

## Latest Journals



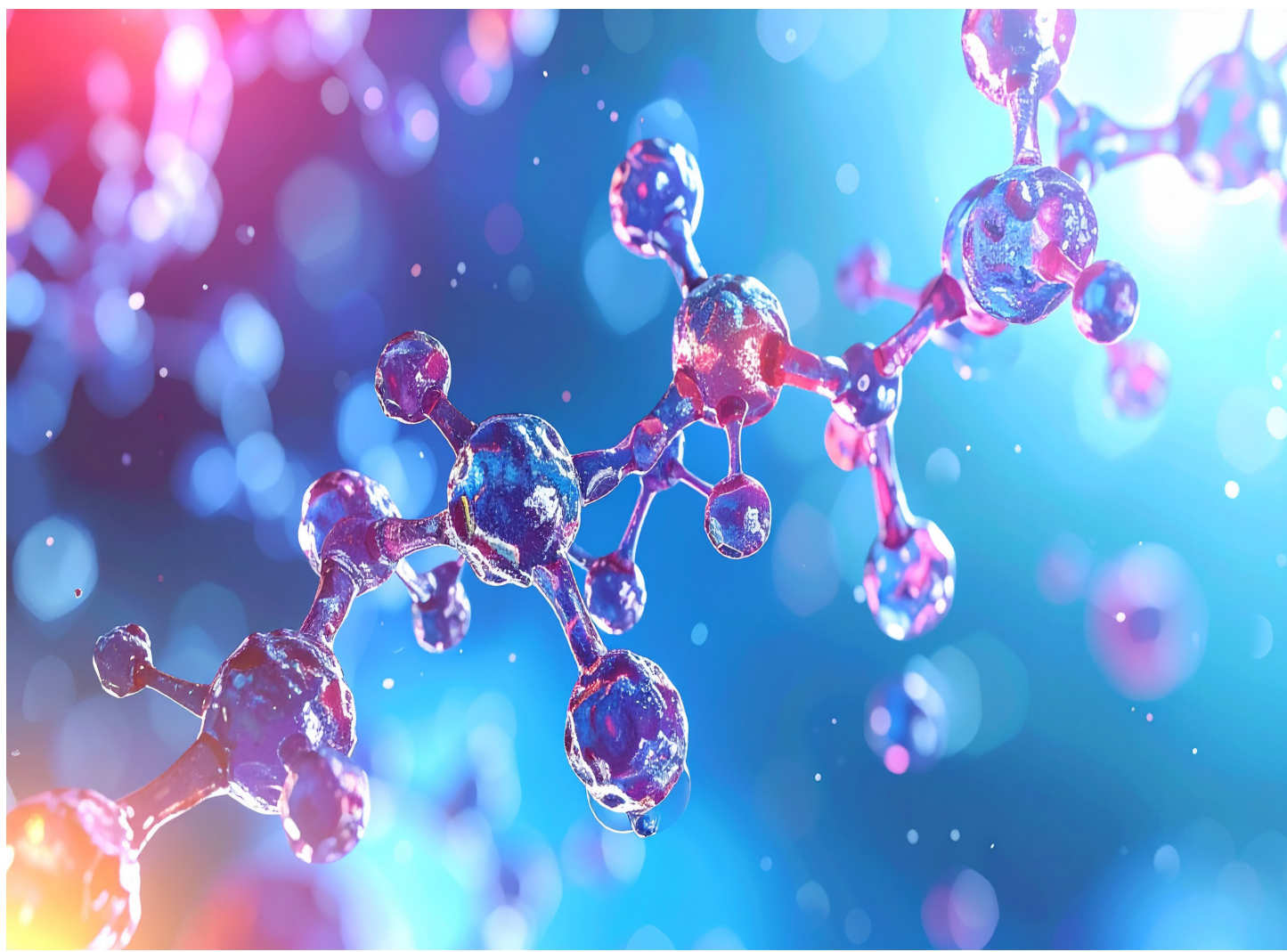
Diabetes Mellitus and Carbohydrate Metabolism  
Atypical Forms of Diabetes

Published: March 10, 2025



Diagnosis and Treatment of Diseases of Lipid and Lipoprotein Metabolism  
Dyslipidemia In Chronic Kidney Disease

Published: April 30, 2025



Pediatric Endocrinology  
Mineralocorticoid Defects in Children

Published: April 20, 2025

## Chapter Sections

### Pediatric Endocrinology

Editor: Constantine A. Stratakis, MD, D(med)Sci, PhD(hc), Mark A. Sperling, MD, Radhika Muzumdar, MD, S. Faisal Ahmed, MD and Rodolfo Rey, MD, PhD

### Obesity

Editor: Jonathan Purnell, MD, Blandine Laferrère, MD PhD and Nitin Kapoor, MD, DM, PhD

### Endocrine Physiology and Disease in Pregnancy and Lactation

Editor: Christopher Kovacs, MD, FRCPC, FACP, FACE

### Endocrine Testing Protocols

Editor: Christian Koch, MD, PhD

### Endocrinology of Aging

Editor: Emiliano Corpas, MD, PhD and Marc R. Blackman, MD

### Disorders that Affect Multiple Organs

Editor: George Chrousos, MD

### Endocrinology of Female Reproduction

Editor: Elizabeth A. McGee, MD and Wendy Kuohung, MD

### Thyroid Disease Manager

Editor: Peter Kopp, MD

### Adrenal Disease and Function

Editor: George Chrousos, MD and Dr. Gregory Kaltsas, MD, FRCP

### Diseases of Bone and Mineral Metabolism

Editor: Frederick Singer, MD and Alison Boyce, MD

### Diffuse Hormonal Systems and Endocrine Tumor Syndromes

Editor: Wouter W. de Herder, MD and Hans Hofland, MD

### Tropical Endocrinology

Editor: Sanjay Kalra, MD, DM, (AIIMS) and Rakesh Sahay, MD, DNB, DM (Endo), FICP, FACE

### Endocrine Emergencies

Editor: Kenneth Feingold, MD

### Pituitary Disease and Neuroendocrinology

Editor: Miles Levy, MD and Marta Korbonits, MD

### Diabetes Mellitus and Carbohydrate Metabolism—Diabete Manager

Editor: Kathleen Dungan, MD, MPH and Ketan Dhatariya, MBBS, MSc, MD, MS, FRCP, PhD

### Endocrinology of Male Reproduction

Editor: Robert McLachlan, MD, PhD and Bradley Anawalt, MD

### Diagnosis and Treatment of Diseases of Lipid and Lipoprotein Metabolism in Adults and Children

Editor: Kenneth Feingold, MD, Don P Wilson, MD and Amy Sanghavi Shah MD, MS, NLA



### Latest Journals



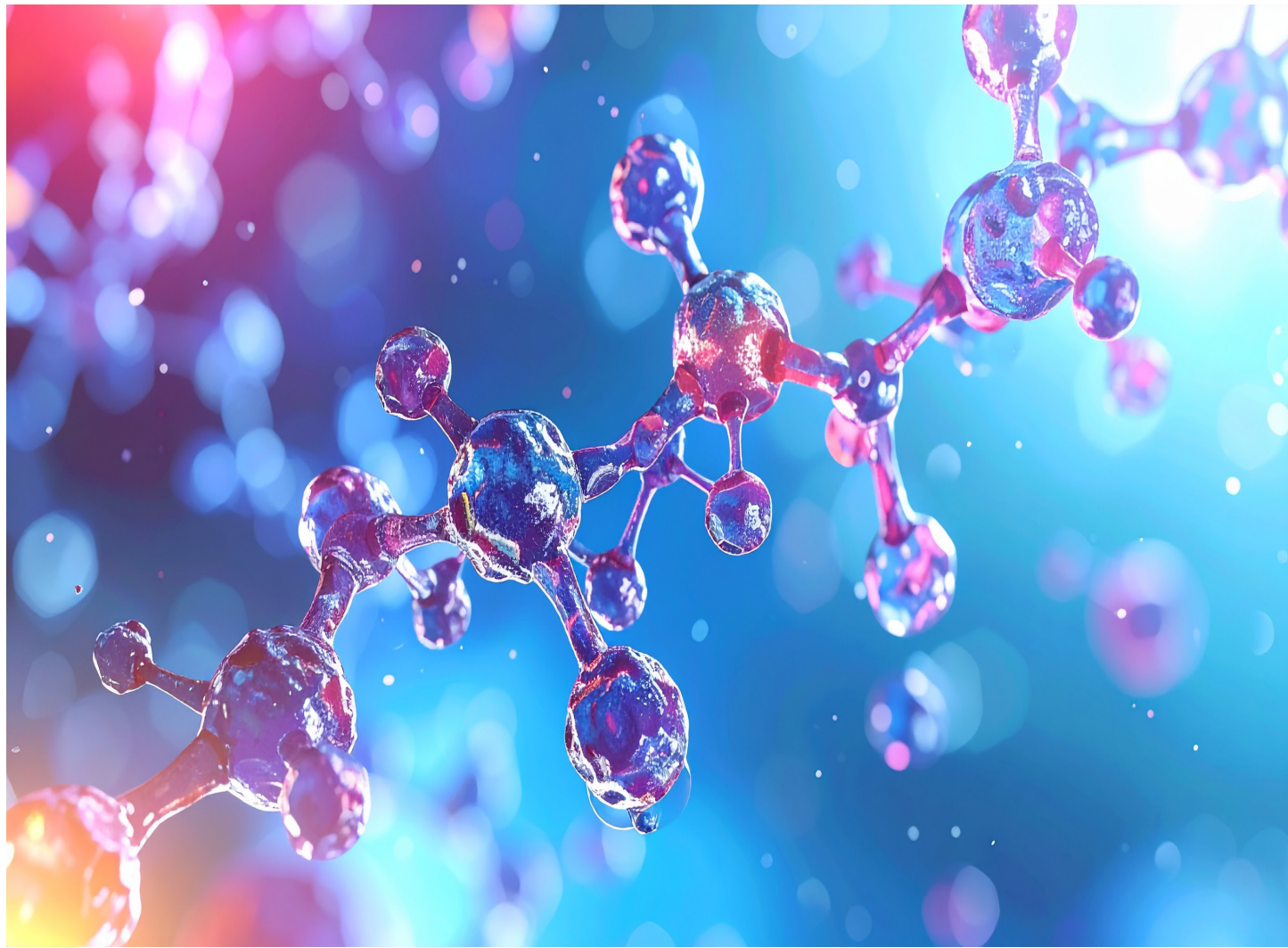
Diabetes Mellitus and Carbohydrate Metabolism  
Atypical Forms of Diabetes

Published: March 10, 2025



Diagnosis and Treatment of Diseases of Lipid and Lipoprotein Metabolism  
Dyslipidemia In Chronic Kidney Disease

Published: April 30, 2025



Pediatric Endocrinology  
Mineralocorticoid Defects in Children

Published: April 20, 2025

### Chapter Sections

#### Pediatric Endocrinology

Editor: Constantine A. Stratakis, MD, D(med)Sci, PhD(hc), Mark A. Sperling, MD, Radhika Muzumdar, MD, S. Faisal Ahmed, MD and Rodolfo Rey, MD, PhD

#### Obesity

Editor: Jonathan Purnell, MD, Blandine Laferrère, MD PhD and Nitin Kapoor, MD, DM, PhD

#### Endocrine Physiology and Disease in Pregnancy and Lactation

Editor: Christopher Kovacs, MD, FRCPC, FACP, FACE

#### Endocrine Testing Protocols

Editor: Christian Koch, MD, PhD

#### Endocrinology of Aging

Editor: Emiliano Corpas, MD, PhD and Marc R. Blackman, MD

#### Disorders that Affect Multiple Organs

Editor: George Chrousos, MD

#### Endocrinology of Female Reproduction

Editor: Elizabeth A. McGee, MD and Wendy Kuohung, MD

#### Thyroid Disease Manager

Editor: Peter Kopp, MD

#### Adrenal Disease and Function

Editor: George Chrousos, MD and Dr. Gregory Kaltsas, MD, FRCP

#### Diseases of Bone and Mineral Metabolism

Editor: Frederick Singer, MD and Alison Boyce, MD

#### Diffuse Hormonal Systems and Endocrine Tumor Syndromes

Editor: Wouter W. de Herder, MD and Hans Hofland, MD

#### Tropical Endocrinology

Editor: Sanjay Kalra, MD, DM, (AIIMS) and Rakesh Sahay, MD, DNB, DM (Endo), FICP, FACE

#### Endocrine Emergencies

Editor: Kenneth Feingold, MD

#### Pituitary Disease and Neuroendocrinology

Editor: Miles Levy, MD and Marta Korbonits, MD

#### Diabetes Mellitus and Carbohydrate Metabolism—Diabete Manager

Editor: Kathleen Dungan, MD, MPH and Ketan Dhatariya, MBBS, MSc, MD, MS, FRCP, PhD

#### Endocrinology of Male Reproduction

Editor: Robert McLachlan, MD, PhD and Bradley Anawalt, MD

#### Diagnosis and Treatment of Diseases of Lipid and Lipoprotein Metabolism in Adults and Children

Editor: Kenneth Feingold, MD, Don P Wilson, MD and Amy Sanghavi Shah MD, MS, NLA



## Diabetes Mellitus and Carbohydrate Metabolism – DiabetesManager

**Editors: Kathleen Dungan, MD, MPH and Ketan Dhatariya, MBBS, MSc, MD, MS, FRCP, PhD**

### **PATHOGENESIS OF DIABETES**

- 1 Etiologic Classification of Diabetes Mellitus**  
Kenneth R. Feingold, MD
- 2 Pathogenesis of Type 1 Diabetes**  
Dana VanBuecken, ARNP, Sandra Lord, MD and Carla J. Greenbaum, MD
- 3 Pathogenesis of Type 2 Diabetes Mellitus**  
Carolina Solis-Herrera, MD, Curtis Triplitt, PharmD, Eugenio Cersosimo, M.D. PhD and Ralph A. DeFronzo, M.D.
- 4 Atypical Forms of Diabetes**  
Carolina Solis-Herrera, MD, Curtis Triplitt, PharmD, Eugenio Cersosimo, M.D. PhD and Ralph A. DeFronzo, M.D.
- 5 Diagnosis and Clinical Management of Monogenic Diabetes**  
Rochelle N Naylor and Louis H. Phillipson, M.D., PhD
- 6 Diabetes Mellitus After Solid Organ Transplantation**  
Phuong-Thu Pham, Mrinalini Sarkar, MD, Phuong Mai Pham and Phuong Chi Pham
- 7 Atypical Forms of Diabetes**  
Carolina Solis-Herrera, MD, Curtis Triplitt, PharmD, Eugenio Cersosimo, M.D. PhD and Ralph A. DeFronzo, M.D.
- 8 Metabolic Syndrome**  
David W. Lam and Derek LeRoith, M.D., PhD.mo, M.D. PhD and Ralph A. DeFronzo, M.D
- 9 Prediabetes**  
Leigh Perreault, MD

### **DIABETES DIAGNOSIS, ASSESSMENT, AND MONITORING**

- 10 Diagnostic Tests For Diabetes Mellitus**  
Melanie Nelson, MS and Kathleen Dungan, MD, MPH
- 11 Monitoring Technologies – Continuous Glucose Monitoring, Mobile Technology, Biomarkers of Glycemic Control**  
Nihaal Reddy, BS, Neha Verma, MD and Kathleen Dungan, MD, MPH
- 12 Assessing Insulin Sensitivity and Resistance in Humans**  
Ranganath Muniyappa, MD, PhD, Ritu Madan, MBBS, MD and Ron T. Varghese, MBBS

### **DIABETES DIAGNOSIS, ASSESSMENT, AND MONITORING**

- 13 Insulin – Pharmacology, Therapeutic Regimens And Principles Of Intensive Insulin Therapy**  
Thomas Donner, MD. and Sudipa Sarkar, MD, MSCI
- 14 Oral and Injectable (Non-Insulin) Pharmacological Agents for the Treatment of Type 2 Diabetes**  
Kenneth R. Feingold, MD
- 15 15 Non-Pharmaceutical Intervention Options for Type 2 Diabetes: Complementary Health Approaches and Integrative Health (Including Natural Products and Mind/Body Practices)**  
Skye A. McKennon, PharmD, BCPS, ACSM-GEI
- 16 The Role of Exercise in Diabetes**  
Salwa J. Zahalka, M.D, Layla A. Abushamat, MD, MPH, Rebecca L. Scalzo, PhD and Jane E. B. Reusch, MD
- 17 Dietary Advice for Individuals with Diabetes**  
Andrew Reynolds, BSc, MSc, PhD, MPH and Joanna Mitri, MD, MS

### **DIABETES TREATMENT – STRATEGIES**

- 18 Changing the Course of Disease in Type 1 Diabetes**  
Dana VanBuecken, ARNP, Sandra Lord, MD and Carla J. Greenbaum, MDD and Ralph A. DeFronzo, M.D.
- 19 The Management of Type 1 Diabetes**  
Savitha Subramanian, MD and David Baidal, MD
- 20 Management Of Type 2 Diabetes: Selecting Amongst Available Pharmacological Agents**  
Emily B. Schroeder, MD, PhD
- 21 Management of Diabetes and Hyperglycemia in Hospitalized Patients**  
Ketan Dhatariya, MBBS, MSc, MD, MS, FRCP, PhD and Guillermo E. Umperrez, MD, CDE, FACE, MACP
- 22 Gestational Diabetes**  
Xiao-Yu Wang, MD, Erin M. Cleary, MD, Stephen F. Thung, MD, Kartik Venkatesh, MD, PhD and Elizabeth O. Buschur, MD, FACE
- 23 Pregestational Diabetes Mellitus**  
Christine P. Field, MD, MPH, Erin M. Cleary, MD, Stephen F. Thung, MD, Kartik Venkatesh, MD, PhD and Elizabeth O. Buschur, MD, FACE
- 24 Islet Transplantation**  
Lorenzo Piemonti, M.D
- 25 Update On Pancreatic Transplantation In The Management Of Diabetes**  
Carlo Lombardo, Gabriella Amorese, Fabio Vistoli, Walter Baronti, Piero Marchetti and Ugo Boggi
- 26 Surgical Prevention and Treatment of Diabetes**  
Alexis Sudlow, MBChB, PhD, Dimitri Pournaras, PhD, FRCS and Paul O'Brien, MD, FRACS
- 27 Diabetes in the Elderly**  
Anna Milanesi, MD PhD and Jane E. Weinreb, M.D
- 28 Diabetes Mellitus in People with Cancer**  
Dr. Nalinie Joharatnam-Hogan, Dr. Thomas J. Carter, Neil Reynolds, Dr. Jan Hoong Ho, Dr. Safwaan Adam and Dr. Ruth Board

### **DIABETIC COMPLICATIONS**

- 29 Hyperglycemic Crises: Diabetic Ketoacidosis And Hyperglycemic Hyperosmolar State**  
Adair R. Gosmanov, M.D., Ph.D., F.A.C.E., Elvira O. Gosmanova, M.D., F.A.S.N. and Abbas E. Kitabchi, M.D., Ph.D., M.A.C.C.E.
- 30 Hypoglycemia During Therapy of Diabetes**  
Hugh A. Davis, MD, Elias K. Spanakis, MD, Philip E. Cryer, MD, Maka Siamashvili, MD and Stephen N. Davis, MBBS
- 31 Hypertension in Diabetes**  
Sowjanya Naha, MD, Darshan Khangura, MD, L. Romayne Kurukulasuriya, MD and James R. Sowers, M.D.
- 32 Platelets, Coagulation, and Antithrombotic Therapy in Diabetes**  
William A. E. Parker, MA, MB, BChir, PhD, MRCP, Robert F. Storey, BSc, BM, DM, FRCP, FESC and Ramzi A. Ajjan, MD, FRCP, MMed.Sci, PhD
- 33 Role Of Glucose And Lipids In The Atherosclerotic Cardiovascular Disease In Patients With Diabetes**  
Kenneth R. Feingold, MD
- 34 Diabetes, Cardiomyopathy, and Heart Failure**  
Ahmet Afşin Oktay, MD, Timir K. Paul, MD, PhD, MPH, Christian A. Koch, MD, PhD and Carl J. Lavie, MD
- 35 Diabetic Retinopathy**  
Jay M. Stewart, M.D., Marco Coassin, M.D., Ph.D. and Daniel M. Schwartz, M.D.

- 36 Diabetic Kidney Disease**  
M. Luiza Caramori, MD, PhD, MSc and Peter Rossing, MD, DMSc
- 37 Diabetic Neuropathies**  
Mohummad Goonoo, MbChB, MRCP and Dinesh Selvarajah, PhD, MRCP
- 38 Diabetic Striatopathy**  
Subhankar Chatterjee, MBBS, MD, Ritwik Ghosh, MBBS, MD and Souvik Dubey, MBBS, MD, DM.
- 39 The Diabetic Foot**  
Andrew JM Boulton, MD, DSc, FICP, FACP, FRCP and Richard W Whitehouse, MD, FRCR
- 40 Sexual Dysfunction in Diabetes**  
Alan W. Shindel, MD, MAS and Tom F. Lue, MD, PhD (hon)
- 41 Skin Manifestations of Diabetes Mellitus**  
Elise Edwards, BA and Gil Yosipovitch, MD
- 42 Sexual Dysfunction in Female Patients with Diabetes**  
Shiv Charan Navriya, Mch, Manali Jain, Om Yadav and Ravi Chandra Chowdaryndra Lord, MD and Carla J. Greenbaum, MD
- 43 Diabetes Mellitus and Infections**  
Keren Zhou, MD and M. Cecilia Lansang, MD, MPH
- 44 Diabetes and Depression**  
Richard IG Holt, MA, MB, BChir, PhD, FRCP
- 45 Gastrointestinal Disorders in Diabetes**  
Chinmay S. Marathe, MBBS, PhD, FRACP, Christopher K. Rayner MBBS, PhD, FRACP, Tongzhi Wu, MD, PhD, Karen L. Jones Dip App Sci (Nuclear Med), PhD and Michael Horowitz, MBBS, PhD, FRACP, FAAHMS, DSc, AO
- 46 Nonalcoholic Fatty Liver Disease: The Overlooked Complication of Type 2 Diabetes**  
Divya Akshintala\*, MD, Radhika Chugh\*, MD, Farah Amer and Kenneth Cusi, MD

### **DIABETES DIAGNOSIS, ASSESSMENT, AND MONITORING**

- 47 Non-Diabetic Hypoglycemia**  
Maria S. Rayas, MD and Marzieh Salehi, MD, MS
- 48 Insulinoma**  
Wouter W. de Herder, MD, PhD and Johannes Hofland, MD, PhD

### **DIABETES AND HYPOGLYCEMIA IN CHILDREN AND ADOLESCENCE**

- 49 Etiology and Pathogenesis of Diabetes Mellitus in Children and Adolescents**  
Mabel Yau, MD, Noel K. Maclaren, MD and Mark A. Sperling, MD
- 50 Treatment of Diabetes mellitus in Children and Adolescents**  
Mabel Yau, MD and Mark A. Sperling, MD
- 51 Type 2 Diabetes In Children and Adolescents – A Focus On Diagnosis and Treatment**  
Orit Pinhas-Hamiel, MD and Philip Zeitler, MD, PhDa, MD and Kathleen Dungan, MD, MPH
- 52 Cardiovascular Risk Reduction In Youth With Diabetes- Opportunities And Challenges**  
Amy S. Shah, MD MS, FNLA and Don P. Wilson, MD, FNLA
- 53 Hypoglycemia in Neonates, Infants, and Children**  
Elizabeth Rosenfeld, MD, MSCE and Paul S. Thornton, MB, BCh, MRCPI, DCH

## Chapter Sections

### **Pediatric Endocrinology**

Editor: Constantine A. Stratakis, MD, D(med)Sci, PhD(hc), Mark A. Sperling, MD, Radhika Muzumdar, MD, S. Faisal Ahmed, MD and Rodolfo Rey, MD, PhD

### **Obesity**

Editor: Jonathan Purnell, MD, Blandine Laferrère, MD PhD and Nitin Kapoor, MD, DM, PhD

### **Endocrine Physiology and Disease in Pregnancy and Lactation**

Editor: Christopher Kovacs, MD, FRCPC, FACP, FACE

### **Endocrine Testing Protocols**

Editor: Christian Koch, MD, PhD

### **Endocrinology of Aging**

Editor: Emiliano Corpas, MD, PhD and Marc R. Blackman, MD

### **Disorders that Affect Multiple Organs**

Editor: George Chrousos, MD

### **Endocrinology of Female Reproduction**

Editor: Elizabeth A. McGee, MD and Wendy Kuohung, MD

### **Thyroid Disease Manager**

Editor: Peter Kopp, MD

### **Adrenal Disease and Function**

Editor: George Chrousos, MD and Dr. Gregory Kaltsas, MD, FRCP

### **Diseases of Bone and Mineral Metabolism**

Editor: Frederick Singer, MD and Alison Boyce, MD

### **Diffuse Hormonal Systems and Endocrine Tumor Syndromes**

Editor: Wouter W. de Herder, MD and Hans Hofland, MD

### **Tropical Endocrinology**

Editor: Sanjay Kalra, MD, DM, (AIIMS) and Rakesh Sahay, MD, DNB, DM (Endo), FICP, FACE

### **Endocrine Emergencies**

Editor: Kenneth Feingold, MD

### **Pituitary Disease and Neuroendocrinology**

Editor: Miles Levy, MD and Marta Korbonits, MD

### **Diabetes Mellitus and Carbohydrate Metabolism–Diabete Manager**

Editor: Kathleen Dungan, MD, MPH and Ketan Dhatariya, MBBS, MSc, MD, MS, FRCP, PhD

### **Endocrinology of Male Reproduction**

Editor: Robert McLachlan, MD, PhD and Bradley Anawalt, MD

### **Diagnosis and Treatment of Diseases of Lipid and Lipoprotein Metabolism in Adults and Children**

Editor: Kenneth Feingold, MD, Don P Wilson, MD and Amy Sanghavi Shah MD, MS, NLA



## Skin Manifestations of Diabetes Mellitus

**Elise Edwards, BA**  
Dr. Phillip Frost Department of Dermatology and Cutaneous Surgery and Miami Itch Center, University of Miami Miller School of Medicine, Miami, FL, USA. eedwards@med.miami.edu

**Gil Yosipovitch, MD**  
Dr. Phillip Frost Department of Dermatology and Cutaneous Surgery and Miami Itch Center, University of Miami Miller School of Medicine, Miami, FL, USA. gyosipovitch@med.miami.edu

Updated: March 21, 2025

### ABSTRACT

Diabetes mellitus is a common and debilitating disease that affects a variety of organs including the skin. Between thirty and seventy percent of patients with diabetes mellitus, both type 1 and type 2, will present with a cutaneous complication of diabetes mellitus at some point during their lifetime. A variety of dermatologic manifestations have been linked with diabetes mellitus; these conditions vary in severity and can be benign, deforming, and even life-threatening. Such skin changes can offer insight into patients’ glycemic control and may be the first sign of metabolic derangement in undiagnosed patients with diabetes. Recognition and management of these conditions is important in maximizing the quality of life and in avoiding serious adverse effects in patients with diabetes mellitus.

### INTRODUCTION

The changes associated with diabetes mellitus can affect multiple organ systems. Between thirty and seventy percent of patients with diabetes mellitus, both type 1 and type 2, will present with a cutaneous complication of diabetes mellitus at some point during their lifetime (1). Dermatologic manifestations of diabetes mellitus have various health implications ranging from those that are aesthetically concerning to those that may be life-threatening. Awareness of cutaneous manifestations of diabetes mellitus can provide insight into the present or prior metabolic status of patients. The recognition of such findings may aid in the diagnosis of diabetes or may be followed as a marker of glycemic control. The text that follows describes the relationship between diabetes mellitus and the skin, more specifically: (1) skin manifestations strongly associated with diabetes, (2) non-specific dermatologic signs and symptoms associated with diabetes, (3) dermatologic diseases associated with diabetes, (4) common skin infections in diabetes, and (5) cutaneous changes associated with diabetes medications.

### SKIN MANIFESTATIONS STRONGLY ASSOCIATED WITH DIABETES MELLITUS

Acanthosis Nigricans

#### EPIDEMIOLOGY

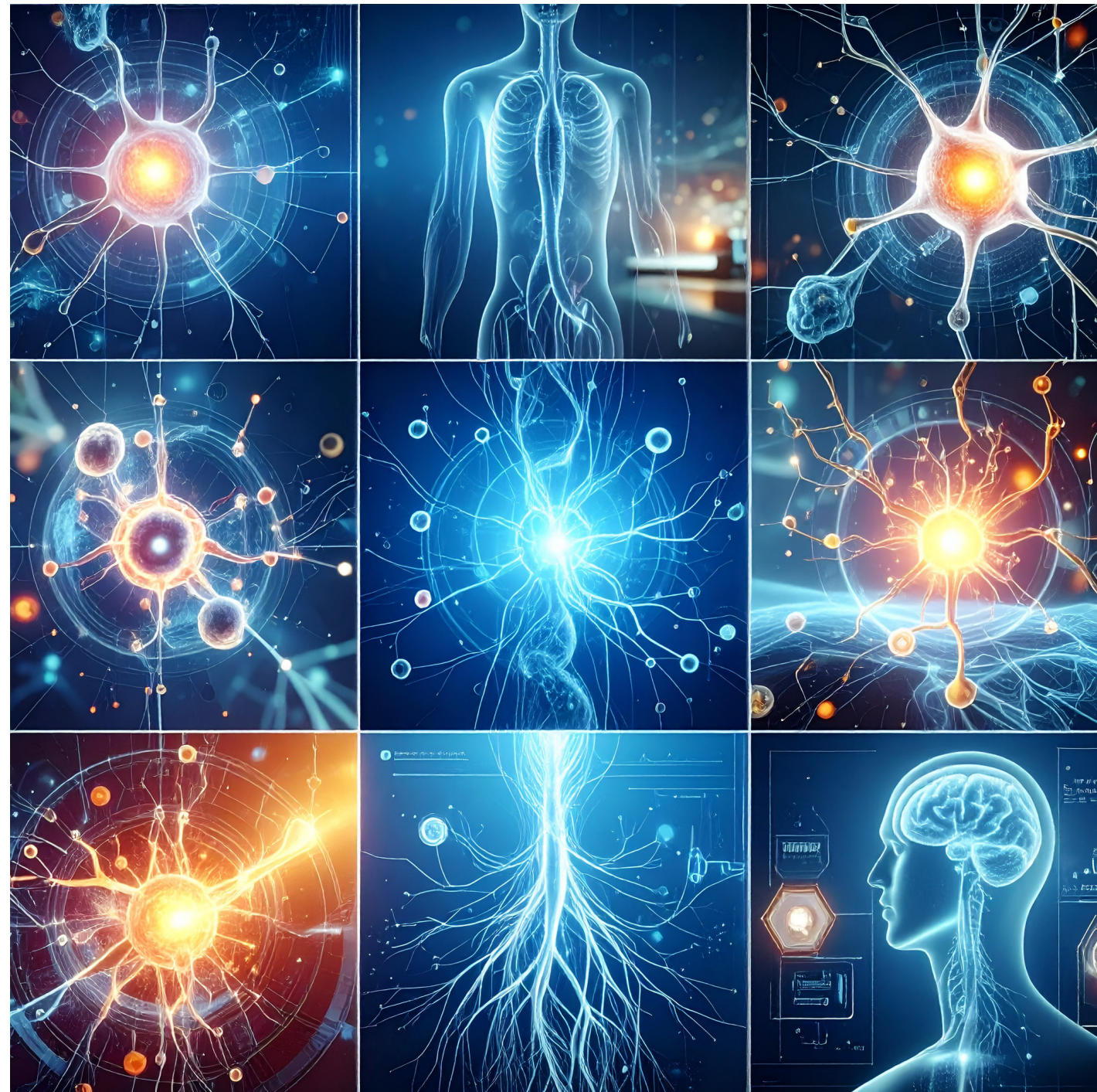
Acanthosis nigricans (AN) is a classic dermatologic manifestation of diabetes mellitus that affects men and women of all ages. AN is more common in type 2 diabetes mellitus (2) and is more prevalent in those with darker skin color. AN occurs more frequently in African Americans, Hispanics, and Native Americans (3). AN is observed in a variety of endocrinopathies associated with resistance to insulin such as acromegaly, Cushing syndrome, obesity, polycystic ovarian syndrome, and thyroid dysfunction. Unrelated to insulin resistance, AN can also be associated with malignancies such as gastric adenocarcinomas and genitourinary cancers, as well as with autoimmune disorders, various medications, and familial disorders (4-4F).

#### PRESENTATION

AN presents chronically as multiple poorly demarcated plaques with grey to dark brown hyperpigmentation and a thickened velvety to verrucous texture (figure 1). Classically, AN has a symmetrical distribution and is located in intertriginous or flexural surfaces such as the back of the neck, axilla, elbows, palmar hands (also known as “tripe palms”), inframammary creases, umbilicus, or groin. Affected areas are asymptomatic; however, extensive involvement may cause discomfort or fetor. Microscopy shows hyperkeratosis and epidermal papillomatosis with acanthosis. The changes in skin pigmentation are primarily a consequence of hyperkeratosis, not changes in melanin. AN can present prior to the clinical diagnosis of diabetes; the presence of AN should prompt evaluation for diabetes mellitus and for other signs of insulin resistance.



Figure 1. Acanthosis nigricans. From Wikipedia.



[← Back to Diabetes Mellitus and Carbohydrate Metabolism—DiabetesManager Section](#)

#### TABLE OF CONTENTS

<b>ABSTRACT</b>
<b>INTRODUCTION</b>
<b>SKIN MANIFESTATIONS STRONGLY ASSOCIATED WITH DIABETES MELLITUS</b>
<b>Acanthosis Nigricans</b>
Epidemiology
Presentation
Pathogenesis
Treatment
<b>Diabetic Dermopathy</b>
Epidemiology
Presentation
Pathogenesis
Treatment
<b>Diabetic Foot Syndrome</b>
Epidemiology
Presentation
Pathogenesis
Treatment
<b>Diabetic Thick Skin</b>
Scleroderma-like skin changes
Epidemiology
Presentation
Pathogenesis
Treatment
Limited joint mobility
Epidemiology
Presentation
Pathogenesis
Treatment
Limited joint mobility
Epidemiology
Presentation
Pathogenesis
Treatment
Scleroderma-like skin changes
Epidemiology
Presentation
Pathogenesis
Treatment
<b>Necrobiosis Lipoidica</b>
Epidemiology
Presentation
Pathogenesis
Treatment
<b>Bullosis Diabeticorum</b>
Epidemiology
Presentation
Pathogenesis
Treatment
<b>Nonspecific Dermatologic Signs and Symptoms</b>
Ichthyosiform changes of the shins
Xerosis
Acquired perforating dermatosis
Epidemiology
Presentation
Pathogenesis
Treatment
Eruptive xanthomas
Epidemiology
Presentation

[more >](#)



[Download PDF](#)

## Chapter Sections

### Pediatric Endocrinology

Editor: Constantine A. Stratakis, MD, D(med)Sci, PhD(hc), Mark A. Sperling, MD, Radhika Muzumdar, MD, S. Faisal Ahmed, MD and Rodolfo Rey, MD, PhD

### Obesity

Editor: Jonathan Purnell, MD, Blandine Laferrère, MD PhD and Nitin Kapoor, MD, DM, PhD

### Endocrine Physiology and Disease in Pregnancy and Lactation

Editor: Christopher Kovacs, MD, FRCP, FACP, FACE

### Endocrine Testing Protocols

Editor: Christian Koch, MD, PhD

### Endocrinology of Aging

Editor: Emiliano Corpas, MD, PhD and Marc R. Blackman, MD

### Disorders that Affect Multiple Organs

Editor: George Chrousos, MD

### Endocrinology of Female Reproduction

Editor: Elizabeth A. McGee, MD and Wendy Kuohung, MD

### Thyroid Disease Manager

Editor: Peter Kopp, MD

### Adrenal Disease and Function

Editor: George Chrousos, MD and Dr. Gregory Kaltsas, MD, FRCP

### Diseases of Bone and Mineral Metabolism

Editor: Frederick Singer, MD and Alison Boyce, MD

### Diffuse Hormonal Systems and Endocrine Tumor Syndromes

Editor: Wouter W. de Herder, MD and Hans Hofland, MD

### Tropical Endocrinology

Editor: Sanjay Kalra, MD, DM, (AIIMS) and Rakesh Sahay, MD, DNB, DM (Endo), FICP, FACE

### Endocrine Emergencies

Editor: Kenneth Feingold, MD

### Pituitary Disease and Neuroendocrinology

Editor: Miles Levy, MD and Marta Korbonits, MD

### Diabetes Mellitus and Carbohydrate Metabolism—Diabete Manager

Editor: Kathleen Dungan, MD, MPH and Ketan Dhatariya, MBBS, MSc, MD, MS, FRCP, PhD

### Endocrinology of Male Reproduction

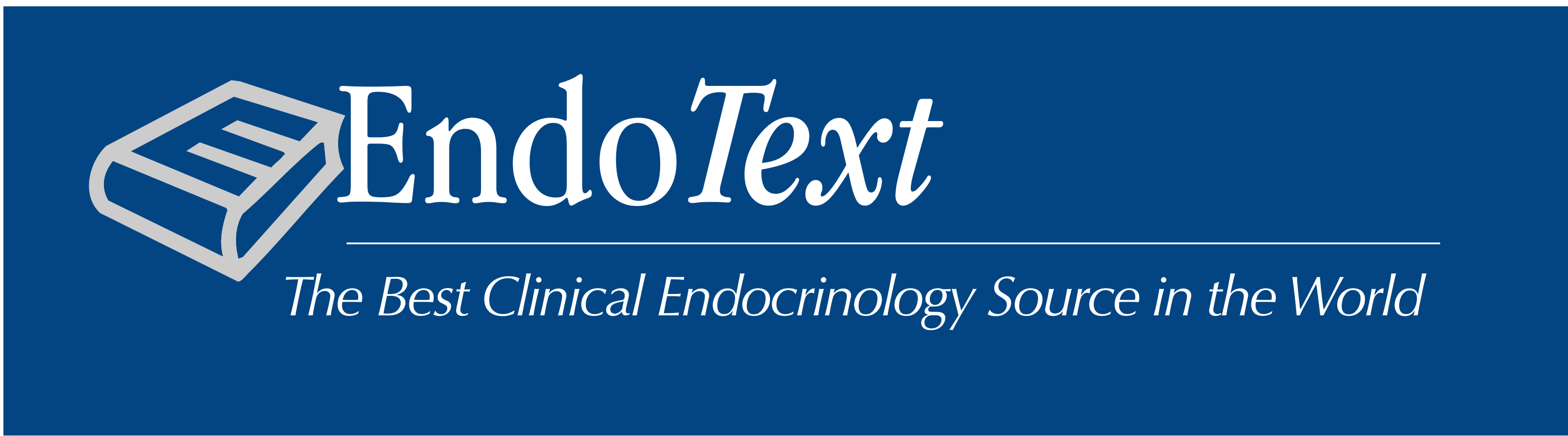
Editor: Robert McLachlan, MD, PhD and Bradley Anawalt, MD

### Diagnosis and Treatment of Diseases of Lipid and Lipoprotein Metabolism in Adults and Children

Editor: Kenneth Feingold, MD, Don P Wilson, MD and Amy Sanghavi Shah MD, MS, NLA



UPDATED LOGO



UPDATED LOGO