

## Long Acting Injections And Implants Advances In Delivery Science And Technology By Springer 2011 12 14

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Now in its fifth edition, Principles of Tissue Engineering has been the definite resource in the field of tissue engineering for more than a decade. The fifth edition provides an update on this rapidly progressing field, combining the prerequisites for a general understanding of tissue growth and development, the tools and theoretical information needed to design tissues and organs, as well as a presentation by the world's experts of what is currently known about each specific organ system. As in previous editions, this book creates a comprehensive work that strikes a balance among the diversity of subjects that are related to tissue engineering, including biology, chemistry, material science, and engineering, among others, while also emphasizing those research areas that are likely to be of clinical value in the future. This edition includes greatly expanded focus on stem cells, including induced pluripotent stem (iPS) cells, stem cell niches, and blood components from stem cells. This research has already produced applications in disease modeling, toxicity testing, drug development, and clinical therapies. This up-to-date coverage of stem cell biology and the application of tissue-engineering techniques for food production – is complemented by a series of new and updated chapters on recent clinical experience in applying tissue engineering, as well as a new section on the emerging technologies in the field. Organized into twenty-three parts, covering the basics of tissue growth and development, approaches to tissue and organ design, and a summary of current knowledge by organ system Introduces a new section and chapters on emerging technologies in the field Full-color presentation throughout

Implantable Technologies: Peptides and Biologic Drug Development is an ideal reference for any postgraduate or researcher interested in utilizing implantable technologies and novel routes of drug administration.

The discipline of dental implantology is one of the scientific medical/dental fields that are moving dynamically very fast. Not to mention the multiple specialties involved in managing the service as well as the research production. As much as it is necessary to have books to review the basics of bone healing, cellular biology, and implant rehabilitation planning, it is very critical to have more focused books to link the dots and elevate the benchmark of success even higher, especially when facing the reality of more advanced case challenges nowadays. "Dental Implantology and Biomaterial" presents four main sections covering topics of clinically applied "tips and tricks", the reality of transmucosal implant surface, the future of ceramic implants, the revolution of implant surface treatment, and finally the application of nonautogenous graft in the treatment process. The aim is updating the practitioners, researchers, and postgraduate trainees in the field with up-to-date clinically applied topics focused on reducing the gap between research and clinical application. Doing so will not only optimize the practice but also advance it with evidence-based maneuvers and technical details.

Long-Acting Drug Delivery Systems: Pharmaceutical, Clinical, and Regulatory Aspects offers a comprehensive overview of the technical, clinical, regulatory and industrial perspectives on these drug delivery systems. The book follows a sequential order, beginning with the current technical state-of-the-field and moving on to more clinical, industrial and regulatory topics. Opening chapters describe the current needs and potential applications of implantable and long-acting therapeutic approaches. The book goes on to describe established and novel long-acting systems, with a focus on the materials used to prepare these systems and their biocompatibility. Importantly, applied topics such as scale-up manufacturing, products under clinical trials and regulatory aspects are covered, offering the reader a holistic view of this rapidly growing field. Brings together technical, clinical, regulatory and industrial perspectives for a complete overview of long acting and implantable drug delivery systems Provides up-to-date coverage of established and novel long-acting and implantable drug delivery systems, both in development and actively in use Appeals to a broad readership, including materials scientists, pharmaceutical scientists, biomedical engineers, clinicians and regulatory experts

Chronic pain is one of the most prevalent, costly, and disabling health conditions in the United States. Estimates show that more than 11 percent of the American population suffer from chronic pain, yet the federal pain research investment has been minimal. In parallel with a gradual increased recognition of the problems of treating chronic pain, the opioid epidemic has emerged as a growing public health emergency. The intersection of these two crises lies in the fact that an unintended consequence of treating pain has been an increasing number of opioid prescriptions and diversion of drugs for illicit purposes. In May 2017, the National Institutes of Health (NIH), and the National Institute on Drug Abuse announced a public-private partnership to develop solutions to the opioid crisis and cut in half the time it takes to develop non-addictive analgesics. To advance the planning of NIH's anticipated public-private partnerships, the National Academies' Forum on Neuroscience and Nervous Systems Disorders hosted a public workshop that brought together a diverse group of stakeholders from academia, federal agencies, advocacy organizations and companies developing therapeutics for pain and opioid use disorders. Participants discussed potential strategies to accelerate development of non-addictive pain medications and treatments for opioid use disorders. This publication summarizes the presentations and discussions from the workshop.

Antipsychotic Long-acting Injections (LAIs) were introduced in the 1960s to improve treatment adherence in schizophrenia. Subsequently, first-generation antipsychotic LAIs became widely used in many countries. Since the initial publication of Antipsychotic Long-acting Injections in 2010, new trial data have been published on long-acting injection (LAI) preparations of the drugs Risperidone, Paliperidone, and Olanzapine. Furthermore, a new LAI preparation of the drug Aripiprazole has recently been approved for clinical use in the United States and is likely to be approved in Europe soon. The second edition of this successful book has been fully updated to include this new data, with reference to both observational studies and randomized controlled trials, as well as other new developments in the clinical use of antipsychotic LAIs. New chapters have been added covering the comparison between oral and injectable antipsychotics, Olanzapine LAI, Aripiprazole LAI, and the practicalities of organizing a specialized clinic for long-acting injectable antipsychotics. Existing chapters have also been thoroughly updated to take into account the most recently published research. Antipsychotic Long-acting Injections, Second edition brings together clinical and research findings on LAIs in a comprehensive volume, with chapters written by international experts.

As the first real contraceptive innovation in over 20 years, and as a long-acting method requiring clinical intervention for application and removal, the implantable contraceptive Norplant has

raised a wide range of issues that could offer valuable lessons about the problems to be addressed if other new contraceptive technologies are to enter the marketplace. In April 1997 an Institute of Medicine workshop on implant contraceptives reviewed newly available data on Norplant's efficacy, safety, and use; identified lessons to be learned about the method's development, introduction, use, and market experience; and explored approaches to developing and introducing new contraceptives based on those lessons. This resulting book contains an examination of Norplant's efficacy and safety, its user populations, training for insertion and removal, consumer perspectives (quality of care, informed decisionmaking, and consumer involvement), and new approaches to contraceptive development and introduction. An appendix contains summaries of 17 workshop presentations.

Using Science to Improve the BLM Wild Horse and Burro Program: A Way Forward reviews the science that underpins the Bureau of Land Management's oversight of free-ranging horses and burros on federal public lands in the western United States, concluding that constructive changes could be implemented. The Wild Horse and Burro Program has not used scientifically rigorous methods to estimate the population sizes of horses and burros, to model the effects of management actions on the animals, or to assess the availability and use of forage on rangelands. Evidence suggests that horse populations are growing by 15 to 20 percent each year, a level that is unsustainable for maintaining healthy horse populations as well as healthy ecosystems. Promising fertility-control methods are available to help limit this population growth, however. In addition, science-based methods exist for improving population estimates, predicting the effects of management practices in order to maintain genetically diverse, healthy populations, and estimating the productivity of rangelands. Greater transparency in how science-based methods are used to inform management decisions may help increase public confidence in the Wild Horse and Burro Program.

Athletic trainers have a responsibility to provide high-quality pharmaceutical care while meeting both legal and ethical requirements. Clinical Pharmacology in Athletic Training empowers athletic trainers with a functional understanding of pharmacology that enables them to formulate a treatment plan intended to mitigate disease and improve the overall health of their patients. This text incorporates the most up-to-date content from the 2020 Commission on Accreditation of Athletic Training Education (CAATE) standards, and it emphasizes interprofessional practice to enable future and current athletic trainers to collaborate with other health professionals in a manner that optimizes the quality of care. Clinical Pharmacology in Athletic Training begins by addressing drug legislation and the legal aspects of the athletic trainer's role in sport medication. The text provides an overview of pharmacokinetics and pharmacodynamics with an emphasis on concepts relevant to clinical practice. Students are introduced to the generic and brand names, general classifications, and appropriate administration of drugs and are guided toward appropriate online reference materials. Part II of this text describes common medications for pain, inflammation, and infections. Part III includes medications for specific conditions, including respiratory, cardiovascular, gastrointestinal, neurological, gynecological, and mental health conditions. The text also includes current information on opioid analgesics, cannabis, and cannabinoid-based medications. Clinical Pharmacology in Athletic Training teaches students to administer appropriate pharmacological agents for the management of the patient's condition. The information includes indications, contraindications, dosing, interactions, and adverse reactions. The following features are included to aid in the learning process: Chapter objectives set the stage for the main topics covered in the chapter. Key terms are boldfaced to indicate terms of special importance, and a glossary of definitions is included at the back of the book. Red Flag sidebars highlight warnings and precautions for certain medications or medicolegal issues. Evidence in Pharmacology sidebars highlight recent research regarding medications. Clinical Application sidebars present real-life stories from the field of athletic training. Case studies highlight specific therapeutic medication applications and are accompanied by questions that prompt readers to think critically about the issues presented. Quick reference drug tables describe medication types, generic and brand names, pronunciations, common indications, and other special considerations for the athletic trainer. Over the past decade, there has been an increased emphasis on pharmacology in athletic training. Clinical Pharmacology in Athletic Training will equip students with appropriate skills and competencies, prepare them to meet patient needs, and enable them to work in interprofessional teams.

This book provides a comprehensive introduction to advanced drug delivery and targeting, covering their principles, current applications, and potential future developments. This edition has been updated to reflect significant trends and cutting-edge advances that have occurred since the first edition was published. All the original chapters have been retained, but the material therein has been updated. Eight new chapters have been added that deal with entirely new technologies and approaches. Features: Offers a comprehensive introduction to the fundamental concepts and underlying scientific principles of drug delivery and targeting Presents an in-depth analysis of the opportunities and obstacles afforded by the application of nanotechnologies for drug delivery and targeting Includes a revised and expanded section on the major epithelial routes of drug delivery currently under investigation Describes the most recent, emerging, and innovative technologies of drug delivery Provides real-life examples of the clinical translation of drug delivery technologies through the use of case studies Discusses the pertinent regulatory hurdles and safety issues of drug delivery and targeting systems—crucial considerations in order to achieve licensing approval for these new technologies

This document is one of two evidence-based cornerstones of the World Health Organization's (WHO) new initiative to develop and implement evidence-based guidelines for family planning. The first cornerstone, the Medical eligibility criteria for contraceptive use (third edition) published in 2004, provides guidance for who can use contraceptive methods safely. This document, the Selected practice recommendations for contraceptive use (second edition), provides guidance for how to use contraceptive methods safely and effectively once they are deemed to be medically appropriate. The recommendations contained in this document are the product of a process that culminated in an expert Working Group meeting held at the World Health Organization, Geneva, 13-16 April 2004.

Functionalized nanomaterials have extremely useful properties, which can outperform their conventional counterparts because of their superior chemical, physical, and mechanical properties and exceptional formability. They are being used for the development and innovation in a range of industrial sectors. However, the use of functionalized nanomaterials is still in its infancy in many industrial settings. Functionalized nanomaterials have the potential to create cheaper and more effective consumer products and industrial processes. However, they also could have adverse effects on the environment, human health, and safety, and their sustainability is questionable, if used incorrectly. This book discusses the opportunities and challenges of using functionalized nanomaterials in a variety of major industrial sectors. Handbook of Functionalized Nanomaterials for Industrial Applications provides a concise summary of the major applications of functionalized nanomaterials in industry today. It covers the enhancements in industrial techniques and processes, due to functionalized nanomaterials, showing how they

substantially improve the performance of existing procedures, and how they can deliver exciting consumer products more cheaply. Emphasis is given to greener approaches, leading to more sustainable products and devices. The legal, economical, and toxicity aspects of functionalized nanomaterials are also discussed in detail. Highlights established industrial applications of functionalized nanomaterials and discusses their future potential for a range of industrial sectors Discusses how functionalized nanomaterials are being used to create new types of commercial products and devices Assesses the challenges of using functionalized nanomaterials in industry, setting out major safety and regulatory challenges

Emphasizing four major classes of polymers for drug delivery-water-soluble polymers, hydrogels, biodegradable polymers, and polymer assemblies-this reference surveys efforts to adapt, modify, and tailor polymers for challenging molecules such as poorly water-soluble compounds, peptides/proteins, and plasmid DNA.

Absorption, Distribution, Metabolism and Excretion (ADME) processes and their relationship with the design of dosage forms and the success of pharmacotherapy form the basis of this upper level undergraduate/graduate textbook. As an introduction oriented to pharmacy students, it is also written for scientist from different fields outside of pharmaceuticals. (e.g. material scientist, material engineers, medicinal chemists) who might be working in a positions in pharmaceutical companies or whose work might benefit from basic training in the ADME concepts and some biological background. Pedagogical features such as objectives, keywords, discussion questions, summaries and case studies add valuable teaching tools. This book will provide not only general knowledge on ADME processes but also an updated insight on some hot topics such as drug transporters, multi-drug resistance related to pharmacokinetic phenomena, last generation pharmaceutical carriers (nanopharmaceuticals), in vitro and in vivo bioequivalence studies, biopharmaceuticals, pharmacogenomics, drug-drug and food-drug interactions, and in silico and in vitro prediction of ADME properties. In comparison with other similar textbooks, around half of the volume would be focused on the relationship between expanding scientific fields and ADME processes. Each of these burgeoning fields has a separate chapter in the second part of the volume, and was written with leading experts on the correspondent topic, including scientists and academics from USA and UK (Duquesne University School of Pharmacy, Indiana University School of Medicine, University of Utah College of Pharmacy, University of Maryland, University of Bath). Additionally, each of the initial chapters dealing with the generalities of drug absorption, distribution, metabolism and excretion would include relevant, classic examples related to each topic with appropriate illustrations (e.g. importance of active absorption of levodopa, implications in levodopa administration, drug drug interactions and food drug interactions emerging from the active uptake; intoxication with paracetamol as a result of glutathione depletion, CYP induction and its relationship with acute liver failure caused by paracetamol, etc). ADME Processes and Pharmaceutical Sciences is written as a core textbook for ADME processes, pharmacy, pharmacokinetics, drug delivery, biopharmaceutics, drug disposition, drug design and medicinal chemistry courses.

Applications of Nanocomposite in Drug Delivery discusses and explores the applications of nanocomposites in the area of drug delivery. Starting with a scientific understanding of drug delivery fundamentals, the book explores the utility of nanocomposites in the area of controlled, transdermal, osteo-articular tuberculosis and stimulus sensitive drug delivery applications. The book intricately details and discusses a variety of methods for their preparation, while also highlighting specific applications of nanocomposites in targeted drug delivery. Discusses nanocomposite and nanotechnology for drug delivery Outlines the mechanisms involved in targeted drug delivery using nanocomposites Includes synthesis methods for nanocomposites used in controlled drug delivery Lists various applications of nanocomposites in drug delivery

Although the United States (U.S.) and the more developed nations of the remainder of the world are blessed with a variety of pharmaceuticals, feed additives, and biological products to treat, prevent, and control animal diseases, there is a healthy desire among persons involved in animal health issues to increase our animal medicine chest. The interest stems from the desire to efficiently produce food that is safe and plentiful and from the desire to have more and better government-approved products available for the prevention and treatment of diseases of dogs, cats, and horses and for an increasing variety of minor animal species. For the animal health industry, increased drug availability means broader markets, increased revenues, and an opportunity to better serve their customers. For the veterinarian, more animal health products means that he or she is better able to treat the usual and the unusual conditions, and to prevent animal disease and suffering. No doubt, we are all winners when new technology and industrial and regulatory initiatives hasten the availability of safe and effective animal health products.

Presenting breakthrough research pertinent to scientists in a wide range of disciplines-from medicine and biotechnology to cosmetics and pharmacy-this Second Edition provides practical approaches to complex formulation problems encountered in the development of particulate delivery systems at the micro- and nano-size level. Completely revised and e

In a unified treatment for the broad subject of materials, this book presents some fascinating phenomena associated with the remarkable performance of polymers and chemical materials. It provides a comprehensive description of the applications and tools for chemical polymeric materials. It also includes the background information necessary for assimilating the current academic literature on complex materials and their applications.

This book provides a comprehensive introduction to advanced drug delivery and targeting, covering their principles, current applications, and potential future developments. This edition has been updated to reflect significant trends and cutting-edge advances that have occurred since the first edition was published. All the original chapters have been retained, but the material therein has been updated. Eight new chapters have been added that deal with entirely new technologies and approaches.

This data booklet highlights estimates of the prevalence of individual contraceptive methods based on the World Contraceptive Use 2019 (which draws from 1,247 surveys for

195 countries or areas of the world) and additional tabulations obtained from microdata sets and survey reports. The estimates are presented for female and male sterilisation, intrauterine device (IUD), implant, injectable, pill, male condom, withdrawal, rhythm and other methods combined.

Control of Ovulation discusses the general principles and practical applications of ovulation control. The book presents 25 papers that cover the basic research practices and practicalities of ovulation control. The materials are grouped according to their respective themes. The first three parts cover the hypothalamus, pituitary gland, and ovary, respectively. The remaining papers discuss concerns regarding the applications of ovulation control, such as ovulation failure; diagnosis of ovulatory disorders; and the induction and synchronization of ovulation. The text will be of great use to practitioners of obstetrics and gynecology in both human and veterinary medicine.

Long acting injections and implants improve therapy, enhance patient compliance, improve dosing convenience, and are the most appropriate formulation choice for drugs that undergo extensive first pass metabolism or that exhibit poor oral bioavailability. An intriguing variety of technologies have been developed to provide long acting injections and implants. Many considerations need to go into the design of these systems in order to translate a concept from the lab bench to actual therapy for a patient. This book surveys and summarizes the field. Topics covered in Long Acting Injections and Implants include the historical development of the field, drugs, diseases and clinical applications for long acting injections and implants, anatomy and physiology for these systems, specific injectable technologies (including lipophilic solutions, aqueous suspensions, microspheres, liposomes, in situ forming depots and self-assembling lipid formulations), specific implantable technologies (including osmotic implants, drug eluting stents and microfabricated systems), peptide, protein and vaccine delivery, sterilization, drug release testing and regulatory aspects of long acting injections and implants. This volume provides essential information for experienced development professionals but was also written to be useful for scientists just beginning work in the field and for others who need an understanding of long acting injections and implants. This book will also be ideal as a graduate textbook.

The new edition of this popular handbook has been thoroughly updated to include the latest data concerning treatment of first-episode patients. Drawing from their experience, the authors discuss the presentation and assessment of the first psychotic episode and review the appropriate use of antipsychotic agents and psychosocial approaches in effective management.

Chitosan in Drug Delivery provides thorough insights into chitosan chemistry, collection, chemical modifications, characterization and applications in the pharmaceutical industry and healthcare fields. The book explores molecular weight, degree of deacetylation and molecular geometry, emphasizing recent advances in the field as written by academic, industry and regulatory scientists. It will be a useful resource for pharmaceutical scientists, including industrial pharmacists, analytical scientists, postgraduate students, health care professionals and regulatory scientists actively involved in pharmaceutical product and process development in natural polymers containing drug delivery. Provides methodologies for the design, development and selection of chitosan in drug delivery for particular therapeutic applications Includes illustrations demonstrating the mechanism of biological interaction of chitosan Discusses the regulatory aspects and demonstrates the clinical efficacy of chitosan

This comprehensive reference uses an ecological perspective to sort out the complex mix of biological, psychological, social, and other factors influencing adolescent health as well as shaping professional responses to the needs of adolescents. Describing critical concerns at the global level and innovative strategies from selected countries, the book urges readers to develop and support practices and policies to enhance optimal youth development. Expert coverage centers on key areas: the global state of adolescent health and development, adolescent health issues and public health answers, making health systems more responsive to youth, and improving school health services. And bedrock themes such as social determinants of health, young people's right to health care, and health and gender disparities are discussed throughout these chapters. Included among the topics: • The epidemiology of adolescent health • Adolescent sexual health and sexuality education • Restorative justice and the mental wellbeing of adolescents • Critical issues in adolescent nutrition: needs and recommendations • Towards an adolescent competent workforce • Pairing children with health services: the changing role of school health services in the 21st century The International Handbook on Adolescent Health and Development is essential to medical schools, public schools, and college libraries; teaching faculty; graduate and post-graduate students in public health, medicine, social work, other behavioral sciences and health disciplines (e.g., nursing, allied health); as well as practitioners interested in better orienting their services to the health needs of adolescents.

The SAGE Encyclopedia of Children and Childhood Studies navigates our understanding of the historical, political, social and cultural dimensions of childhood. Transdisciplinary and transnational in content and scope, the Encyclopedia both reflects and enables the wide range of approaches, fields and understandings that have been brought to bear on the ever-transforming problem of the "child" over the last four decades This four-volume encyclopedia covers a wide range of themes and topics, including: Social Constructions of Childhood Children's Rights Politics/Representations/Geographies Child-specific Research Methods Histories of Childhood/Transnational Childhoods Sociology/Anthropology of Childhood Theories and Theorists Key Concepts This interdisciplinary encyclopedia will be of interest to students and researchers in: Childhood Studies Sociology/Anthropology Psychology/Education Social Welfare Cultural Studies/Gender Studies/Disability Studies

This book is a comprehensive resource on psychotropic medications, detailing the latest methods for defining their characteristics, their use in different patient populations, and drug-drug interactions; an important collection of information for clinicians, students, researchers, and members of the pharmaceutical industry alike. The first section provides the foundational principles of these drugs. Mathematical modeling of parameters that affect their entry to, and exit from, the central nervous system (CNS) compartment are presented on an individual basis and then applied to target populations with specific disease states. Methods and characteristics that inform the transfer of these drugs from the laboratory bench to use in patient care are discussed, including imaging techniques, genetics and physiological barriers, such as the blood-brain barrier. The second section describes the characteristics of specific agents, nominally arranged into different therapeutic categories and with reference crossover use in different disease states. The pharmacologic characteristics of different drug formulations are explored in the context of their ability to improve patient adherence. The third section focuses on drug-drug interactions. Psychotropic medications from different categories are frequently prescribed together, or alongside medications used to treat comorbid conditions, and the information provided is directly relevant to the clinic, as a result. The clinical application of pharmacokinetics and pharmacodynamics of CNS agents has made significant progress over the past 50 years and new information is reported by numerous publications in psychiatry, neurology, and

pharmacology. Our understanding of the interrelationship between these medications, receptors, drug transporters, as well as techniques for measurement and monitoring their interactions, is frequently updated. However, with information presented on a host of different platforms, and in different formats, obtaining the full picture can be difficult. This title aims to collate this information into a single source that can be easily interpreted and applied towards patient care by the clinical practitioner, and act as a reference for all others who have an interest in psychopharmacological agents.

Long acting veterinary formulations play a significant role in animal health, production and reproduction within the animal health industry. Such technologies offer beneficial advantages to the veterinarian, farmer and pet owner. These advantages have resulted in them growing in popularity in recent years. The pharmaceutical scientist is faced with many challenges when innovating new products in this demanding field of controlled release. This book provides the reader with a comprehensive guide on the theories, applications, and challenges associated with the design and development of long acting veterinary formulations. The authoritative chapters of the book are written by some of the leading experts in the field. The book covers a wide scope of areas including the market influences, preformulation, biopharmaceutics, in vitro drug release testing and specification setting to name but a few. It also provides a detailed overview of the major technological advances made in this area. As a result this book covers everything a formulation scientist in industry or academia, or a student needs to know about this unique drug delivery field to advance health, production and reproduction treatment options and benefits for animals worldwide.

Handbook of Research on Functional Materials: Principles, Capabilities and Limitations covers a broad range of modern materials and provides industry professionals and researchers in polymer science and technology with a single, comprehensive book summarizing all aspects involved in the modern materials production chain. The book focuses on industrially important materials, analytical techniques, and formulation methods, with chapters covering step-growth, radical, and co-polymerization, crosslinking and grafting, reaction engineering, advanced technology applications, including conjugated, dendritic, and nanomaterial polymers and emulsions, and characterization methods, which includes spectroscopy, light scattering, and microscopy. The book introduces current state-of-the-art technology in modern materials with an emphasis on the rapidly growing technologies. It takes a unique approach by presenting specific materials and then progresses into a discussion of the ways in which these materials and processes are integrated into today's functioning manufacturing industry. It follows a more quantitative and design-oriented approach than other texts in the market, helping readers gain a better understanding of important concepts. Readers will also discover how material properties relate to the process variables in a given process as well as how to perform quantitative engineering analysis of manufacturing processes.

Developed by experts on schizophrenia and exhaustively reviewed by APA members, the "American Psychiatric Association Practice Guideline for the Treatment of Patients With Schizophrenia" provides therapists with a set of patient care strategies that will aid their clinical decision making. The guideline describes the best and most appropriate treatments available to patients with schizophrenia, including psychopharmacological treatments, ECT, and psychosocial and community interventions. It delineates the process of treatment planning and identifies areas in which research may improve our understanding and management of this condition. This guideline will also help managed care organizations develop more scientifically based and clinically sensitive criteria for the utilization and reimbursement of psychiatric services. Armed with these guidelines, clinicians can improve the care of their patients with schizophrenia and enable them to lead happier and more productive lives.

Alcohol use disorder (AUD) is a major public health problem in the United States. The estimated 12-month and lifetime prevalence values for AUD are 13.9% and 29.1%, respectively, with approximately half of individuals with lifetime AUD having a severe disorder. AUD and its sequelae also account for significant excess mortality and cost the United States more than \$200 billion annually. Despite its high prevalence and numerous negative consequences, AUD remains undertreated. In fact, fewer than 1 in 10 individuals in the United States with a 12-month diagnosis of AUD receive any treatment. Nevertheless, effective and evidence-based interventions are available, and treatment is associated with reductions in the risk of relapse and AUD-associated mortality. The American Psychiatric Association Practice Guideline for the Pharmacological Treatment of Patients With Alcohol Use Disorder seeks to reduce these substantial psychosocial and public health consequences of AUD for millions of affected individuals. The guideline focuses specifically on evidence-based pharmacological treatments for AUD in outpatient settings and includes additional information on assessment and treatment planning, which are an integral part of using pharmacotherapy to treat AUD. In addition to reviewing the available evidence on the use of AUD pharmacotherapy, the guideline offers clear, concise, and actionable recommendation statements, each of which is given a rating that reflects the level of confidence that potential benefits of an intervention outweigh potential harms. The guideline provides guidance on implementing these recommendations into clinical practice, with the goal of improving quality of care and treatment outcomes of AUD.

"A comprehensive, authoritative text on all aspects of substance abuse and addiction medicine. Scientific topics such as the biology of various addictions and all dimensions of clinical treatment and management are addressed by a wide range of leading contributors. Behavioral addictions are addressed also, so the text is not solely devoted to specific substances and their misuse"--Provided by publisher.

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