

Approach to tall stature: When height signals disease

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Abstract

Growth is a fundamental yet complex and tightly regulated process essential for normal childhood health and development. Linear growth and attained adult height are predominantly determined by genetic factors and influenced by hormonal, nutritional, and psychosocial factors. Although tall stature is often a benign familial or constitutional variant, it may occasionally indicate an underlying endocrine, genetic, chromosomal, or systemic disorder. The evaluation of tall stature aims to distinguish normal growth variants from pathological overgrowth and identify conditions associated with significant morbidity. Extreme tall stature, generally defined as height exceeding 2–3 standard deviations above the population mean, is uncommon in children and adolescents. The differential diagnosis includes familial tall stature, constitutional advancement of growth, growth hormone excess, hyperthyroidism, and genetic or chromosomal overgrowth syndromes. A systematic evaluation should include a detailed personal, developmental, and three-generation family history, accurate anthropometric measurements, growth velocity, bone age, and assessment of body proportions, including arm span and sitting height. Physical examination should focus on dysmorphic features, skeletal disproportion, pubertal status, and cardiovascular abnormalities. Targeted biochemical, hormonal, genetic, and imaging investigations should be guided by clinical findings. Recognizing features that distinguish pathological tall stature from normal variants is crucial for early diagnosis and appropriate multidisciplinary management, potentially preventing serious complications such as cardiovascular disease and aortic dissection. [*J Assoc Clin Endocrinol Diabetol Bangladesh*, 2026;5(Suppl 1): S14]

Keywords: Tall stature, Growth disorders, Overgrowth syndromes

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