

5. **Infants and children**

5.1 **Introduction**

A number of reports have addressed the appropriate use and interpretation of anthropometry in infancy and childhood (1-4). This section is intended to update these reports and to discuss topics that they did not cover fully.

The use and interpretation of growth measurements may differ significantly according to whether they concern the individual (for clinical purposes) or an entire population (for public health purposes). The structure of this section reflects this important difference. Emphasis is placed on the assessment of physical status by measurement of height, weight, and mid-upper arm circumference. Other anthropometric measurements may be of relevance in specific clinical and research settings, particularly in developed areas, but these are not covered in detail. Greater emphasis is also given to problems of less developed areas, to children under 5 years old, to problems of undernutrition (rather than overnutrition), and to public health considerations rather than clinical applications, all of which are relevant to most of the world's children, particularly those at greatest health and nutritional risks.

The proper assessment and interpretation of physical status are of little value without appropriate action to improve the health and nutritional status of the individual child or of the population of interest. This section of the report therefore focuses on the applications and interpretation of anthropometry, although its scope does not include the detailed prescription or subsequent evaluation of intervention activities. It also addresses the growth patterns of infants fed according to current WHO recommendations and the relevance of such patterns for the development of growth curves. Increased recognition of the immediate benefits of breast-feeding for health, nutrition, and child-spacing has led to widespread efforts to promote exclusive breast-feeding from birth to 4-6 months of age; thereafter, children should continue to be breast-fed, while receiving appropriate and adequate complementary foods, up to 2 years of age or beyond (5).

Anthropometric indices are used as the main criteria for assessing the adequacy of diet and growth in infancy. Application of these criteria, however, has become difficult as the scientific and clinical communities have realized that growth patterns observed over the past 30-50 years, among presumably normal infants, vary according to diet (6). This is especially problematic when failure to understand these variations may lead to inappropriate decisions on supplementary feeding of fully breast-fed infants – a dangerous change where the new foods may be contaminated or of poor nutritional quality. The outcomes of premature weaning are an increased risk of infectious illness, the replacement of human milk by foods of inferior nutritional value, and reduced