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Nota di contenuto	Insulin Resistance; Contents; Preface; List of Contributors; 1 The Insulin Receptor and Downstream Signalling; 1.1 Introduction; 1.2 Insulin receptor structure and function; 1.3 Insulin receptor substrates; 1.4 Downstream signalling pathways; 1.5 The basis of insulin's signalling specificity; 1.6 Conclusion; References; 2 Insulin-mediated Regulation of Glucose Metabolism; 2.1 Introduction; 2.2 Insulin as a master regulator of whole body glucose disposal; 2.3 Insulin-mediated regulation of glucose metabolic pathways 2.4 Glucose uptake into skeletal muscle - the rate-limiting step in glucose metabolismAcknowledgements; References; 3 Insulin Action on Lipid Metabolism; 3.1 Introduction: does insulin affect lipid metabolism?; 3.2 Molecular mechanisms by which insulin regulates lipid metabolism; 3.3 Insulin and lipolysis; 3.4 Insulin, lipoprotein lipase and cellular fatty acid uptake; 3.5 Co-ordinated regulation of fatty acid synthesis and ketogenesis; 3.6 Insulin and cholesterol synthesis; 3.7 Insulin effects on lipoprotein metabolism;

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regions involved in counter-regulation; 7.4 Glucosensing neurons; 7.5

Central control of peripheral organs involved in glucoregulation

7.6 Additional afferent signals to the CNS regulating peripheral glucose

metabolism

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## Sommario/riassunto

Diabetes is now one of the major causes of morbidity worldwide. In many cases, the onset of diabetes is progressive, developing via a condition of insulin resistance. This book considers the development of this condition, its consequences and clinical and therapeutic aspects. The book reviews the normal biology of insulin action on glucose, lipids and proteins. It considers the pathological basis for insulin resistance in animal models and humans, and discusses the influence of heredity, dietary factors and exercise. Clinical consequences including dyslipidaemia, hypertension and polycy

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