

# Preface

Growth entails the development of parts or all of a living being, from conception to maturity. The pattern of growth is not uniform and each body region has its own distinct growth characteristics. This is clearly illustrated by the typical growth spurts in boys and girls, driven by the endocrine changes accompanying puberty. However, patterns of growth are perturbed when there are changes in metabolism or physiology as well as adverse conditions such as disease, malnutrition, and overt endocrine imbalance. In some populations the general prevailing patterns of growth and development are quite distant from the normal ranges documented by international organizations. Superficial interpretation may indicate that such apparent adverse patterns may be environmental in origin, but genetic predisposition may also impact on growth. Thus a significant number of factors are responsible for the differences between how children should grow and how children actually grow into mature adults. The human body has an inherent capacity to compensate for abnormalities by “catch-up growth” to predetermined levels. However, this realignment to normality does not occur in every individual, and perturbations in growth may have long-term or life-long implications. Because of these implications, abnormalities in organ, tissue, or whole-body development need to be characterized, measured, defined, and treated. There is also cross-transferable information to be applied from one country or disease to another country or disease. In other words, information on growth is uniquely applicable across many spheres. However, specific information about, characteristics of, and methods for monitoring and describing normal and abnormal growth must be highly detailed, preferably in a cohesive reference. *Handbook of Growth and Growth Monitoring in Health and Disease* was designed to address these needs. All facets and features of growth are described in 15 sections.

The chapters are written by national or international experts who are specialists in their field. Each chapter is self-contained. Sometimes experts in one field are novices in another. To bridge this knowledge divide the authors have incorporated sections on applications to other areas of health and disease, practical methods and techniques, guidelines, and key points or features. The summary points presented in bullet form are designed for easier intellectual digestion. This book is for clinical scientists, researchers, doctors, nurses, physiologists, nutritionists and dietitians, public health scientists, epidemiologists, health workers and practitioners, exercise physiologists, physiotherapists, university faculty, undergraduates, and graduates. It is also designed for policy makers and health economists.

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