Preface

Overweight, defined as body-mass index (BMI) greater than 25, and obesity, defined as BMI greater than 30, are characterized by excessive fat accumulation which poses adverse risks to health. Worldwide, there are more than one billion overweight and 300 million obese adults. Obesity is a major risk factor for diabetes, cardiovascular disease, sleep apnea, non-alcoholic fatty liver disease, arthritis, cancer and other diseases, and has been associated with enormous health costs, premature death, reduction in the quality of life and disability. The increasing global incidence of child obesity is also a major concern. The obesity epidemic is not just a problem for industrialized societies. Indeed, obesity rates have risen three times or more over the past two decades in some developing countries. Although the growing obesity epidemic undoubtedly reflects profound changes in diet and lifestyle over recent decades, genetic factors are important in determining a person’s susceptibility to weight gain and adverse health consequences of obesity.

The goal of this book is to highlight the pathophysiology of obesity and associated diseases. While a completely comprehensive discussion of the metabolic basis of obesity is beyond the scope of this book, we present in-depth reviews of a wide range of topics, including energy homeostasis and intermediary metabolism, adipocyte biology, central neuronal pathways, adipokines, cytokines, classical hormones, abnormal glucose and lipid metabolism, and dysregulation of major organs, with an emphasis on human obesity. We believe these topics will be interesting and provide critical information on the metabolic basis of obesity to researchers, clinicians, students, and the public at large.

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