



## Height and BMI Trends of 2019

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### Why in News

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A recent study published in **The Lancet**, provides new estimates for **height and Body Mass Index (BMI) trends in 2019** across 200 countries after analysing data from 2,181 studies.

Height and BMI are **anthropometric measures of the quality of nutrition and healthiness** of the living environment during childhood and adolescence and are highly **predictive of health and developmental outcomes** throughout life.

**Anthropometry** is the science of measuring the size and proportions of the human body.

### Key Points

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- Both height and BMI have **increased from 1985 to 2019** although **there is still a great deal of potential for height** while curbing any future rise in obesity.
- The height and BMI trajectories over age and time of school-aged children are **highly variable across countries**, which indicates **heterogeneous nutritional quality and lifelong health advantages and risks**.
- **Body Mass Index:**
  - It is measured as the weight in kilograms divided by the square of the height in metres.

**World Health Organisation (WHO) guidelines define a normal BMI range as 18.5 to 24.9, overweight as 25 or higher, and obesity as 30 or higher.**
  - **India ranks third and fifth from the bottom respectively** among countries where **19-year-old girls and boys have a low BMI**.
  - The **mean BMI of 19-year-old boys** is **20.1** in India, compared to a high of 29.6 in the Cook Islands and a low of 19.2 in Ethiopia.
  - The **mean BMI for 19-year-old Indian girls** is again **20.1**, compared to a high of 29.0 in Tonga and a low of 19.6 in Timor-Leste.

- **Height:**
  - The **20 cm or higher difference between countries with the tallest and shortest mean height represents** approximately **8 years of growth gap for girls** and approximately **6 years for boys**.  
For example, 19-year-old girls in India have the same mean height as 12-year-old Dutch girls.
  - The mean **height of Indian 19-year-olds** is **166.5 cm for boys** and **155.2 cm for girls**, well below the high of Netherlands boys (183.8 cm) and girls (170 cm).
- **Analysis of India's Situation:**
  - In **developing countries like India**, there is a **dual burden of overnutrition as well as undernutrition**.
  - The **prevalence of overweight and obesity** among adolescents of both **Indian girls and boys is lower** when compared to children of developed nations.
  - There can be **several reasons** for this like variations in the epigenetic, dietary intakes, familial, psychosocial, parental education, occupations, income, etc.
    - **Epigenetics** literally means 'above' or 'on top of' genetics. It refers to **external modifications to the Deoxyribonucleic acid (DNA)** that turn genes 'on' or 'off'.
    - These modifications **do not change the DNA sequence**, but instead, they **affect how cells 'read' genes**.
- **Suggestions:**
  - There is a **need for regular diet and nutrition surveys in India** to avert the increase of overweight and obesity among children and adolescents.  
**Overweight and obesity are mostly carried over to adult age** and are **causes for many metabolic disorders** like insulin resistance, diabetes, hypertension, CVDs, stroke, etc.
  - **Programmes targeted towards the poor** from birth through school years are needed.

**Source: IE**