

Preventive Medicine, Medical Statistics and Epidemiology

About The Book

This textbook includes three parts. Part A-Preventive Medicine focuses on environment (living, occupation, food, etc.) and health. Part B-Medical Statistics focuses on basic concepts and statistical methods. Part C-Epidemiology comprises topics such as distribution of diseases, descriptive studies, cohort studies, case-control studies, experimental studies, causal inference studies, screening and diagnostic testing, and prevention and control of diseases. The book will be a useful guide for medical students at various levels.

本教材是首部在中国大陆出版的英语版《预防医学、医学统计学和流行病学》教科书，由浙江省和江苏省五所高等院校以及美国德克萨斯大学等有关单位的预防医学专家编著而成。本书分预防医学，医学统计学和流行病学三个部分。主要介绍生活环境、职业环境、食品营养因素对健康的影响，以及疾病与健康统计分析研究中常用的医学统计学和流行病学方法。可用作临床医学及相关专业本科或研究生教材。

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Preventive Medicine, Medical Statistics and Epidemiology

预防医学、医学统计学和流行病学

(英文版)

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倪春辉/Ni Chunhui



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内 容 提 要

本教材是首部在中国大陆出版的《预防医学、医学统计学和流行病学》英语版教科书,由浙江省和江苏省五所高等院校以及美国德克萨斯大学等有关单位的预防医学专家编著而成。本书分为预防医学、医学统计学和流行病学三个部分,主要介绍生活环境、职业环境以及食品营养因素对健康的影响,健康与疾病统计分析研究中常用的医学统计学和流行病学方法。附录部分包括医学统计方法常用附表,供使用者参考或查阅。

本书内容简明、新颖,实用性强,可作为临床医学及相关专业留学生的本科、专科或研究生教材,同时也是疾病防治和临床医务工作者有用的参考书。

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前 言

教材是教学的载体,对教学质量有着直接的影响。近年来,随着高等教育国际化的飞速发展,来华进行医学相关专业学习的人数迅猛增加。然而,目前可供医学专业留学生使用的公共卫生相关课程的英语教材甚少。

公共卫生包括很多分支学科,其中最主要的有预防医学、流行病学、医学统计学和卫生服务等。预防医学是医学教育中的一个重要组成部分,与基础医学、临床医学共同组成现代医学的整体。由于缺乏统编教材,目前全国各高校大多自编讲义或直接选用国外原版教材,由此造成了各院校之间教学内容差异很大,教学质量参差不齐。考虑到预防医学,医学统计学和流行病是医学相关专业留学生在医学学习过程中的三个重要的必修内容。由浙江大学出版社组织华东区五所高校以及美国德克萨斯大学等有关单位的预防医学专家编著了本部英语版《预防医学、医学统计学和流行病学》教材,希望借此为我国留学生预防医学英语教材的建设抛砖引玉。

本书包括三个部分。第一部分为预防医学,主要阐述生活环境与健康,职业环境与健康,以及食品营养与健康;第二部分为医学统计学,主要阐述医学统计学基本概念、常用医学统计方法;第三部分为流行病学,主要阐述流行病学基础理论、常用研究方法和疾病预防与控制等。本教材内容简明,资料新颖,图文并茂,每章后还附有复习或练习题。通过学习,读者将掌握公共卫生、健康、预防医学、预防医学策略、医学统计学和流行病学等的基本概念;掌握环境、职业和食品营养因素与健康的关系;学会如何采用医学统计学和流行病学的方法分析资料和设计医学研究课题。

在本书编写过程中,浙江大学出版社、宁波大学医学院、南京医科大学及各参编院校领导和教务处给予了大力支持,宁波大学教材建设项目、宁波大学医学院临床医学专业核心基础课程国家级教学团队,浙江省“病理生理学技术研究重点实验室”以及南京医科大学公共卫生学院资助了本教材的出版,在此表示衷心的感谢。在本书编写过程中,全体编委尽心尽力、通力合作,力求使本书既有创新性,又体现实用性,既反映本学科的国际先进发展水平,又结合广大发展中国家的现状。但由于时间仓促、水平有限,书中错误与疏漏在所难免,恳请广大读者批评指正。

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赵进顺 倪春辉

2014年1月

Preface

Due to the rapid development of higher education in China, many Chinese universities have experienced an increase in international students. International students in medical related disciplines have been rapidly increasing in recent years. However, English version textbooks for public health-related courses in medicine are still lacking in China.

Public health has many sub-fields, but typically includes preventive medicine, epidemiology, medical statistics, and health services. Preventive medicine is a medical discipline that focuses on prevention of diseases and promotion of health and wellbeing, which is an important part in medical education. Basic medicine, clinical medicine and preventive medicine constitute the whole structure of modern medicine. Due to the lack of English version textbooks, most colleges and universities in China have to use self-prepared teaching materials or textbooks from various western countries for teaching public health-related course. This situation unavoidably results in inconsistency in teaching contents among different colleges and universities. Consequently, teaching quality in public health-related courses is hard to guarantee. Considering this situation, 39 experts and professors in preventive medicine from different universities in China joined together to publish this English version textbook entitled "Preventive Medicine, Medical Statistics and Epidemiology" for the international students majoring in medicine.

This textbook includes three parts. Part A—Preventive Medicine focuses on topics including fundamentals of environmental health, living environment and health, occupational environment and health, and food nutrition and health. Part B—Medical Statistics focuses on basic concepts and statistical description, hypothesis test and *t*-test, analysis of variance, Chi-square test, non-parametric tests, and linear correlation and regression. Part C—Epidemiology focuses on topics such as distribution of diseases, descriptive study, cohort study, case-control study, experimental study, causal inference, screening and diagnostic test, and prevention and control of disease.

This textbook has the most updated information presented in a user-friendly format supplemented with end-of-chapter review questions or exercises. By the end of studying this textbook, the readers will know the concepts of public health, preventive medicine,

preventive medicine strategies, medical statistics, and epidemiology; learn the relationship between living environmental, occupational environmental and nutritional factors with health; learn how to use medical statistics and epidemiological methods to analyze data and design medical research.

In the process of writing this book, all members of the editorial board strive to make the book both innovative and embody practicality, to reflect not only the level of development of the discipline in developed countries, but also in developing countries. Due to the time limitation, errors and omissions are certainly unavoidable in this book. Readers' criticisms and suggestions are all appreciated, and please send all emails to zhaojinshun@nbu.edu.cn; chni@njmu.edu.cn.

Zhao Jinshun, Ni Chunhui

January 2014

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We would like to thank Mrs. Linda Bowman, a Research Biologist at National Institute for Occupational Health and Safety of CDC(U. S.), for her assistance in proof reading. We would also like to thank Mr. Fan Rui, a medical student at the Medical School of Ningbo University; Mr. Zhang Jian a postgraduate student at the Public Health School of Nantong University and Miss Xie Mengmeng a graduate student in the Department of Nutrition and Food Hygiene at Xuzhou Medical College for their assistance in literature search. In addition, publication of this textbook would not have been possible without the financial supports from Ningbo University Textbook Publication Project, National Teaching Team for Core Curriculum of Clinical Medicine of Ningbo University, Zhejiang Provincial Key Laboratory of Pathological and Physiological Technology, grants from the National Nature Science Foundation of China (No. 81273111) and Public Health School of Nanjing University.

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