

## BOOK REVIEW

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**Book: Sharma & Sharma's Principles of Pharmacology, 4th Edition**

Author: Dr. HL Sharma, Dr. KK Sharma (Late)

Publishing: 2023

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This article reviews the book Sharma & Sharma's Principles of Pharmacology, 4th Edition, which targets undergraduate medical, nursing, paramedical, and pharmacology students. It has a 4.3-star rating and 1253 Views, downloaded 204. The book was published by Paras Medical Publisher, India, in 2023. The authors are two pharmacologists, Dr. HL Sharma and Dr. KK Sharma. Both are former Indian Pharmacology Professors.

Dr. HL Sharma worked as a professor and head of the Department of Pharmacology in Medical and dental colleges in India for many years. He is also a senior research fellow at the National Institute of Mental Health Program, USA. He wrote all editions of Principles of Pharmacology with his friend, Dr. KK Sharma.

Dr. KK Sharma is a medical doctor and National CME coordinator cum Advisor at the National Academy of Medical Sciences in New Delhi. He is a former Professor and Head of the Department of Pharmacology, medical and allied health science universities in India. He is a renowned researcher and he received various research awards.

This book was revised by Dr. Harsh M Joshi, a faculty member of the Department of Pharmacology, NHL Municipal Medical College Gujarat University, India who added some chapters that cover the competency-based medical education curriculum.

This is one of the very first textbooks written and produced in India. The first edition was published in 2007, reprinted in 2008 and 2010. The second one was published in 2011, reprinted in 2012, 2013, and 2015. The third edition was published in 2017, and reprinted in 2018, 2019, and 2020. This textbook has local and international appeal. The writing style is engaging, simple, reader-friendly, and captivating, with colorful and schematic apt illustrations.

The first edition of this book was reviewed by the Journal of Cardiovascular Pharmacology & Therapeutics, USA, the Indian Journal of Pharmacology, and the National Medical Journal of India. In this edition, recent US-FDA-approved drugs, COVID-19 vaccines, and recently developed drugs are added. This text consists of fourteen sections as follows.

1. GENERAL PRINCIPLES OF PHARMACOLOGY
2. DRUGS AFFECTING AUTONOMIC NERVOUS SYSTEM
3. DRUGS ACTING ON PERIPHERAL NERVOUS SYSTEM
4. DRUGS AFFECTING RENAL AND CARDIOVASCULAR SYSTEM AND RELATED AUTACOIDS

- 5.DRUG THERAPY OF INFLAMMATION AND RELATED AUTOCOIDS
- 6.DRUGS AFFECTING GIT FUNCTIONS
- 7.DRUGS ACTING ON CENTRAL NERVOUS SYSTEM
- 8.HORMONES AND HORMONE ANTAGONISTS
- 9.DRUGS ACTING ON RESPIRATORY SYSTEM
- 10.DRUGS ACTING ON BLOOD AND BLOOD-FORMING ORGANS
- 11.CHEMOTHERAPY OF MICROBIAL DISEASES
- 12.CHEMOTHERAPY OF NEOPLASTIC DISEASES
- 13.SPECIAL TOPICS
- 14.APPENDICES

Section 1, General Principles of Pharmacology, comprises 9 chapters: Introduction, Nature and Sources of Drugs, Dosage Forms of the Drugs, How Drugs are Administered, How Drugs are Biotransported, Pharmacokinetics, Pharmacodynamics, Drugs Discovery and Clinical Evaluation of New Drugs, Concepts of Essential Medicines and Rational Use of Drugs. In this section, the authors discussed definitions, terminologies, routes of drug administration with advantages and disadvantages, mechanisms of drug action and side effects, Drug Agonists and antagonists, essential medicines and P-Drugs (Personal or Preferred Drugs), Step-by-step Phases of Drug Discovery are extensively explained. This section is crucial for undergraduate medical, nursing, public health, paramedical, and pharmacy students.

Section 2 and Section 3 describe the drugs affecting the autonomic and peripheral nervous systems. In section 2, drugs affecting the Sympathetic Nervous System and Parasympathetic Nervous System, ganglionic stimulants, blockers, and adrenergic neuron-blocking drugs, as well as, in section 3, skeletal muscle relaxants and local anesthetics with the summary. Therefore, these sections aim to postgraduate anesthetic students.

In the next section, renal system, the authors discuss diuretics, angiotensin-converting enzyme inhibitors, angiotensin receptor antagonists with plasma half-life, plasma clearance, and dosage. For the cardiovascular system, drug therapy for hypertension, angina pectoralis, arrhythmia, heart failure, and dyslipidemia with therapeutic dose, drug of choice, and contraindications are in detail, therefore applicable to medical and pharmacy students for prescribing hypertensive patients.

Section 5, Drug Therapy of Inflammation and Related Autacoids, illustrates the common anti-inflammatory drugs, and then, the drug treatments for migraine, gout, and rheumatoid diseases with figures and tables.

Section 6 writes about drugs affecting GIT, in this section, drug treatment for peptic ulcer, constipation, diarrhea, vomiting, irritable bowel syndrome, gall stones, and ulcerative colitis with dose, frequency, and combination of drugs. The authors are wished-for medical and allied health students.

Section 7 highlights the drugs acting on the central nervous system: general anesthetics, antipsychotics, antidepressants, antiepileptic drugs, opioid analgesics, drug

dependence, and drug abuse are talked in depth about the treatment of Parkinsonism disease.

Regarding the hormone and hormone antagonists, the male and female reproductive hormones, contraceptive hormones, thyroid and parathyroid hormones, and insulin and anti-diabetic drugs with therapeutic dose, mode of action, and side effects, especially for treatment of diabetes mellitus, and also supportive in family planning.

Section 9 explains drug therapy for bronchial asthma, cough, and chronic obstructive pulmonary diseases. Section 10 outlines how vitamins, antioxidants, and drugs affect the coagulation, fibrinolysis, and platelet function. Hence helpful in the treatment of life-threatening conditions.

In the chemotherapy of microbial diseases section, drug treatment for bacterial diseases: Tuberculosis, Leprosy, viral diseases: AIDS, protozoal diseases: malaria, helminth diseases, and fungal diseases with the drug of choice, mode of action, dose, side effects, contraindications. The proper understanding of phases of the division of the cell cycle and the specificity of anticancer drugs are briefly explained in the anti-cancer drug section, section 12.

Section 13 provides interesting special topics such as immunotherapy, vaccines, and antisera including COVID-19 vaccines, Evidence-Based Medicine with a pyramid, and Therapeutic Drug Monitoring with examples. In appendices, drugs are to be avoided during pregnancy, and the bioassay of drugs. Thus, advantageous to medical students, pharmacy students, epidemiologists, immunologists, and virologists.

To sum up, this is a good, up-to-date textbook. It is easy to understand and remember, with an emphasis on understanding the concepts rather than a statement of facts. This book guides medical and allied health students with a lucid and efficient presentation. The authors have been successful in their endeavor, and the book preserves the reader's sinus rhythm.

Therefore, I absolutely recommend the book Sharma & Sharma's Principles of Pharmacology, 4th Edition, because it is an excellent, well-illustrated Pharmacology textbook. The authors have followed a teaching method rather than a method of instruction, so students can learn by themselves without teachers.