In 1993 the World Health Organization (WHO) undertook a comprehensive review of the uses and interpretation of anthropometric references. The review concluded that the NCHS/WHO growth reference, which had been recommended for international use since the late 1970s, did not adequately represent early childhood growth and that new growth curves were necessary. The World Health Assembly endorsed this recommendation in 1994. The WHO Multicentre Growth Reference Study (MGRS) was undertaken in response to that endorsement and implemented between 1997 and 2003 to generate new curves for assessing the growth and development of children the world over. The MGRS collected primary growth data and related information from 8440 healthy breastfed infants and young children from diverse ethnic backgrounds and cultural settings (Brazil, Ghana, India, Norway, Oman and USA). The growth standards developed based on these data and presented in this report provide a technically robust tool that represents the best description of physiological growth for children under five years of age. The standards depict normal early childhood growth under optimal environmental conditions and can be used to assess children everywhere, regardless of ethnicity, socioeconomic status and type of feeding.