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Descrizione fisica	1 online resource (840 p.)
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Nota di contenuto	Cover; Title; Copyright; Preface; About the Authors; 1: Chemical Introduction: Sources, Classification and Chemical Properties of Drugs; 1.1 Introduction; 1.2 Drug nomenclature and classification; 1.3 Properties of molecules; 1.4 Physicochemical interactions between drugs and other chemicals; 1.5 Law of mass action; 1.6 Ionization; 1.7 Partition coefficients; 1.8 Stereochemistry; Further reading and references; 2: Drug Administration and Distribution; 2.1 Introduction; 2.2 Drug transfer across biological membranes; 2.3 Drug administration; 2.4 Drug distribution; 2.5 Plasma protein binding 2.6 SummaryReferences and further reading; 3: Drug Elimination; 3.1 Introduction; 3.2 Metabolism; 3.3 Excretion; References and further reading; 4: Elementary Pharmacokinetics; 4.1 Introduction; 4.2 Single-compartment models; 4.3 Non-linear kinetics; 4.4 Relationship between dose, onset and duration of effect; 4.5 Limitations of single-compartment models; 4.6 Summary; References and further reading; 5: More Complex and Model Independent Pharmacokinetic Models; 5.1 Introduction; 5.2 Multiple compartment models; 5.3 Curve fitting and choice of most appropriate model 5.4 Model independent approaches5.5 Population pharmacokinetics; 5.6 Summary; References and further reading; 6: Kinetics of Metabolism and Excretion; 6.1 Introduction; 6.2 Metabolite kinetics; 6.3

Renal excretion; 6.4 Excretion in faeces; References and further reading; 7: Further Consideration of Clearance, and Physiological Modelling; 7.1 Introduction; 7.2 Clearance in vitro (metabolic stability); 7.3 Clearance in vivo; 7.4 Hepatic intrinsic clearance; 7.5 In vitro to in vivo extrapolation; 7.6 Limiting values of clearance; 7.7 Safe and effective use of clearance  
7.8 Physiological modelling7.9 Inhomogeneity of plasma; References and further reading; 8: Drug Formulation: Bioavailability, Bioequivalence and Controlled-Release Preparations; 8.1 Introduction; 8.2 Dissolution; 8.3 Systemic availability; 8.4 Formulation factors affecting bioavailability; 8.5 Bioequivalence; 8.6 Controlled-release preparations; 8.7 Conclusions; References and further reading; 9: Factors Affecting Plasma Concentrations; 9.1 Introduction; 9.2 Time of administration of dose; 9.3 Food, diet and nutrition; 9.4 Smoking; 9.5 Circadian rhythms; 9.6 Weight and obesity; 9.7 Sex  
9.8 Pregnancy9.9 Ambulation, posture and exercise; References and further reading; 10: Pharmacogenetics and Pharmacogenomics; 10.1 Introduction; 10.2 Methods for the study of pharmacogenetics; 10.3 N-acetyltransferase; 10.4 Plasma cholinesterase; 10.5 Cytochrome P450 polymorphisms; 10.6 Alcohol dehydrogenase and acetaldehyde dehydrogenase; 10.7 Thiopurine methyltransferase; 10.8 Phase 2 enzymes; 10.9 Transporters; 10.10 Pharmacodynamic differences; References and further reading; 11: Developmental Pharmacology and Age-related Phenomena; 11.1 Introduction  
11.2 Scientific and regulatory environment in regard to younger and older patients

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#### Sommario/riassunto

This is an authoritative, comprehensive book on the fate of drug molecules in the body, including implications for pharmacological and clinical effects. The text provides a unique, balanced approach, examining the specific physical and biological factors affecting the absorption, distribution, metabolism and excretion of drugs, together with mathematical assessment of the concentrations in plasma and body fluids. Understanding the equations requires little more than a basic knowledge of algebra, laws of indices and logarithms, and very simple calculus. A companion web site contains additional

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