

Handbook Of Kidney Transplantation Lippincott Williams

Thoroughly revised and updated for its Sixth Edition, this handbook is a practical, easily accessible guide to nutritional management of patients with acute and chronic renal diseases. Leading international experts present state-of-the-art information on these patients' nutritional requirements and offer dietary recommendations, with menus and lists of supplements to enhance patient compliance. Numerous tables and figures enable readers to find essential information quickly. This edition includes new chapters on the dietary approach to treating patients with kidney stones and hypertension, as well as on obesity and physical activity as they relate to patients with kidney disease.

Authoritative, well-written, and comprehensive textbook of clinical nephrology, combining the clinical aspects of renal disease important for daily clinical practice while giving extensive information about the underlying basic science and current evidence available. This new edition highlights the numerous changes in clinical management that have arisen as a result of recently concluded clinical trials and there are now specific formal guidelines for optimal treatment of patients. Each section of the textbook has been critically and comprehensively edited under the auspices of one of the leading experts in the field. The emphasis throughout is on marrying advances in scientific research with clinical management. Where possible treatment algorithms are included to aid patient care.

The revised, updated Fourth Edition of this popular handbook provides practical, accessible information on all aspects of dialysis, with emphasis on day-to-day management of patients. Chapters provide complete coverage of hemodialysis, peritoneal dialysis, special problems in dialysis patients, and problems pertaining to various organ systems. This edition reflects the latest guidelines of the National Kidney Foundation's Kidney Disease Outcomes Quality Initiative (KDOQI) on hemodialysis and peritoneal dialysis adequacy and on nutrition. New chapters cover chronic kidney disease management in predialysis patients, frequent daily or nocturnal hemodialysis, and hemodiafiltration. Chapters on venous and arteriovenous access have been completely revised. Each chapter provides references to relevant Web sites.

Now in its thoroughly revised, updated Third Edition, this handbook provides a practical overview of renal transplantation for physicians who manage transplant patients as well as nurses and other professionals on the transplant team. This edition provides completely up-to-date coverage of topics such as immunosuppressive drugs, short- and long-term post-transplant management, complications, and ethical/legal issues. Readers will also find current references and the latest information on therapy and monitoring in a user-friendly format.

Pediatric Acute Care

Absolute Nephrology Review

Brunner & Suddarth's Textbook of Medical-surgical Nursing

Renal Nursing

Practice Guidelines for Acute Care Nurse Practitioners - E-Book

Kidney Transplantation: A Guide to the Care of Transplant Recipients is an easy to read, up to date, clinical resource written by experts in the field of kidney transplantation. The book explains how donors and recipients are selected for transplantation, how the surgical procedure is performed, and how the experts recognize and treat rejection. Clearly illustrated chapters show how the immune system works in the setting of transplantation and how immunosuppressive medications prevent rejection of the transplanted kidney; knowledge essential for the proper care of the transplant recipient. The acute and long-term care of the patient is described from the perspective not only of proper immunosuppressive medication management, but also from the perspective of comorbidities most common to transplanted patients, including cardiovascular disease, diabetes mellitus, infectious diseases, malignancies, and bone disease. Special issues that impact the care of the transplant recipient, such as unusual donor sources, nonadherence and insurability are also addressed. The **Handbook of Chronic Kidney Disease Management** focuses on practical aspects of managing patients with mild to moderate Chronic Kidney Disease (CKD), incorporating the expertise of cardiologists, endocrinologists, general internists, and nephrologists. Chapters include case vignettes and management algorithms, and treatment recommendations reconcile recently published clinical guidelines from NKF, AHA, NCEP, and ADA. In addition, treatment recommendations in this handbook take into account the realities of reimbursements in the U.S. This clinical pocket manual based on the comprehensive text, **Lippincott's Manual of Nursing Practice**, covers the four main areas of nursing—medical-surgical, maternal-newborn, pediatric, and psychiatric—and contains comprehensive assessment, treatment, and nursing intervention information on the most common conditions. Conditions are presented in alphabetical order with extensive cross-referencing. This brilliant synthesis summarizes all of the recent accomplishments - as well as the ongoing research - in the field of composite tissue transplantation. It includes sections on hand transplantation and vascularized bone marrow transplantation. The volume focuses on immunology and the biotechnology/bioengineering aspects of transplantation surgery, as those two areas have demonstrated the most growth within the last five years in terms of current research.

Manual of Nephrology

Oxford Textbook of Fundamentals of Surgery

ICU Care of Abdominal Organ Transplant Patients

Handbook of Chronic Kidney Disease Management

Handbook of Kidney Transplantation

With growing numbers of chronically ill patients surviving longer and receiving novel medical and surgical treatments, emergency departments are increasingly the venue for associated acute presentations. How can emergency physicians respond to these challenging and emerging conditions? This book focuses on the unusual and complex disease presentations not covered in detail in the standard textbooks, helping you manage patients with conditions such as congenital heart disease, cystic fibrosis, morbid obesity, intellectual disability and

intestinal failure. Not only does this book provide guidance on evaluation and diagnosis, but it also addresses the practical issues of acute management and continuing referral. The individual chapters are written by high profile emergency physicians, in conjunction with appropriate specialists, and include authoritative evidence to back up the clinical information. This manual offers a concise guide for treating patients with a wide range of kidney disorders and hypertension. It features brief, focused chapters with abundant tables and algorithms. Coverage includes practical information on renal transplant and dialysis, the main classes of drugs used for hypertension and renal protection.

Publisher's Note: Products purchased from 3rd Party sellers are not guaranteed by the Publisher for quality, authenticity, or access to any online entitlements included with the product. Now in full color for the first time, the third edition of the Handbook of Pediatric Urology helps you better understand the diagnosis and treatment of all major urologic disorders and conditions in infants, children, and adolescents. A new third editor, Dr. Jeffery A. Stock—Director of Pediatric Urology at Kravis Children's Hospital, Icahn School of Medicine at Mount Sinai in New York—and over 25 contributors provide thorough, concise coverage of the entire field, making this quick-reference ideal for bedside use as well as deep-dive research. Now in its updated Fourth Edition, this popular handbook is a practical guide for physicians and surgeons who manage kidney transplant patients and for nurses and other professionals on the transplant team. In concise, readable, well-illustrated chapters, the book outlines the major concerns surrounding renal transplantation and the most successful approaches to problems arising in short-term and long-term patient care. This edition's chapters on immunobiology and immunosuppression have been completely rewritten to reflect recent advances. Chapters on surgery, histocompatibility, and the first three months post-transplant have also been thoroughly updated.

Stakes and Kidneys

Handbook of Nutrition and Food

After the Kidney Transplant

Handbook of Pediatric Urology

Oxford Textbook of Clinical Nephrology Volume 3

Concise, easy to read, and designed for quick reference, Quick Guide to Kidney Transplantation is a compact resource for general nephrologists, residents, fellows, nurse practitioners, and others involved in the care of post-transplant patients. Focusing on must-know clinical information needed to provide optimal patient care, this expertly written guide helps you gain the knowledge and expertise you need in this complex area.

There are many obstacles in kidney transplantation. For the transplant team, there is the balance between immunosuppression to aid in the recipient's tolerance of the allograft and the infection risk of a suppressed immune system. These potential long term complications of kidney transplantation are relatively well known, but there are many other complications that patients and families do not consider when preparing themselves for a kidney transplant. Although the benefits of attempting a kidney transplant far outweigh downfalls of the long term sequelae, kidney transplantation is by no means a benign procedure. It is the hope of these authors that the reader will leave with a sense of understanding towards the kidney recipients.

"Clinical nephrology is an evolving specialty in which the amount of available information is growing daily, and is spread across a myriad of books, journals, and websites. The Oxford Desk Reference:

Nephrology is an essential resource which brings this information together in an easy-to-use format enabling the reader to access it when they need it most." "This book combines up-to-date, relevant, and evidence-based information on the management of renal disease. It is designed so that each subject forms a self-contained topic, laid out with the key aim of providing rapid and easy access to information. It should be consulted in the clinic or ward setting for guidance on the optimum management of a particular condition." "With chapters written by an international group of leading figures within the field, this book is an essential resource for all nephrologists and allied professionals." --Book Jacket.

Significantly revised and updated, this second edition of the bestselling Handbook of Nutrition and Food welcomes contributions from several new authors, including Elaine B. Feldman and Johanna Dwyer, notable leaders in nutritional science. Retaining the high level of scientific research, accessible language, and attention to detail of the original

Primer on Kidney Diseases

Pancreas, Islet and Stem Cell Transplantation for Diabetes

Clinician's Manual of Pediatric Nephrology

The Washington Manual of Nephrology Subspecialty Consult

Paediatric Nephrology

Now in its Seventh Edition, this best-selling Spiral® Manual is a practical quick-reference guide to the diagnosis and treatment of renal disorders. The book covers all common renal problems in a user-friendly outline format designed for rapid information retrieval. Coverage includes acute and chronic kidney diseases, fluid and electrolyte disorders, acid-base disturbances, urinary tract infections, kidney stones, and hypertension. Highlights of this Seventh Edition include updated information on kidney disease in diabetes. A chapter on drug dosing in patients with renal impairment provides specific recommendations for over 500 drugs.

Handbook of Kidney Transplantation Lippincott Williams & Wilkins

Liver disease is a rapidly growing speciality, and nurses and health care professionals need to have the relevant knowledge and skills to care for patients with liver problems in a safe and effective way. Liver Diseases is a comprehensive, evidence-based, practical guide to the nursing care and management of patients with liver disease. Liver Diseases explores a range of liver conditions, including cirrhosis, portal hypertension, alcoholic liver disease, viral hepatitis, autoimmune hepatitis, Wilson's disease and acute liver failure. It looks at the anatomy & physiology of the liver, assessment of liver function and diagnostic studies, acute and chronic liver disease, pregnancy related liver disease, liver transplantation and infectious liver diseases. For each condition the epidemiology, complications and nursing management are provided, along with illustrative case studies and further reading. Liver Diseases is an invaluable tool for all nurses and health care professionals working with people with liver disease. SPECIAL FEATURES The first UK book on care of the liver from a

nursing and healthcare perspective Written by a well-respected and renowned author in the field Covers a wide spectrum of liver diseases, with relevant nursing management guidelines With case studies, further reading and illustrations throughout

Pre- and post-operative care of transplant patients is an aspect of Critical Care Medicine in which most ICU physicians and nurses have received little or no formal training and are left to cope with this complex population with only spotty, incomplete 'on-the-job experience' as a guide. In response to this clinical knowledge gap, this book provides a concise 'at the bedside' resource for clinicians caring for abdominal organ transplant patients before and after surgery. Schwartz's Clinical Handbook of Pediatrics

Liver Diseases

An Essential Guide for Nurses and Health Care Professionals

Current Concepts in Kidney Transplantation

Rev. ed. of: Pancreas and islet transplantation.

Designed specifically for nephrologists and trainees practicing in the ICU, Handbook of Critical Care Nephrology is a portable critical care reference with a unique and practical nephrology focus. Full-color illustrations, numerous algorithms, and intuitively arranged contents make this manual a must-have resource for nephrology in today 's ICU.

This popular handbook is a practical guide for physicians, surgeons, nurses, and other professionals who manage kidney transplant patients. It is concise, readable, and well-illustrated. Chapters outline the major concerns surrounding renal transplantation and the most successful approaches to problems arising in short-term and long-term patient care. Chapter topics include immunobiology and immunosuppression, as well as chapters on surgery, histocompatibility, and the first three months post-transplant surgery. This thoroughly updated Fifth Edition includes new information on options for patients with end-stage renal disease, immunosuppressive medications and protocols for kidney transplantation, and the first two months following transplant.

This translational text offers in-depth reviews of the metabolic and nutritional disorders that are prevalent in patients with renal disease. Chapter topics address the growing epidemic of obesity and metabolic syndrome. Each chapter integrates basic and clinical approaches, from cell biology and genetics to diagnosis, patient management and treatment. Chapters in sections 4-7 include new illustrative case reports, and all chapters emphasize key concepts with chapter-ending summaries. New features also include the latest National Kidney Foundation Clinical Practice Guidelines on Nutrition in Chronic Renal Failure, the most recent scientific discoveries and the latest techniques for assessing nutritional status in renal disease, and literature reviews on patients who receive continuous veno-venous hemofiltration with or without dialysis. Provides a common language for nephrologists, nutritionists, endocrinologists, and other interested physicians to discuss the underlying research and translation of best practices for the nutritional management and prevention of renal disease Saves clinicians and researchers time in quickly accessing the very latest details on nutritional practice as opposed to searching

through thousands of journal articles Correct diagnosis (and therefore correct treatment) of renal, metabolic, and nutritional disorders depends on a strong understanding of the molecular basis for the disease - both nephrologists and nutritionists will benefit Nephrologists and nutritionists will gain insight into which treatments, medications, and diets to use based on the history, progression, and genetic make-up of a patient Case Reports will offer an added resource for fellows, nutritionists, and dieticians who need a refresher course

Handbook of Nutrition and the Kidney

Kidney Transplantation: A Guide to the Care of Kidney Transplant Recipients

Nutritional Management of Renal Disease

Understanding the Complexities of Kidney Transplantation

An Essential Q & A Study Guide

The Washington Manual of Nephrology Subspecialty Consult has been thoroughly updated and covers inpatient and outpatient management of nephrology with the same clinical practicality as the widely-popular Washington ManualTM of Medical Therapeutics. It has been written by the residents, fellows, and attending physicians of the distinguished Washington University School of Medicine and is tailored for residents performing inpatient consults, students working on an inpatient medicine service, and specialists seeking fast-access information on the management of common renal diseases. Organized for quick and easy access to information, this handbook includes sections on general approaches to kidney disease, electrolyte and acid-base disorders, acute kidney injury and continuous renal replacement, causes of kidney disease, pregnancy and nephrolithiasis, and chronic kidney disease. Appendices include dosing adjustments for antimicrobials and antiretrovirals and a listing of red flag drugs that cause renal impairment. Don't miss the other key topics in The Washington ManualTM Subspecialty Consult Series: · Allergy, Asthma, and Immunology · Gastroenterology · Hematology and Oncology · Infectious Disease · Rheumatology The Washington ManualTM is a registered mark belonging to Washington University in St. Louis to which international legal protection applies. The mark is used in this publication by LWW under license from Washington University.

Preparing students for successful NCLEX results and strong futures as nurses in today's world. Now in its 12th edition, Brunner and Suddarth's Textbook of Medical-Surgical Nursing is designed to assist nurses in preparing for their roles and responsibilities in the medical-surgical setting and for success on the NCLEX. In the latest edition, the resource suite is complete with a robust set of premium and include ancillaries such as simulation support, adaptive testing, and a variety of digital resources helping prepare today's students for success. This leading textbook focuses on physiological, pathophysiological, and psychosocial concepts as they relate to nursing care. Brunner is known for its strong Nursing Process focus and its readability. This edition retains these strengths and incorporates enhanced visual appeal and better portability for students. Online Tutoring powered by Smarthinking--Free online tutoring powered by Smarthinking, gives students access to expert nursing and allied health science educators whose mission, like yours, is to achieve success. Students can access live tutoring support, critiques of written work, and other valuable tools. The responsibilities of the Pediatric Nephrologist in the Nephrologist and other involv

specialists is vital to critical care setting are multifaceted. Management of optimize outcome for each individual child. acute renal failure with and without renal replacement therapy. In this first edition of the book, we have included chapters focused on general topics in pediatric nephrology that are most germane to the care of the critically ill child. We have tried to look at the clinical situations the care of children admitted to the Pediatric Intensive Care Unit from the aspect of both the Pediatric Intensivist and Care Unit. Due to the complex and specialized care renal specialist. We hope that this book will supply the required, critical care nephrology could even be considered a separate entity compared to the clinical scenarios treated in the outpatient setting or on the inpatient Nephrology. pediatric ward.

Kidney transplantation is a complex field that incorporates several different specialties to manage the transplant patient. This book was created because of the importance of kidney transplantation. This volume focuses on the complexities of the transplant patient. In particular, there is a focus on the comorbidities and special considerations for a transplant patient and how they affect kidney transplant outcomes. Contributors to this book are from all over the world and are experts in their individual fields. They were all individually approached to add a chapter to this book and with their efforts this book was formed. Understanding the Complexities of Kidney Transplantation gives the reader an excellent foundation to build upon to truly understand kidney transplantation.

Nephrology
A Guide to Practice

Pediatric Nephrology in the ICU

Handbook of Critical Care Nephrology

Oxford Desk Reference

"This book offers a practical approach to guide nurses in the art and science of renal care. It is holistic as well as technical, therapeutic and compassionate in its approach. Acute and chronic renal failure, renal osteodystrophy and other selected diseases are comprehensively discussed. The nurse's role with regard to specific treatments such as peritoneal dialysis, haemodialysis, plasma exchange and haemoperfusion as well as organ transplantation procedures are discussed in detail, and a section relating specifically to paediatric care is included. The final section of the book is devoted to the use of complementary therapies and alternative medicine in renal disease."--BOOK JACKET.

Paediatric Nephrology is designed to help the reader understand and manage any condition affecting the kidney in childhood. It is pocket-sized to give easy reference in the clinical setting and highlights the important issues for quick use. From history taking and urinalysis, electrolyte management, acute kidney injury and transplantation, all aspects are covered in this concise yet comprehensive guide to this specialist area. It is an invaluable reference for both the general paediatrician and the specialist on:

- history taking and examination, urinalysis and radiological investigations;*
- the management of acute emergencies such as fluid, electrolyte and acid-base imbalances and acute renal failure;*
- renal*

problems in the neonate; · issues involving immunology, dialysis, vaccination and drug prescribing; · key areas, such as chronic kidney disease, transplantation, and acute kidney injury. The appendix provides useful additional information and protocols. This new edition is up-to-date and evidence-based when possible. Tables and equations direct readers to the use of relevant medication and drug dosages.

An official publication of the National Kidney Foundation (NKF), the book provides a current overview of the pathophysiology, diagnosis, and management of kidney diseases, fluid and electrolyte disorders, hypertension, dialysis, and kidney transplantation. Includes new chapters on pathogenesis and pathophysiology of diabetic nephropathy and genetic basis of glomerular and structural kidney disorders.

The here presented book covers different areas of clinical and scientific interest, reaching from donor evaluation to newest methods in immunological diagnostics. But also aspects of daily care of transplant recipients can be found in the carefully selected chapters. Everything driven by the aim to improve the care for all of our transplanted patients.

Current Issues and Future Direction in Kidney Transplantation
Challenging and Emerging Conditions in Emergency Medicine
Transplantation of Composite Tissue Allografts
A Guide to Interprofessional Practice

Lippincott Manual of Nursing Practice Handbook

PRACTICE GUIDELINES FOR ACUTE CARE NURSE PRACTITIONERS, 2nd Edition is the only comprehensive clinical reference tailored to the needs of advance practice nurses. With discussions of more than 230 of the most common conditions experienced by adult patients in acute care, this reference includes everything you need on a day-to-day basis. Plus, quick reference is easy with a spiral binding and content organized by body system. Each condition lists a concise outline of defining terms, incidence/predisposing factors, subject and physical examination findings, diagnostic tests, and management strategies so you can find everything you need to know quickly. Includes discussion of body systems, nutritional considerations, fluid/electrolyte imbalances, shock, trauma, gerontological concerns, professional issues, and trends in advanced practice. Nursing guidelines for more than 230 of the most common conditions experienced by adult patients in acute care serve as an invaluable resource in the field. Conditions are organized by body system for quick reference when treating patients. Each condition lists defining terms, incidence/predisposing factors, subjective and physical examination findings, diagnostic tests, and management strategies to provide help every step of the way. Coverage also includes discussion of body systems, nutritional considerations, fluid/electrolyte imbalances, shock, and trauma for a complete look at patient care and diagnosis. An entire chapter dedicated to congestive heart failure gives you a deeper look at the disease. Specific content, as well as online references, for diseases such as SARS and West Nile Virus give you the most current information available on these evolving diseases. New chapters on admission, pre-op and post-op orders prepare you for every step of the patient treatment process. Addition of ICD-9 codes within the

chapters makes classifying diseases with ICD codes easy. New content on Parkinson's disease, gout, testicular cancer, multiple sclerosis, bite management (including spider, snake, animal, and human) better prepare you for these situations. Updated and expanded content reflects changes in current guidelines and evidence-based practice, an important part of working in the field. Updated and expanded content on coronary artery disease and inclusion of the new JNC 7 national hypertension guidelines features more information on these common diseases. Expanded and updated coverage of postmenopausal women and hormone replacement therapy.

Despite significant accomplishments to date, kidney transplantation is a relatively young field in medicine. Due to the armamentarium of agents available to effectively suppress the immune system, the past decade has seen a shift in focus from prevention of rejection to a focus on extending the life of the allograft and novel strategies to increase the organ donor pool. This book covers basic concepts in kidney transplantation while also addressing ways to manage kidney transplant recipients in order to maximize patient and graft survival. In addition, novel concepts to increase organ availability are addressed, including kidney paired donation and single site laparoendoscopic donor nephrectomy for living donor kidney transplantation, and utilization of marginal, hepatitis C positive, and older donor organs to increase deceased donor transplant opportunities.

It is well known that the numbers of organs that become available each year for transplantation fall far short of the numbers that are actually required. In this boldly argued book James Stacey Taylor contends that, given both this shortage and the desperate poverty that some people endure, it is morally imperative that the current methods of organ procurement be supplemented by a legal, regulated market for human transplant organs purchased from live vendors. Taylor pays particular attention to outlining the implications that recognizing the moral legitimacy of these market transactions in human body parts and reproductive capacities have for public policy.

Organized by chief complaint, this comprehensive, pocket-sized handbook for medical students and early residents covers the diagnosis and management of more than 80 common problems found in children, focusing on symptoms, differential diagnosis, laboratory assessment, and various treatment options for each problem. Customers & reviewers note that the major strengths of this book are its readability and ease of use. It contains the perfect amount of detail and emphasizes high-yield topics that appear on end-of-rotation and in-service exams and really helps direct one's thinking process.

The Patients and Their Allograft

Handbook of Nephrology and Hypertension

Why Markets in Human Body Parts are Morally Imperative

Handbook of Dialysis

Quick Guide to Kidney Transplantation

Stay up-to-date on the latest evidence and clinical practice in pediatric acute care with the definitive textbook in the field. Now in its second edition, Pediatric Acute Care: A Guide for Interprofessional Practice takes an evidence-based, interprofessional approach to pediatric acute care as it exemplifies the depth and diversity that 's needed for the dynamic healthcare environments in which acutely ill children receive care. Coverage includes how to work with the pediatric patient and family, major acute care disorders and their management, emergency preparedness, common acute care

procedures, and much more. With contributions from more than 200 practicing clinicians and academic experts, it represents a wide variety of disciplines including medicine, nursing, pharmacy, child life, nutrition, law, integrative medicine, education, public health, and psychology, among others. The second edition also features the addition of new physician and nurse practitioner co-editors as well as extensive content updates including updated evidence-based content throughout the text, the integration of the 2016 IPEC Core Competencies for Interprofessional Collaborative Practice, a new full-color design, and new vivid illustrations throughout. **UNIQUE!** Interprofessional collaborative approach includes contributions from more than 200 practicing clinicians and academic experts from the U.S. and Canada, including nursing, medicine, pharmacy, child life, nutrition, law, integrative medicine, education, public health, and psychology. Consistent organization within disorder chapters begins with a section on Physiology and continues with sections on Pathophysiology, Epidemiology and Etiology, Presentation, Differential Diagnosis, Diagnostic Studies, and a Plan of Care that include Therapeutic Management, Consultation, Patient and Family Education and Disposition and Discharge Planning. Comprehensive content spanning five units divides coverage into introductory information, the approach to the pediatric patient and family, major acute care disorders and their management, emergency preparedness, and common acute care procedures. **NEW!** Updated evidence-based content has been added throughout to ensure that you 're up-to-date on all topics needed to provide care for pediatric patients in acute, inpatient, emergency, transport, and critical care settings. **NEW!** Full-color design and illustrations enhance learning and make content easier to navigate and digest. **NEW!** Integration of the 2016 IPEC Core Competencies ensure that you 're learning the professional skills and protocols required for effective, contemporary interprofessional collaborative practice. **UPDATED!** Streamlined procedures unit focuses more sharply on need-to-know content.

Thoroughly revised and updated for its Fifth Edition, this handbook is a practical, easily accessible guide to nutritional management of patients with kidney disorders. Leading international experts present state-of-the-art information on these patients' nutritional requirements and offer dietary recommendations, with menus and lists of supplements to enhance patient compliance. Numerous tables and figures enable readers to find essential information quickly. Six of this edition's chapters have new contributing authors. Coverage includes new information on nutritional management of lipid disorders and abnormalities in calcium, phosphorus, and bone metabolism. Chapters on nutritional requirements in hemodialysis and peritoneal dialysis have been completely updated.