Current Trends in Diabetes

Provides a comprehensive overview of wireless computing in medicine, with technological, medical, and legal advances. This book brings together the latest work of leading scientists in the disciplines of Computing, Medicine, and Law, in the field of Wireless Health. The book is organized into three main sections. The first section discusses the use of distributed computing in medicine. It concentrates on methods for treating chronic diseases and cognitive disabilities like Alzheimer's, Autism, etc. It also discusses how to improve portability and accuracy of monitoring instruments and reduce the redundancy of data. It emphasizes the privacy and security of using such devices. The role of mobile sensing, wireless power and Markov decision process in distributed computing is also examined. The second section covers nanomedicine and discusses how the drug delivery strategies for chronic diseases can be efficiently improved by Nanotechnology enabled materials and devices such as MENs and Nanorobots. The authors will also explain how to use DNA computation in medicine, model brain disorders and detect bio-markers using nanotechnology. The third section will focus on the legal and privacy issues, and how to implement these technologies in a way that is safe and ethical.

Defines the technologies of distributed wireless health, from software that runs cloud computing data centers, to the technologies that allow new sensors to work. Explains the applications of nanotechnologies to prevent, diagnose and cure disease. Includes case studies on how the technologies covered in the book are being implemented in the medical field, through both the creation of new medical applications and their integration into current systems. Discusses pervasive computing's organizational benefits to hospitals and health care organizations, and their ethical and legal challenges. Wireless Computing in Medicine: From Nano to Cloud with Its Ethical and Legal Implications is written as a reference for computer engineers working in wireless computing, as well as medical and legal professionals. The book will also serve students in the fields of advanced computing, nanomedicine, health informatics, and technology law.

Feline Practice: Integrating Medicine and Well-Being (Part II), An Issue of Veterinary Clinics of North America: Small Animal Practice

Clinical Chemistry, Immunology and Laboratory Quality Control: A Comprehensive Review for Board Preparation, Certification and Clinical Practice, Second Edition presents core topics and 70 case studies that illustrate the application of clinical chemistry knowledge to everyday patient care. This succinct reference offers practical examples of how things function in the pathology clinic with useful lists, key points, case studies and a bullet point format ideal for quick pre-board review.
Bioelectronics and Medical Devices

The emergence of type 2 diabetes as a global pandemic is one of the major challenges to health care in the 21st century. This book contains chapters covering the newest scientific concepts in the pathogenesis of type 2 diabetes, and the complications and approaches in diagnosis and glycemic control. Part of the book is dedicated to the effect of diabetes on the mental functions and treatment strategies to prevent cognitive decline. Glucose monitoring, using cutting-edge technologies, is outlined, as well as the role of health information technologies in diabetes management. Updates on glucose lowering therapy are presented, and the new emerging class of SGLT2 inhibitors is discussed in detail. The purpose of this book is to disseminate knowledge on type 2 diabetes and to contribute to the professional development of physicians, internists, endocrinologists, medical students, and research scientists in diabetes.

Low-power Wearable Healthcare Sensors

Offering a unified resource for both clinicians and pharmacists, A Medication Guide to Internal Medicine Tests and Procedures provides concise, focused answers to common medication questions before, during, and after internal medicine tests and procedures. Co-authored by experienced physicians and clinical pharmacists, this unique, time-saving reference brings together essential information for healthcare providers and students in a convenient, highly templated, pocket-sized book. Addresses the many medication questions surrounding 54 of the most commonly used tests and procedures. Ensures proper peri-procedural management by addressing what medications need to be administered or held ahead of a specific test. Provides foundational guidance on the diagnostic process, anticoagulation and glycemic management in the periprocedural period, and anesthesia, followed by highly templated chapters arranged alphabetically by procedure name. Includes brief descriptions of tests, how they are performed, and common findings. Helps readers avoid interference with tests and unnecessary adverse effects, optimizing patient outcomes.

Take Control of Type 1 Diabetes

'Fast Facts: Type 1 Diabetes in Adults' provides a practical overview of this chronic autoimmune condition. Written by and for health professionals working in primary care, this colourful and accessible handbook highlights important practice points that cover: • the identification and management of adults with type 1 diabetes • the prevention and treatment of complications • advances in technology and future treatments An indispensable read for anyone wanting to get up to speed with best practice in primary care. Table of Contents: • Overview • Diagnosis • Management • Hypoglycemia • Education • Special circumstances • Complications • Living with the condition • Technology • Future treatments

Korte Gids

Trends in Bioelectroanalysis

This issue of Endocrinology and Metabolism Clinics, guest edited by Dr. Grazia Aleppo, will cover key topics in Technology in Diabetes. This issue is one of four selected each year by our series consulting editor, Dr. Adriana G. Ioachimescu. Topics discussed in this issue will include: Evolution of Diabetes Technology, Diabetes
Technology in children, Diabetes Technology in adults, type 2 Diabetes, Benefits and challenges of Diabetes Technology use in older adults, Integration of Diabetes Technology in Clinical Practice, Diabetes Technology in the inpatient setting for management of hyperglycemia, Standardization of CGM reports, Diabetes Technology and Exercise, Psychosocial Aspects of Diabetes Technology use, Automated insulin delivery, and Glucagon, among others.

Handbook of Diabetes Technology

This volume offers a careful selection of trend-setting topics in the field. In-depth review articles illustrate current trends in the field. Experienced experts present a comprehensive overview concerning the electrochemical biosensing of glucose for diabetes care from an industrial research and development perspective a survey of bioassay applications for individually addressable electrochemical arrays, focusing on liquid-phase bioanalytical assays a review of recent advances in the development of electronic tongues based on the use of biosensor arrays coupled with advanced chemometric data analysis novel strategies of DNA biosensor development and corresponding applications for studies of DNA damage a survey of recent trends in the electrochemistry of redox proteins, including the increasing diversity of redox proteins used in electrochemical studies, novel immobilization strategies, and biosensor / biofuel cell applications an overview of electrochemical sensing of blood gases with advanced sensor concepts a survey of recent bioelectroanalytical studies with high spatial resolution using scanning electrochemical microscopy with a wide range of applications covering imaging of living cells, studies of metabolic activity, imaging of local enzyme activity, and studies of transport through biolayers This timely collection will be of interest not only for experts in the field, but also to students and their teachers in disciplines that include analytical chemistry, biology, electrochemistry, and various interdisciplinary research areas.

Prediction of HbA1c Response to Flash Glucose Monitoring Device FreeStyle Libre (FSL)

Prediction of HbA1c response to flash glucose monitoring device FreeStyle Libre (FSL)Harshal Deshmukh1 Thozhukat Sathyapalan1, Emma Wilmot3, Jane Patmore4, David Bishop5, David Lipscomb6, Rumasia Banatwalla7, Reza Zaidi8, Louise Overend9, Shafie Kamruddin10, Bob Ryder11, Chris Walton12Academic Diabetes and Endocrinology, University of Hull UK2Academic Diabetes and Endocrinology, University of Hull UK3University hospital of Derby4Academic Diabetes and Endocrinology, University of Hull5South Tyneside and Sunderland NHS trust6SUSSEX COMMUNITY NHS FOUNDATION TRUST7ASHFORD AND ST PETER’S HOSPITALS NHS FOUNDATION TRUST8Royal Liverpool and Broadgreen University Hospitals NHS Trust9Cumbria Partnership NHS Trust10COUNTY DURHAM AND DARLINGTON NHS FOUNDATION TRUST11SANDWELL AND WEST BIRMINGHAM HOSPITALS NHS TRUST12Academic Diabetes and Endocrinology, University of Hull UK, United KingdomBackgroundThe FreeStyle Libre (FSL) flash glucose monitoring device was made available on the UK National Health Services (NHS) drug tariff in 2017. There is limited data on the effect of FSL use on glycaemic control in patients with diabetes.AimsThis objective of this study is to use the FSL national audit data to identify predictors of response to flash glucose monitoring(FSL)MethodClinicians were invited to submit FSL user data to a secure web-based tool held within the NHS N3 network. Data were analysed from submissions from the 70 NHS hospital trusts. Response to FSL was defined as ≥10mmol/mol drop in HbA1c following initiation of FSL. Two prediction models; logistic regression and machine learning (gradient boosting) were used for analysis. Logistic regression analysis with a response to FSL was used as the dependent variable and age, gender, BMI, baseline HbA1c, the average number of SMBG monitoring, structured education for diabetes and other relevant covariates were included as independent variables. For the gradient boosting analysis, the whole sample was split into training and testing samples by the ratio of 3:1. All the statistical analysis were done in R3.5.5.ResultsThe study consisted of 4419 users of FSL (96% TID), 53% females and a median baseline HbA1c 66.2 (IQR=57-78). Of the 4419 patients, 1097 had at least one follow-up HbA1c and the median drop in HbA1c following initiation of FSL was 6.1 mmol/mol. The users of FSL with ≥10mmol/mol drop in HbA1c had median 6.2 (4.9-9) FSL scans per day. 28% of patients had a drop HbA1c of 10 mmol/mol or higher. Logistic regression analysis showed higher baseline HbA1c (Beta=0.08, P

RSSDDI Textbook of Diabetes Mellitus

The LNAI 12299 constitutes the papers of the 18th International Conference on Artificial Intelligence in Medicine, AIME 2020, which will be held online in August 2020. The 42 full papers presented together with 1short papers in this volume were carefully reviewed and selected from a total of 103 submissions. The AIME 2020 goals were to present and consolidate the international state of the art of AI in biomedical research from the perspectives of theory, methodology, systems, and applications.
Recent Advances in Diabetes

Application of Flash Glucose Monitoring System in the Case Management of Type 2 Diabetes with Poor Blood Glucose Control

What is the Clinical and Cost Effectiveness of Freestyle Libre® Flash Glucose Monitoring for Patients with Diabetes Mellitus Treated with Intensive Insulin Therapy?

Digital Health

This new volume discusses the applications and challenges of deep learning and the internet of things for applications in healthcare. It describes deep learning techniques in conjunction with IoT used by practitioners and researchers worldwide. The authors explore the convergence of IoT and deep learning to enable things to communicate, share information, and coordinate decisions. The book includes deep feedforward networks, regularization, optimization algorithms, convolutional networks, sequence modeling, and practical methodology. Chapters look at assistive devices in healthcare, alerting and detection devices, energy efficiency in using IoT, data mining for gathering health information for individuals with autism, IoT for mobile applications, and more. The text also offers mathematical and conceptual background that presents the latest technology as well as a selection of case studies.

RSSDI Diabetes Update 2019

RSSDI Diabetes Update 2018

This book is a printed edition of the Special Issue "Carbohydrate Metabolism in Health and Disease" that was published in Nutrients

RSSDI Diabetes Update 2020

Diabetes is a disease that occurs when the pancreas does not produce enough insulin to control the amount of glucose in the blood. This book is a comprehensive guide to the latest advances in the diagnosis and treatment of diabetes. Divided into six sections, the manual begins with an overview of diagnosis and classification, followed by discussion on epidemiology and aetiology. Section four covers comorbidities and complications of diabetes including hyper- and hypoglycaemia, heart failure, foot ulcers, and diabetic retinopathy. The final sections examine recent advances and technologies. The detailed text is further enhanced by clinical photographs, diagrams and tables to assist learning. Key points Comprehensive guide to latest advances in diagnosis and management of diabetes Discusses diagnosis and classification, epidemiology and aetiology Covers many different comorbidities and complications Highly illustrated with clinical photographs, diagrams and tables

Diabetes Technology

This is a story of healing set in the context of a wealthy philanthropist who gathers a dedicated group of Christian faithful to resurrect a dying town by creating a high quality medical center. It is more than the challenges, labor and sacrifice required by this ambitious ten year project. We enter the lives of multiple citizens
from this poor and medically underserved area. The rich ebb and flow of their hardships, disappointments, and redemptions is the real meat of the story. Humans, of course, are God's creations, so the reader also finds joy, along with the satisfaction of seeing a main character's hatred and quest for revenge quelled by compassion, reconciliation and love. 1 Corinthians 13:13. — Bill E. Barry MD

Artificial Intelligence in Medicine

Bioelectronics and Medical Devices: From Materials to Devices-Fabrication, Applications and Reliability reviews the latest research on electronic devices used in the healthcare sector, from materials, to applications, including biosensors, rehabilitation devices, drug delivery devices, and devices based on wireless technology. This information is presented from the unique interdisciplinary perspective of the editors and contributors, all with materials science, biomedical engineering, physics, and chemistry backgrounds. Each applicable chapter includes a discussion of these devices, from materials and fabrication, to reliability and technology applications. Case studies, future research directions and recommendations for additional readings are also included. The book addresses hot topics, such as the latest, state-of-the-art biosensing devices that have the ability for early detection of life-threatening diseases, such as tuberculosis, HIV and cancer. It covers rehabilitation devices and advancements, such as the devices that could be utilized by advanced-stage ALS patients to improve their interactions with the environment. In addition, electronic controlled delivery systems are reviewed, including those that are based on artificial intelligences. Presents the latest topics, including MEMS-based fabrication of biomedical sensors, Internet of Things, certification of medical and drug delivery devices, and electrical safety considerations Presents the interdisciplinary perspective of materials scientists, biomedical engineers, physicists and chemists on biomedical electronic devices Features systematic coverage in each chapter, including recent advancements in the field, case studies, future research directions, and recommendations for additional readings

Carbohydrate Metabolism in Health and Disease

Advances in technology have produced a range of on-body sensors and smartwatches that can be used to monitor a wearer's health with the objective to keep the user healthy. However, the real potential of such devices not only lies in monitoring but also in interactive communication with expert-system-based cloud services to offer personalized and real-time healthcare advice that will enable the user to manage their health and, over time, to reduce expensive hospital admissions. To meet this goal, the research challenges for the next generation of wearable healthcare devices include the need to offer a wide range of sensing, computing, communication, and human-computer interaction methods, all within a tiny device with limited resources and electrical power. This Special Issue presents a collection of six papers on a wide range of research developments that highlight the specific challenges in creating the next generation of low-power wearable healthcare sensors.

Assistance Dogs for People With Disabilities

Diabetes mellitus is a group of metabolic diseases in which a person has high blood sugar, either because the body does not produce enough insulin, or because cells do not respond to the insulin that is produced. The latest edition of this reference provides endocrinologists with the latest advances in the diagnosis and management of diabetes. Beginning with an overview of epidemiology, pathophysiology and metabolism, the next sections discuss presentations of diabetes, therapeutic management, complications, and comorbidities. The following chapters cover diabetes in certain population groups, education and technology, nutrition, glucose monitoring, and research. The book concludes with a section dedicated to Type 1 diabetes, and a selection of journal reviews. Flow diagrams, tables and figures further enhance the comprehensive text. Key points Latest edition of comprehensive reference detailing latest advances in diagnosis and management of diabetes Covers numerous therapeutic methods Complete sections dedicated to Type 1 diabetes and journal reviews Highly illustrated with flow diagrams, tables and figures

Technology in Diabetes, An Issue of Endocrinology and Metabolism Clinics of North America

Now in its fifth edition, the Textbook of Diabetes has established itself as the modern, well-illustrated, international guide to diabetes. Sensibly organized and easy to navigate, with exceptional illustrations, the Textbook hosts an unrivalled blend of clinical and scientific content. Highly-experienced editors from across the globe
assemble an outstanding set of international contributors who provide insight on new developments in diabetes care and information on the latest treatment modalities used around the world. The fifth edition features an array of brand new chapters, on topics including: Ischaemic Heart Disease Glucagon in Islet Regulation Microbiome and Diabetes Diabetes and Non-Alcoholic Fatty Liver Disease Diabetes and Cancer End of Life Care in Diabetes as well as a new section on Psychosocial aspects of diabetes. In addition, all existing chapters are fully revised with the very latest developments, including the most recent guidelines from the ADA, EASD, DUK and NICE. Includes free access to the Wiley Digital Edition providing search across the book, the full reference list with web links, illustrations and photographs, and post-publication updates Via the companion website, readers can access a host of additional online materials such as: 200 interactive MCQ's to allow readers to self-assess their clinical knowledge every figure from the book, available to download into presentations fully searchable chapter pdfs Once again, Textbook of Diabetes provides endocrinologists and diabetologists with a fresh, comprehensive and multi-media clinical resource to consult time and time again.

Textbook of Diabetes

This book covers the main fields of diabetes management through applied technologies. The different chapters include insulin therapy through basic insulin injection therapy, external and implantable insulin pumps and the more recent approaches such as sensor augmented pumps and close-loop systems. Islet transplantation is also described through its technical aspects and clinical evaluation. Glucose measurement through blood glucose meters and continuous glucose monitoring systems are comprehensively explained. Educational tools including videogames and software dedicated to diabetes management are depicted. Lastly, Telemedicine systems devoted to data transmission, telemonitoring and decision support systems are described and their use for supporting health systems are summarized. This book will help professionals involved in diabetes management understanding the contribution of diabetes technologies for promoting the optimization of glucose control and monitoring. This volume will be helpful in current clinical practice for diabetes management and also beneficial to students.

New Insights in Diagnosing and Treatment of Glucose Disorders and Obesity in Children and Adolescents

The domain of eHealth faces ongoing challenges to deliver 21st century healthcare. Digitalization, capacity building and user engagement with truly interdisciplinary and cross-domain collaboration are just a few of the areas which must be addressed. This book presents 190 full papers from the Medical Informatics Europe (MIE 2018) conference, held in Gothenburg, Sweden, in April 2018. The MIE conferences aim to enable close interaction and networking between an international audience of academics, health professionals, patients and industry partners. The title of this year’s conference is: Building Continents of Knowledge in Oceans of Data - The Future of Co-Created eHealth, and contributions cover a broad range of topics related to the digitalization of healthcare, citizen participation, data science, and changing health systems, addressed from the perspectives of citizens, patients and their families, healthcare professionals, service providers, developers and policy makers. The second part of the title in particular has attracted a large number of papers describing strategies to create, evaluate, adjust or deliver tools and services for improvements in healthcare organizations or to enable citizens to respond to the challenges of dealing with health systems. Papers are grouped under the headings: standards and interoperability, implementation and evaluation, knowledge management, decision support, modeling and analytics, health informatics education and learning systems, and patient-centered services. Attention is also given to development for sustainable use, educational strategies and workforce development, and the book will be of interest to both developers and practitioners of healthcare services.

The Athlete’s Guide to Diabetes

Resurrecting Fledgling

Wireless Computing in Medicine

BACKGROUND: Diabetes mellitus (DM) has become one of the most common public health problems world-wide. According to the 2014 Norwegian Public Health
report, diabetes affects an estimated 4.3% of the Norwegian population. Diabetes is a metabolic disorder resulting from a defect in insulin production, secretion, action, or all. Type 1 and 2 are the two main types, with the prevalence of type 2 accounting for the majority (>85%) of diabetes. This assessment will focus on FreeStyle Libre, flash glucose monitor for insulin treated individuals with type 1 and 2 diabetes ("Type 1 and 2 DM"). To achieve proper quality of life and reduce long-term problems, people are increasingly encouraged to take an active role in the management of their condition. Adequate treatment management, aimed at tight control of blood glucose, reduces the risk of the long-term complications of diabetes such as retinopathy, nephropathy, neuropathy, coronary heart disease, ischaemic stroke and peripheral vascular disease. “Management” of the disease should be understood as a package including testing of blood glucose, taking insulin (i.e., multiple daily insulin injections, using an insulin pump), using anti-hyperglycemic drugs, or adopting lifestyle interventions such as diet and physical activity. In recent years, and available in Europe since 2014, the FreeStyle Libre System -- a "wireless" method using a sensor for monitoring interstitial fluid glucose -- was introduced to help individuals with type 1 and 2 DM achieve better glucose control. The system, unlike others, does not require finger prick calibration, since that functionality is embedded into the core technology. Also, unlike other systems, the individual has to take active action to get access to the real time glucose value, by leading the receiver over the sensor. Similarly to other continuous glucose monitoring options, it relies on the individual to take action on the information retrieved.

SUGGESTED RESEARCH PRIORITIES: 1. Independent research for FreeStyle Libre will be important. 2. Diabetes affects the life of children, adolescients and their caregivers in many ways, as well as pregnant women. Independent research including these groups is warranted. 3. The clinical effectiveness of FreeStyle Libre needs to be investigated in different conditions, for example, among individuals with poor self-monitoring adherence, newly diagnosed, impaired awareness of hypoglycaemia, and in addition to training and education components. 4. FreeStyle Libre compared to other continuous monitoring systems is warranted. 5. Pain is a major determinant of diabetes treatment adherence, especially for children, and it should be included as an individual outcome in future trials. 6. Future trials should include longer term follow up and quality of life outcome assessments at various points to inform integrated clinical and cost effectiveness modelling.

**Freestyle Libre Flash Glucose Self-monitoring System**

Diabetes mellitus is a group of metabolic diseases in which a person has high blood sugar, either because the body does not produce enough insulin, or because cells do not respond to the insulin that is produced. The fourth edition of Textbook of Diabetes Mellitus has been fully revised to provide clinicians with the latest developments in the field. Divided into 19 sections, the book begins with discussion on the epidemiology, physiology and metabolism of the disease; its diagnosis and classification; and aetiologypathogenesis, genetics and hormone action. The following sections cover types of diabetes, including in different segments of the population; clinical features and complications; diabetes with comorbidities; and management of the disease through both pharmacotherapy and non-pharmacological methods. Key points Fully revised new edition presenting latest advances in diagnosis and management of diabetes mellitus Covers diabetes in different population groups and with comorbidities Highly illustrated with clinical photographs, diagrams and tables Previous edition (9789351520900) published in 2014

**Freestyle Libre® Flash Glucose Monitoring for Patients with Diabetes Mellitus Treated with Intensive Insulin Therapy**

Digital Health: Exploring Use and Integration of Wearables is the first book to show how and why engineering theory is used to solve real-world clinical applications, considering the knowledge and lessons gathered during many international projects. This book provides a pragmatic A to Z guide on the design, deployment and use of wearable technologies for laboratory and remote patient assessment, aligning the shared interests of diverse professions to meet with a common goal of translating engineering theory to modern clinical practice. It offers multidisciplinary experiences to guide engineers where no clinically advice and expertise may be available. Entering the domain of wearables in healthcare is notoriously difficult as projects and ideas often fail to deliver due to the lack of clinical understanding, i.e., what do healthcare professionals and patients really need? This book provides engineers and computer scientists with the clinical guidance to ensure their novel work successfully translates to inform real-world clinical diagnosis, treatment and management. Presents the first guide for wearable technologies in a multidisciplinary and translational manner Helps engineers design real-world applications to help them better understand theory and drive pragmatic clinical solutions Combines the expertise of engineers and clinicians in one go-to guide, accessible to all

**Neural Information Processing**

This book is a complete guide to the diagnosis and management of diabetes. Divided into eight sections, the text begins with an overview of the history, epidemiology
and pathogenesis of the disease. The next chapters discuss different types diabetes, diagnosis, managements techniques, and monitoring. The following sections cover chronic and acute complications, and diabetes in special situations such as in pregnancy and during Ramadan. The book concludes with discussion on transplant, gene and stem cell therapy, psychosocial aspects, and public health and economics. The comprehensive text is further enhanced by clinical photographs, diagrams and exhaustive references. Key points Comprehensive guide to diagnosis and management of diabetes Covers different types of diabetes and potential complications Includes discussion on diabetes in special situations such as in pregnancy or during Ramadan Features clinical photographs, diagrams and exhaustive references

Yearbook of Diabetes 2017

This book unravels the role of Point-of-Care (POC) glucose monitoring as an essential part of diabetes management. It provides the reader with an in-depth knowledge and understanding of diabetes management, including: the need for POC glucose monitoring the glucose detection technologies (invasive, noninvasive and continuous) being used in the POC devices the analytical performance, characteristics, pros and cons of the POC devices developed to date the importance and role of glycated hemoglobin (HbA1c) monitoring for diabetes management the various POC devices and analyzers for the determination of HbA1c. This is the first book to provide complete up-to-date information on POC glucose detection technologies and devices for diabetic monitoring and management. It will be an important reference for healthcare professionals, biomedical engineers, researchers, economists and policy makers. This book also serves as an asset and teaching aid for professionals and researchers in diabetic monitoring and management.

Building Continents of Knowledge in Oceans of Data: The Future of Co-Created EHealth

The three-volume set of LNCS 11953, 11954, and 11955 constitutes the proceedings of the 26th International Conference on Neural Information Processing, ICONIP 2019, held in Sydney, Australia, in December 2019. The 173 full papers presented were carefully reviewed and selected from 645 submissions. The papers address the emerging topics of theoretical research, empirical studies, and applications of neural information processing techniques across different domains. The third volume, LNCS 11955, is organized in topical sections on semantic and graph based approaches; spiking neuron and related models; text computing using neural techniques; time-series and related models; and unsupervised neural models.

Type 2 Diabetes

Diabetes doesn’t have to slow you down. Whether you’re a recreational exerciser or a competitive athlete, The Athlete’s Guide to Diabetes has the training and performance advice you need to remain active while effectively managing your condition. Renowned researcher and diabetes expert Dr. Sheri Colberg offers best practices and tips for managing blood glucose levels for athletes of all ages with type 1 and type 2 diabetes. She provides the most up-to-date information on insulin and other medications and their effects on exercise, nutritional practices and supplements, including low-carbohydrate eating, the latest technologies used to manage glucose, including continuous glucose monitoring (CGM), injury prevention and treatment as well as tactics for diabetes-related joint issues, and mental strategies for maximizing performance and optimizing health. You'll find 15 profiles of athletes with type 1 diabetes who share their accomplishments and how they manage medications, food intake, and other tools available to manage their activities with diabetes. Guidelines for 165 different sports and activities will reduce your trial and error when it comes to performing and feeling your best during fitness activities, endurance sports, endurance-power sports, power sports, and outdoor activities. The Athlete’s Guide to Diabetes adheres to latest guidelines from such trusted sources as the American Diabetes Association and the American College of Sports Medicine. It is the one resource you can’t be without if you want to stay healthy and active, train smarter, and reach new levels of athletic success without losing control of your blood glucose management. CE exam available! For certified professionals, a companion continuing education exam can be completed after reading this book. The Athlete’s Guide to Diabetes Online CE Exam may be purchased separately or as part of The Athlete’s Guide to Diabetes With CE Exam package that includes both the book and the exam.

Sadikot's International Textbook of Diabetes

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A Medication Guide to Internal Medicine Tests and Procedures, E-Book

Around 500,000 people in the UK have type 1 diabetes - about 10% of the total with diabetes. It can develop at any age, but often in previously very healthy children and young adults. This is the first book in many years that has been published in the UK to support people with type 1 diabetes in managing their condition. Drawing on his many years working at one of the leading diabetes centres in the UK, Dr David Cavan provides a practical guide to managing all aspects of the condition, including insulin pump therapy and the latest technology available. This cutting-edge book presents invaluable advice that will offer genuine hope to adults with type 1 diabetes and their families.

Clinical Chemistry, Immunology and Laboratory Quality Control

Glucose Monitoring Devices: Measuring Blood Glucose to Manage and Control Diabetes presents the state-of-the-art regarding glucose monitoring devices and the clinical use of monitoring data for the improvement of diabetes management and control. Chapters cover the two most common approaches to glucose monitoring—self-monitoring blood glucose and continuous glucose monitoring—discussing their components, accuracy, the impact of use on quality of glycemic control as documented by landmark clinical trials, and mathematical approaches. Other sections cover how data obtained from these monitoring devices is deployed within diabetes management systems and new approaches to glucose monitoring. This book provides a comprehensive treatment on glucose monitoring devices not otherwise found in a single manuscript. Its comprehensive variety of topics makes it an excellent reference book for doctoral and postdoctoral students working in the field of diabetes technology, both in academia and industry. Presents a comprehensive approach that spans self-monitoring blood glucose devices, the use of continuous monitoring in the artificial pancreas, and intraperitoneal glucose sensing Provides a high-level descriptions of devices, as well as detailed mathematical descriptions of methods and techniques Written by experts in the field with vast experience in the field of diabetes and diabetes technology

Fast Facts: Type 1 Diabetes in Adults

This issue of Veterinary Clinics: Small Animal Practice, guest edited by Dr. Margie Scherk, is the second of two issues on Feline Practice: Integrating Medicine and Well-Being. Topics in this issue include, but are not limited to: Nutrition and risks of weight and muscle loss; Importance of maintaining muscle and weight: controversies in what to feed; Nutrition: How to feed; Nutrition: assessing requirements and current intake; Stem cell therapy and cats; Complex disease management: managing a cat with comorbidities; Hyperaldosteronism in cats, Hyperthyroidism and Hypothyroidism in cats; Updates in feline diabetes; Feline pancreatitis; Triaditis; Hypertension in cats; Feline gallbladder diseases; Oral health and disease; and Newly recognized neurological entities.

Point-of-care Glucose Detection for Diabetic Monitoring and Management

Background Blood glucose monitoring is an important part of diabetes management. SMBG does not provide any information about the trend of Glucose, might miss peak valley value of blood sugar fluctuations, unable to reflect fluctuations in blood sugar changes throughout the day, FreeStyle Libre FGM (Flash Glucose Monitoring) provide dynamic blood sugar trend curve, implantation trauma and the cost is lower than traditional CGM system, the advantages in daily self-management of diabetes patients are prominent. AimTo investigate the effects of wearing a Flash Glucose Monitoring system combined with case management on self-management behavior and glucose control in type 2 diabetes patients with poor glucose control.Method30 patients with type 2 diabetes who visited the endocrinology department of Beijing Tsinghua Changgung hospital from November 2017 to March 2018 and wore a Flash Glucose Monitoring system (FGM) were selected as the observation group (FGM+ case management group).30 patients with type 2 diabetes who underwent self-monitoring of blood glucose (SMBG) were selected as the control group (SMBG+ case management group) during the same period. Patients in observation group wore FGM for 14 days, case manager guided how to take full advantage of its functions and to observe the influence of lifestyle on blood glucose fluctuation. Patients were asked to record diets, exercise and other life events during wearing, while case manager providing continuous online support. Patients return to outpatient service to download the report after 14 days, case manager would analysis AGP map combined with patient’s life events records, and made personalized management plan. The control group was required to self-monitor blood glucose at least 4 times a week. The two groups both received monthly outpatient visits for individual management, and the intervention period was 3 months. The differences in self-management behavior and glycosylated hemoglobin between the two groups were compared at baseline and 3 months after the
intervention. Results: A total of 60 participants all completed the study, 32 female and 28 male. The average age was 53.06 ± 8.49 years old and duration of diabetes 6.71u00b1 5.44 years. The baseline data of the two groups were comparable. After the intervention, the self-management behavior scores of both groups were significantly improved, and the glycosylated hemoglobin was significantly decreased. The total score of diabetes self-management behavior, diet, exercise, blood glucose monitoring dimensions and glycosylated hemoglobin in the observation group were better than those in the control group [(62.00u00b13.93) vs (52.06u00b115.44), (25.60u00b112.06) vs (20.26u00b113.81), (12.30u00b111.26) vs (9.33u00b112.00), (7.33u00b111.09) vs (6.26u00b111.04), (7.05u00b10.83) vs (7.78u00b10.67% ]). Conclusion: The Flash Glucose Monitoring system provides abundant big data support for the case management of type 2 diabetes, helping the case manager to provide the best individual guidance and suggestions for patients, helping patients to establish a good self-management behavior mode of diabetes mellitus, and effectively improve blood glucose control.

Deep Learning and IoT in Healthcare Systems

We live in a century of technological revolution and the birth of artificial intelligence. Like every other sphere of our life, diabetes-related technology is moving forward with lightning speed. New and improved insulin administration devices, increased capacity for monitoring one’s blood glucose levels, and the ability to communicate directly with the device supplying insulin as well as with the patient and his/her healthcare provider have changed diabetes therapy forever. The problem is that diabetes-related technology is moving ahead much faster than physicians and other healthcare professionals can incorporate these advances into our practices. Diabetes Technology will consist of three parts: Part I addresses the clinical science of diabetes pumps, continuous glucose monitoring and communication technology with numerous practical aspects. Part III offers personal stories of healthcare providers who treat their own diabetes with modern diabetes technology. In particular, they will address how and why they decided to use this technology and the positive and negative aspects of their decision.

Glucose Monitoring Devices

This book presents a collection of recent articles published in peer reviewed journals. The articles provide clinicians and trainees with the latest information in the field of diabetology. Divided into twelve sections the yearbook begins with an overview of basic science and epidemiology, followed by discussion on Type 1 diabetes and gestational diabetes. The next sections cover comorbidities, complications, therapeutics, paramedical care, research, and new technologies and guidelines. For each article, the authors provide background information, key learning points, strengths and limitations of the study, and a ‘take home’ message. Each article is accompanied by detailed references for further reading. Key points Collection of recent articles on diabetes published in peer reviewed journals In depth discussion on Type 1 diabetes and gestational diabetes Authors provide background information and summaries for each article Detailed references for further reading

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