

# **DRUG DOSSIER**

**(VOLUME - I)**

**PART-1& 2**

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## PREFACE

This book has been meticulously crafted to serve as an extensive resource for researchers, students, healthcare professionals, and individuals engaged in pharmaceutical and medical sciences. The primary objective is to provide a comprehensive, reliable reference for drug-related data, including vital details such as physical and chemical properties, biological characteristics, and the average marketed price of drugs in India. To further enhance clarity and understanding, the mechanism of action for each drug is illustrated in a simplified flowchart format. By doing so, the book bridges the gap between academic knowledge and practical application.

Drugs are the cornerstone of modern medicine, playing a pivotal role in the prevention, diagnosis, and treatment of diseases. A thorough understanding of their properties, classifications, interactions, and therapeutic effects is essential for professionals in the fields of pharmacology, pharmacy, and clinical medicine. This volume aims to equip users with a detailed, accessible compendium of drug data that can be quickly referenced for various purposes, from research and drug development to clinical decision-making.

This particular volume is dedicated exclusively to drugs related to three major bodily systems: the *"Digestive system*, the *"Cardiovascular system*, and the *"Central Nervous System (CNS)"*. Each drug discussed in this book is classified based on its therapeutic application in these critical systems. Given the centrality of these systems to human health, the drugs covered here are highly significant in treating a wide range of diseases and conditions—from gastrointestinal disorders to heart diseases and neurological conditions.

The book is organized into sections that provide comprehensive details on each drug's properties and characteristics:

**Physical and Chemical Properties:** This section outlines key physical and chemical attributes of each drug, including molecular weight, solubility, and chemical structure. These properties are foundational in pharmaceutical research, as they influence drug formulation, stability, pharmacokinetics, and pharmacodynamics.

**Biological Properties:** This section is particularly thorough, providing in-depth information on each drug's:

- ✓ **Drug Class:** The therapeutic category the drug falls under, helping readers understand its primary clinical application.
- ✓ **ATC Code:** The Anatomical Therapeutic Chemical Classification System code, which categorizes the drug based on its mechanism of action and usage.
- ✓ **Dosage Forms:** Information on the various forms in which the drug is available, including tablets, injections, creams, and more.
- ✓ **Uses:** An exploration of the medical conditions and indications for which the drug is commonly prescribed, with a focus on digestive, cardiovascular, and CNS disorders.

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- ✓ **Mechanism of Action:** Illustrated with flowcharts to visually represent the sequence of events from drug administration to its therapeutic effects. This approach simplifies complex pharmacological mechanisms.
- ✓ **Half-life:** Information on how long the drug remains active in the body, an essential factor for determining dosing schedules.
- ✓ **Side Effects and Adverse Effects:** A detailed look at both common and rare reactions, allowing healthcare professionals to monitor and manage patient safety.
- ✓ **Drug Interactions:** An in-depth analysis of how the drug interacts with other medications, emphasizing potential risks and necessary precautions.
- ✓ **Warnings and Precautions:** Key safety information, including which populations (e.g., pregnant women, elderly, or individuals with liver or kidney disease) should avoid or use the drug with caution.
- ✓ **Storage:** Guidelines on how to store the drug to maintain its efficacy, including environmental considerations like temperature and humidity.
- ✓ **Combinations:** Insights into drug combinations that are either beneficial or should be avoided, based on clinical studies and best practices.

To guarantee the accuracy and reliability of the information, this book draws from several trusted and authoritative databases, including:

- ✓ **PUB CHEM:** A robust source of chemical and pharmacological data on drugs.
- ✓ **DRUGBANK:** A detailed repository providing comprehensive drug and pharmaceutical knowledge.
- ✓ **CIMS:** A widely used medical reference, particularly focused on the Indian pharmaceutical landscape.
- ✓ **CHEMSPIDER:** A chemical structure database offering quick access to information on various drug compounds.
- ✓ **DRUGS.COM:** A global resource providing comprehensive drug-related data for clinical and research use.

These reputable sources ensure that the data provided is up-to-date, accurate, and highly relevant for both academic and practical applications.

The primary goal of this volume is to support professionals and students in the field by offering detailed, easy-to-reference information on drugs targeting the digestive, cardiovascular, and central nervous systems. This book will serve multiple purposes:

- ✓ **For students,** it offers a clear, visual guide to understanding drug mechanisms and their effects, making complex pharmacological concepts easier to grasp.
- ✓ **For researchers,** the detailed drug data can be quickly referenced for designing studies, conducting experiments, or reviewing literature.
- ✓ **For healthcare professionals,** this book provides practical information that can be applied directly in clinical settings, aiding in more informed and effective patient care.

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By compiling this resource, we aim to contribute to the ongoing advancement of drug research and pharmacology while supporting healthcare professionals in delivering more effective and safe treatments. We believe that this book will be a valuable asset in your work and encourage further exploration in the ever-evolving field of pharmaceutical and clinical research.

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