



## South Asians at Higher Health Risks

According to a study published in Nature Scientific Reports, South Asians, even those who move to other countries, are at a **higher risk of diabetes than people of most other ethnicities, the reason for this is their relatively low lean mass.**

### Findings

- Mesolithic hunter-gatherer ancestors of South Asians were much taller, but low lean mass has characterised South Asians for at least 11,000 years, putting them at **higher risk of type-2 diabetes and other non-communicable diseases (NCDs)** such as heart disease, according to the study which analysed 197 archaeological and recent South Asian adult skeletons.
- Height decreased by 8.5cm in men and 7.7cm in women when South Asians transitioned from hunting and gathering to farming around 9,000 years ago, but their **lean mass (organ and muscle mass) has remained unchanged** over the past 11,000 years, the study said.
- The study suggests that while height is determined by nutritional factors, physique (bone breadth and lean mass) reflects ecological pressures.
- The ancient origins of low lean mass in South Asians would be most consistent with long-term adaptation to ecological pressures, rather than more recent dietary change or the impact of 19<sup>th</sup>-20<sup>th</sup> century famines exacerbated by British colonial policy.
- Low lean mass is present at birth in South Asian babies compared with European babies. Even after South Asian families migrate to other parts of the world, such as the UK, their children, after several generations still have low lean mass compared with children of European ancestry.
- People of South Asian ancestry are at a higher risk of diabetes, compared to their European counterparts, even after considering the risks like unhealthy diet, sedentary lifestyles and obesity.

### Projection

- Since changes in lean mass are unlikely over the next four to five generations, making **lifestyle interventions are crucial to containing NCDs**, which account for 60% of all deaths in India.

### Suggestions

- The implications of the study are that **low lean mass is a very ancient characteristic**, so it is unlikely to change much in the coming generations.
- This means that other interventions, especially the **promotion of healthy lifestyles**, are particularly critical to manage the growing health and economic burden of chronic diseases.
- **Building muscle mass and high fitness levels** have the potential for averting diabetes, and even heart disease.
- South Asians need to build lean muscle mass from an early age, so sports should be an integral part of school curriculum, along with muscle-building exercises and **enhanced protein intake**.

**Diabetes** is defined as a condition that occurs when the body cannot efficiently make use of glucose that serves as a source of energy for body cells. A hormone called Insulin controls blood sugar levels.

- Diabetes is either caused by insufficient production of insulin by the pancreas or if the body cells not effectively responds to the **insulin** produced.

## Diabetes Mellitus

- It is the inability of the body to effectively use or respond to the insulin produced by the body, and as a result, blood sugar levels cannot be regulated effectively. It is further classified into two types,
- **Type 1 Diabetes:** It occurs when the pancreas fails to produce sufficient insulin.
- **Type 2 Diabetes:** Type 2 diabetes is the most common type of diabetes. In this condition body does not use insulin properly. This is called insulin resistance. The main reason for the occurrence of type 2 diabetes is due to obesity and lack of exercise.

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