

Contents

Part I Bone Diseases

1	Bone Disease Associated with Diabetes Mellitus: Particularly Focusing on Its Contribution to the Development of Atherosclerosis	3
	Masaaki Inaba	
2	Various Kinds of Bone Disease in Diabetes: Rheumatic Conditions	11
	Hitoshi Goto	
3	Fracture Risk in Diabetes	27
	Masahiro Yamamoto and Toshitsugu Sugimoto	
4	Mechanism for the Development of Bone Disease in Diabetes: Abnormal Glucose Metabolism	43
	Ryo Okazaki and Daisuke Inoue	
5	Mechanism for the Development of Bone Disease in Diabetes: Increased Oxidative Stress and Advanced Glycation End Products	63
	Sho-ichi Yamagishi	
6	Mechanism for the Development of Bone Disease in Diabetes: Renal Bone Disease	81
	Yasuo Imanishi and Masaaki Inaba	
7	Impaired Parathyroid Function and Bone Formation: A Risk for Development of Adynamic Bone Disease to Enhance Vascular Calcification	99
	Shinsuke Yamada	

8	Bone as an Endocrine Organ: Diabetic Bone Disease as a Cause of Endocrine Disorder via Osteocalcin, FGF23 Secreted from Osteocyte/Osteoblast	113
	Koichiro Yoda	

Part II Muscle Diseases

9	Overview	127
	Nobuharu L. Fujii	
10	Mechanism of Skeletal Muscle Contraction: Intracellular Signaling in Skeletal Muscle Contraction	139
	Yasuko Manabe	
11	Mechanism of Skeletal Muscle Contraction: Role of Mechanical Muscle Contraction in Glucose Homeostasis	155
	Yasuro Furuichi	
12	Ectopic Fat Accumulation and Glucose Homeostasis: Ectopic Fat Accumulation in Muscle	171
	Katsuhito Mori, Tomoaki Morioka, Koka Motoyama, and Masanori Emoto	
13	Ectopic Fat Accumulation in the Liver and Glucose Homeostasis . . .	185
	Toshinari Takamura, Hirofumi Misu, and Shuichi Kaneko	
14	Ectopic Fat Accumulation and Glucose Homeostasis: Role of Leptin in Glucose and Lipid Metabolism and Mass Maintenance in Skeletal Muscle	201
	Tomoaki Morioka, Katsuhito Mori, Koka Motoyama, and Masanori Emoto	
15	Evaluation of Insulin Resistance in Diabetes: Standard Protocol for a Euglycemic-Hyperinsulinemic Clamp Using an Artificial Pancreas	215
	Masanori Emoto, Tomoaki Morioka, Hisayo Yokoyama, Yuko Sawada-Yamazaki, Koka Motoyama, Katsuhito Mori, Kiyoshi Maekawa, Yoshiki Nishizawa, and Masaaki Inaba	
16	Sarcopenia in Diabetes Mellitus	237
	Ken Sugimoto, Chung-Chi Wang, and Hiromi Rakugi	
17	Body Temperature Regulation During Exercise Training	253
	Kazunobu Okazaki	
18	Clinical Application of Exercise Therapy in Diabetes	269
	Masayuki Hosoi, Yosuke Yakushiji, and Shiro Tanaka	
19	Clinical Application of Exercise Therapy in Diabetes with Chronic Kidney Disease	279
	Hisayo Yokoyama	

Musculoskeletal Disease Associated with Diabetes
Mellitus

Inaba, M. (Ed.)

2016, VIII, 296 p. 67 illus., 29 illus. in color., Hardcover

ISBN: 978-4-431-55719-7