1. Record Nr. UNINA9910144678003321

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Titolo	Insulin resistance [[electronic resource]] : a clinical handbook / / Andrew J. Krentz
Pubbl/distr/stampa	Oxford ; ; Malden, Mass., : Blackwell Science, c2002
ISBN	1-282-12300-9 9786612123009 0-470-69892-6 0-470-69838-1
Descrizione fisica	1 online resource (202 p.)
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Soggetti	Insulin resistance
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	Insulin Resistance A Clinical Handbook; Contents; Preface; About the author; Acknowledgements; 1 Pathophysiology of insulin resistance; 1.1 Introduction; 1.2 Normal physiology; 1.2.1 Hormonal regulation of metabolism; 1.2.2 The insulin receptor; 1.2.3 Post-binding events; 1.2.4 Glucose metabolism; 1.2.5 Lipid metabolism; 1.2.6 Protein metabolism; 1.2.7 Ion transport; 1.3 The concept of insulin resistance; 1.3.1 Early studies of insulin action; 1.3.2 Radioimmunoassays for insulin; 1.4 Definitions of insulin resistance; 1.5 Assessment of insulin action in vivo 1.5.1 Fasting insulin concentration1.5.2 Dynamic techniques-endogenous insulin; 1.5.3 Dynamic techniques-exogenous insulin; 1.5.4 Mathematical modelling techniques; 1.5.5 Insulin suppression test; 1.5.6 Hyperinsulinaemic euglycaemic clamp technique; 1.5.7 Complementary techniques; 1.6 Mechanisms of insulin resistance; 1.6.1 Genetic defects; 1.6.2 Acquired forms of insulin resistance; 1.6.3 Fetal origins hypothesis; 1.7 Further reading; 2 Insulin resistance in clinical medicine; 2.1 Clinical features; 2.2 Factors influencing insulin sensitivity; 2.2.1 Normal variation in insulin action 2.2.2 Sex2.2.3 Age; 2.2.4 Physical exercise; 2.2.5 Tobacco; 2.2.6 Alcohol; 2.3 Physiological states of insulin resistance; 2.3.1 Puberty; 2.3.2 Pregnancy; 2.3.3 Menstrual cycle; 2.3.4 The menopause; 2.4

Severe insulin-resistance syndromes; 2.5 Insulin resistance and cardiovascular risk; 2.5.1 Syndrome X; 2.5.2 Obesity; 2.5.3 Regional adiposity; 2.5.4 Impaired glucose tolerance; 2.5.5 Type 2 diabetes mellitus; 2.5.6 Essential hypertension; 2.5.7 Dyslipidaemia; 2.5.8 Endothelial dysfunction; 2.5.9 Microalbuminuria; 2.5.10 Hyperuricaemia; 2.5.11 Impaired fibrinolysis
2.5.12 Polycystic ovary syndrome2.5.13 Non-alcoholic steatohepatitis; 2.6 Other disorders associated with insulin resistance; 2.6.1 Counter-regulatory hormone secretion; 2.6.2 Endocrinopathies; 2.6.3 Chronic renal failure; 2.6.4 Hepatic cirrhosis; 2.6.5 Cardiac failure; 2.7 Miscellaneous inherited disorders; 2.8 Drug-induced insulin resistance; 2.9 Further reading; 3 Management of insulin resistance and associated conditions; 3.1 Non-pharmacological measures; 3.1.1 Medical nutrition therapy; 3.1.2 Physical activity; 3.1.3 Alcohol; 3.1.4 Tobacco; 3.2 Drugs for type 2 diabetes; 3.2.1 Biguanides
3.2.2 Thiazolidinediones3.2.3 Sulphonylureas; 3.2.4 Meglitinide analogues; 3.2.5 -Glucosidase inhibitors; 3.2.6 Insulin; 3.3 Antiobesity drugs; 3.3.1 Sibutramine; 3.3.2 Orlistat; 3.3.3 Leptin; 3.2.4 3-adrenocepter agonists; 3.4 Lipid-modifying drugs; 3.4.1 Fibric acid derivatives; 3.4.2 Acipimox; 3.4.3 Statins; 3.4.4 Omega-3 fatty acids; 3.5 Antihypertensive drugs; 3.2.4 -adrenocepter agonists; 3.5.2 Calcium-channel blockers; 3.5.3 Angiotensin converting enzyme inhibitors; 3.5.4 Angiotensin II receptor antagonists; 3.5.5 1-Receptor blockers; 3.5.6 Selective imidazoline receptor agonists
3.5.7 Aspirin

Sommario/riassunto

Insulin resistance, defined as a reduced biological action of insulin, has emerged as a major factor in the development and progression of a number of common non-communicable diseases in man. The role of insulin resistance in the aetiology of type 2 diabetes is particularly well-established. However, insulin resistance has also come to be regarded as a key component of a broader syndrome of common metabolic defects that conspire to increase the risk of atherosclerotic coronary heart disease. The ramifications of insulin resistance now embrace many different medical specialties. The obje

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Autore	Zhu Jun-Wei
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ISBN	981-19-6321-5
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (191 pages)
Collana	Mathematics and Statistics Series
Disciplina	629.8312
Soggetti	Automatic control Robotics Automation Telecommunication Computer networks Control and Systems Theory Control, Robotics, Automation Communications Engineering, Networks Computer Communication Networks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references (pages 177-186) and index.
Nota di contenuto	Chapter 1. Introduction -- Chapter 2. Design of nominal intermediate estimator -- Chapter 3. Robust Fault Estimation (FE) for a Network of Dynamical Systems -- Chapter 4. FE based Tracking Control for Multi-Agent Systems (MASs) with undirected graph -- Chapter 5. FE based Tracking Control for MASs under directed graph -- Chapter 6. FE based Tracking Control for MASs with mismatched disturbances -- Chapter 7. Applications on Multi-Axis Motion Control Systems -- Chapter 8. Conclusions and Future Research Directions.
Sommario/riassunto	This book is concerned with the fault estimation problem for network systems. Firstly, to improve the existing adaptive fault estimation observer, a novel so-called intermediate estimator is proposed to identify the actuator or sensor faults in dynamic control systems with high accuracy and convergence speed. On this basis, by exploiting the properties of network systems such as multi-agent systems and large-

scale interconnected systems, this book introduces the concept of distributed intermediate estimator; faults in different nodes can be estimated simultaneously; meanwhile, satisfactory consensus performances can be obtained via compensation based protocols. Finally, the characteristics of the new fault estimation methodology are verified and discussed by a series of experimental results on networked multi-axis motion control systems. This book can be used as a reference book for researcher and designer in the field of fault diagnosis and fault-tolerant control and can also be usedas a reference book for senior undergraduate and graduate students in colleges and universities. .