1. Record Nr. UNINA9910817439903321

Titolo	Bioactive food as dietary interventions for diabetes / / edited by Ronald Ross Watson and Victor R. Preedy
Pubbl/distr/stampa	Boston, : Elsevier, 2013
ISBN	1-283-71647-X 0-12-397762-2
Edizione	[1st ed.]
Descrizione fisica	1 online resource (659 p.)
Collana	Bioactive foods in chronic disease states
Altri autori (Persone)	WatsonRonald R (Ronald Ross) PreedyVictor R
Disciplina	613.2 616.4620654
Soggetti	Diabetes - Nutritional aspects Bioactive compounds
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Front Cover; Bioactive Food as Dietary Interventions for Diabetes; Copyright; Contents; Preface: Diabetes Food; Contributors; Chapter 1: Role of Oxidative Stress in the Pathogenesis of Insulin Resistance and Type 2 Diabetes; 1. Introduction; 2. Systemic Glucose Homeostasis is a Multiorgan Process; 3. Glucose Dysregulation: The Pathogenesis of Insulin Resistance; 4. Origins of Oxidative Stress in Various Cell Types; 4.1. Renin-Angiotensin System and NADPH Oxidase; 4.2. Nutrient Excess and Mitochondrial Overactivity; 4.3. Hyperglycemia; 4.4. Dyslipidemia: Role of Excess FFAs 4.5. Endoplasmic Reticulum Stress4.6. Additional Role of Nitrosative Stress; 5. Mechanisms of Oxidative Stress-Associated Insulin Resistance; 5.1. Oxidative Stress and Defects in Insulin Signaling: Skeletal Muscle and Liver; 5.2. Oxidative Stress and Defects in Insulin Secretion: Pancreatic Beta-Cells; 5.3. Oxidative Stress and Defects in Vascular Function; 6. Utility of Select Antioxidants as Interventions in Oxidative Stress-Associated Insulin Resistance; 6.1. General Concepts of Antioxidant Properties; 6.2. ALA and Its Effects on Glucoregulation; 7. Conclusion and Perspectives AcknowledgmentsReferences; Relevant Websites; Chapter 2: Diabetes

and the Role of Dietary Supplements; 1. Introduction; 2. Alpha-Lipoic Acid; 3. Omega-3 Oils; 4. Chromium; 5. Gymnemma Sylvestre; 6. Fenugreek; 7. Vitamin D; 8. Conclusion; Glossary; References; Chapter 3: Government Regulation of Dietary Supplements and Foods: Role in Diabetes; 1. Introduction; 2. Nongovernmental Recommendations for Diabetics; 3. NHPs for Diabetics; 4. Food Label Information and Nutrition - Health Claims; 5. Nutrition Recommendations for Diabetics; 6. Conclusions; References
Chapter 4: Diabetes as an Immune Dysfunction Syndrome1. Diagnostic Laboratory Testing; 1.1. First-Line Assessments; 1.1.1. Glucose and insulin levels; 1.1.2. HbA1c; 1.2. Additional Testing; 1.2.1. C-octanoic acid breath test; 1.2.2. C-peptide; 1.2.3. C-reactive protein (hsCRP); 1.2.4. Cortisol and DHEA; 1.2.5. Lymphocyte Response Assay (LRA) tests; 1.2.6. Fibrinogen; 1.2.7. Homocysteine; 1.2.8. Insulin-like growth factor binding protein-1; 1.2.9. Intestinal hyperpermeability test; 1.2.10. Iron and ferritin; 1.2.11. Oxidized LDL (oxLDL); 1.2.12. Metabolic acidosis risk
1.2.13. Sleep survey or evaluation2. Key Clinical Issues; 2.1. Energy Metabolism; 2.1.1. Glucose; 2.1.2. Fructose; 2.1.3. Protein metabolism in diabetes; 2.1.4. Fat metabolism; 2.2. Autonomic Neuropathy; 2.3. Immune Dysregulation and Increased Permeability; 2.4. Maldigestion; 2.4.1. Reflux; 2.4.2. Dyspepsia; 2.4.3. Dysbiosis; 2.4.4. Malabsorption; 2.4.5. Delayed gastric emptying; 2.5. Autacoids: Profound Biochemical Effects; 3. Diagnoses and Comorbidities; 3.1. Prevalent Comorbidities; 3.1.1. Vascular sequella and neurodegeneration; 3.1.2. Hyperlipidemia and hypertension
3.1.3. Kidney disease

Sommario/riassunto

The role of diet in the prevention, control and treatment of diabetes continues to provide significant opportunity for non-pharmaceutical interventions for many of the over 20 million people who live with this disease. Looking beyond traditional dietary controls may lead to more effective, cost efficient, and flexible options for many patients. Bioactive Food as Dietary Interventions for Diabetes is the only available scientific resource focused on exploring the latest advances in bioactive food research, and the potential benefit of bioactive food choice on the diabetic condi