* to all but experts in a given field.
 - a. exciting
 - b. encouraging
 - c. convincing
 - d. perplexing
9. The molecular influence pervades all the traditional disciplines *underlying* clinical medicine.
 - a. forming the foundation of
 - b. relying on
 - c. affecting
 - d. composing
10. Much of this progress has been in basic science, conducted in the pursuit of truth *for its own sake*.
 - a. for its survival
 - b. for the benefit of its own
 - c. without any help
 - d. on its own

WORD STUDY

1. advance

- 1) *n.* 推进; 进展 (a forward movement; progress or improvement)

Tremendous advances have been made in cardiac surgery in the past ten years.

(The past ten years have seen great advances in cardiac surgery.)

Advances in medical sciences have lengthened human life.

- 2) *vt.* 推进; 提出; 提升 (to bring forward; put forward; promote)

It's malnutrition that advances the progress of the disease.

He worked so well that he was soon advanced to a higher position.

- 3) *vi.* 向前推进; 有进展 (to move forward or show improvement)

The science of medicine was advancing rapidly.

As the disease advances, it causes ulceration, bleeding and necrosis.

- 4) *advanced a.* 先进的; 晚期的 (far on in development, growth, etc.)

The more advanced the disease is, the more difficult the treatment.

He is longing to pursue advanced studies in your Department.

2. progress

- 1) *n.* ['prəʊgres] 进展; 进步; 好转 (advance; development; improvement)

Great progress has been made in the field of organ transplantation in the past ten years. (The past ten years have witnessed great progress in the field of organ transplantation.)

Pneumonia may appear as a complication in the progress of measles.

- 2) *vi.* [prə'gres] 有进展; 发展; 好转 (to advance; develop; improve)

Researches on environmental health have progressed rapidly.

More patients had progressed in the treatment group than in the control group.

The minor illness may progress to a serious one.

WORD BUILDING

1. in- and un-

These prefixes are used to make an adjective negative, e. g. incomplete means 'not complete'; unable means 'not able'.

Exercise 1) Using 'in-' or 'un-', make the following negative.

curable direct like familiar capable organic known
visible aided necessary aware easy usual natural
fortunately favorable

2. dis-

This is attached to words, mainly verbs and their derived adjectives and nouns, to give a negative or opposite meaning, e. g. disconnect, the opposite of 'connect'; disagree, meaning 'not agree'.

3. non-

This is freely added to adjectives or nouns to give the sense of 'not being' or 'not having', e. g. non-smoker, meaning: a person who does not smoke. Similar-

ly, the adjective 'non-living' means 'not alive' or 'not living'.

Exercise 2) Using 'dis-' or 'non-', make the following negative or opposite.

appear advantage scientist fiction like order toxic communicable

infect ease pathogenic close

comfort charge specific metal surgically

GRAMMAR EXERCISES

I. Follow the models given below as you restate the same idea by using a single past or present participle.

Model: Significant progress has resulted from research conducted by scientists with a clinical goal *that is specified*.

Significant progress has resulted from research conducted by scientists with a *specified* clinical goal.

Research in any field is a process *that demands a lot*.

Research in any field is a *demanding* process.

1. Throughout most of the history *that has been recorded* medicine was anything but scientific.
 2. Molecular biology is now a discipline *that has been recognized*.
 3. Some disciplines *that were once neglected* are now increasingly recognized as vital to medicine.
 4. No food contains all the nutrients *that are needed*.
 5. If the veins *that are affected* fail to respond to simple treatment, they may sometimes require surgical removal.
 6. Many universities are putting more and more stress on research because of the needs *that are expanding*.
 7. Failure to correct the defect may lead to a condition *that cripples the patients*.
 8. Scientists hope to discover even more powerful agents *that have healing effects*.
 9. Antibiotics are found effective against many types of bacteria to degrees *that vary*.
 10. Elastic tissue contains fibers *that branch*.
- II. Rewrite the following sentences using 'it' as a formal subject.

Model: To date the beginnings of modern medicine from these relatively recent events is customary.

It is customary to date the beginnings of modern medicine from these relatively recent events.

That the groundwork for modern medicine has been laid by these great discoveries is obvious.

It is obvious that the ground work for modern medicine has been laid by these great discoveries.

1. To conduct research in the pursuit of truth for its own sake is necessary.

2. To understand the causes of diseases is important.
3. To breathe through the nose is advisable.
4. To find effective ways of combating air pollution is essential.
5. To study cells without a microscope is impossible.
6. That we have entered a molecular age of basic biologic science is clear to all.
7. That the expansion of new knowledge continues at such a pace is bewildering.
8. That certain bacteria enter the body through the nose and mouth is very common.
9. That the trachea or bronchi are blocked by inhaled foreign objects is not uncommon.
10. That animal and plant tissues can be transformed into human tissues is miraculous.

III. Examine the following two sentence patterns carefully.

It was not until the decade 1935-1945 that sulfonamides and penicillin entered into clinical medicine.

Sulfonamides and penicillin did not enter into clinical medicine until the decade 1935-1945.

Now change the following sentences from one pattern into the other.

1. It is not until the food is digested that the process of absorption begins.
2. It is not until the food is broken down into water-soluble materials that the cells can use it.
3. It was not until the entry of sulfonamides and penicillin into clinical medicine that some previously lethal and untreatable diseases became curable.
4. It is not until the child is about six years old that the first permanent tooth makes its appearance.
5. It is not until the child is born that its lungs are used.
6. Fats are not acted on until they reach the small intestine, where they are mixed with bile.
7. Medicine was not scientific until new principles of physics and chemistry were applied to it.
8. The cause of anthrax was not known until the anthrax bacillus was identified.
9. Pain-killers can not be prescribed until the cause of acute abdominal pain is determined.
10. Francis Bacon's dream of organized research did not come true until the 1800's.

TRANSLATION

I. Translate the following sentences into English.

1. 受到损伤的静脉有时需用手术切除。
2. 抗生素在不同程度上对多种细菌有作用。
3. 在大部分有记载的历史中，医学一点不具科学性。

4. 科学家希望发现更强大的有治愈功效的药剂。
5. 理解疾病的原因是很重要的。
6. 某些细菌通过口腔进入人体是很常见的。
7. 不用显微镜是不可能研究细胞的。
8. 新知识继续以这样的速度扩展是令人吃惊的。

II. Translate the following passage into English. You may need the verbs given below in your translation.

heal seek devote progress diagnose

医学是使人恢复健康的艺术和科学。它寻求拯救生命和减轻痛苦。医生致力于向疾病作斗争。

医学实践经常被称作一门科学。没有有关人体和它如何工作的科学认识,医学就不可能取得进展。但是每个人都与其他人不同。没有两个疾病完全一样。医生有许多科学的工具来帮助他们工作,但是他们必须依靠自己的智慧、判断和技能来诊断和医治疾病。由于这些原因,医学实践又是一门艺术。

SUPPLEMENTARY READING

Rapid Progress In Modern Medicine

Medical science has made tremendous strides since the 19th century. The German physicist Wilhelm Röntgen discovered by chance x-rays, which provided a way to diagnose many different maladies and provided a method for treatment of cancer. The discovery of radium by Mme. Curie was the beginning of modern atomic physics, and it has also served as a powerful weapon in the hands of physicians in the treatment of cancer.

The biggest victory of man over infectious diseases has been the discovery of penicillin. In the first clinical trials on severely ill patients, penicillin was found to be many times more effective than sulfa drugs. Another antibiotic, streptomycin, has proved to be very useful in the fight against tuberculosis. Numerous other antibiotics of value have since been developed successively.

Other remarkable achievements have been developed more recently. Medical researchers have produced machines that are able to perform the work of defective body organ. The heart-lung machine, for example, can take over the work of the heart and lungs during operation. It is with the use of this machine that an open-heart surgery can be performed successfully. Most wonderful of all is the practice of organ transplantation, through which a man's diseased organ (a heart, lung, liver or kidney) can be replaced by a healthy one from another person. In many instances severed limbs can also be reattached with success.

Thanks to enormous strides in medicine, the incidence of numerous life-threatening diseases has been dramatically reduced or eliminated altogether. Similarly, many diseases once considered incurable can now be prevented or controlled, if not cured.

Despite all these marvellous achievements, physicians are not yet able to control many of man's most common ailments. Researchers are constantly seeking better methods of destroying viruses without destroying body cells. If they succeed, physicians may be able to conquer such diseases as the common cold and influenza. Physicians also need to learn a great deal more about the causes of mental illness and heart disease. Increased knowledge in these areas would provide ways of minimizing the incidence of these ailments.

- stride [straɪd] *n.* 大步; 进展, 进步
 method ['meθəd] *n.* 方法, 办法
 cancer ['kænsə] *n.* 癌
 weapon ['wepən] *n.* 武器, 兵器
 trial [traɪl] *n.* 试用, 试验; 审判
 sulfa ['sʌlfə] *n.* & *a.* 磺胺类药物; 磺胺的
 numerous ['nju:mərəs] *a.* 许多, 为数众多的
 successively [sək'sesɪvli] *ad.* 相继地, 逐次地
 defective [dɪ'fektɪv] *a.* 有缺点的, 有缺陷的
 take over 代替; 接管, 接任
 lung [lʌŋ] *n.* 肺
 transplantation [ˌtrænsplɑ:n'teɪʃən] *n.* 移植, 移植法
 instance ['ɪnstəns] *n.* 例子; 场合, 情况
 sever ['sevə] *vt.* 切断, 割断
 limb [lɪm] *n.* 肢体, 手足
 reattach [ˌri:ə'tætʃ] *vt.* 重新接上, 重新系着
 enormous [ɪ'nɔ:məs] *a.* 重大的, 巨大的; 重要的
 incidence ['ɪnsɪdəns] *n.* 发病率
 similarly ['sɪmɪləli] *ad.* 相似地, 类似地
 incurable [ɪn'kjʊərəbl] *a.* 医不好的, 不可救药的
 virus ['vaɪərəs] *n.* 病毒
 conquer ['kɒŋkə] *v.* 征服, 攻克, 战胜
 influenza [ɪnflu'enzə] *n.* 流行性感
 minimize ['mɪnɪmaɪz] *vt.* 使减到最小, 使缩到最小

Comprehension: Choose the best answer.

1. Radium is a powerful weapon in the fight against _____.
 a. tuberculosis b. cancer c. influenza d. pneumonia
2. Streptomycin has proved to be very effective against _____.
 a. tuberculosis b. cancer c. influenza d. pneumonia
3. An open-heart operation can be performed with success by the use of _____.
 a. local anesthesia b. general anesthesia
 c. an electron microscope d. a heart-lung machine