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DENND1B Gene

Why in the News?

Recent research by the University of Cambridge has identified the DENND1B gene as a significant contributor to obesity in Labrador Retrievers and humans.

- **DENND1B** – An obesity gene in dogs and humans.
- The DENND1B gene is also found in humans, in whom it was also associated with *higher body mass*.
- **5 obesity-associated genes** – The researchers *identified five obesity-associated genes*, and then checked if these genes were also relevant to human obesity.
- Among the 5 obesity-associated genes, DENND1B gene was found to be *most strongly associated with body mass and obesity* in labradors.
- **Regulates appetite** – The gene essentially interferes with a brain signalling pathway that helps regulate our appetite.
- **Weight gain** – This gene affects the body's hunger and energy balance, which can lead to weight gain.
- Dogs with a mutation in this gene had about *8% more body fat than those without it*.
- **Multifaceted interplay** – Obesity is a complex condition resulting from a multifaceted interplay between genetic predispositions and environmental factors like diet and lifestyle, rather than being solely determined by either.

References

1. The Indian express | DENND1B Gene

Isolationism

Why in the news?

Current global conflicts and economic concerns fuel discussions about the merits of a more restrained U.S. foreign policy, an alternative to Isolationism.

- **Isolationism** – A foreign policy approach that emphasizes avoiding entangling alliances and minimizing involvement in international conflicts.
- **Historical Context** – Rooted in the early days of the US, with figures like George Washington advocating for non-intervention in European affairs.
- **Misconceptions –** Often portrayed as complete withdrawal from the world, but historically, it has involved selective engagement, with continued trade, diplomacy and

cultural exchanges.

Historical Evolution

- **19th Century** – The US pursued a policy of limited engagement, focusing on domestic development and expansion within the Western Hemisphere.
- **Post-World War I** – A surge in isolationist sentiment due to the war's devastating costs, leading to the Neutrality Acts of the 1930s.
- **World War II** – The attack on Pearl Harbor marked the end of traditional isolationism, as the US became a global superpower.
- **Cold War and Beyond** – "Isolationism" became a derogatory term used to discredit those who opposed military interventions and alliances.

Implications for Global Diplomacy

- **Reduced Global Influence** – Isolationism can diminish diplomatic influence, allowing other powers to shape global narratives.
- **Security Concerns** – A lack of engagement in global security frameworks can lead to instability. For example, U.S. disengagement from NATO or other alliances may embolden adversaries.
- **Economic Consequences** – Protectionist policies, including tariffs and trade restrictions, often accompany isolationism, disrupting supply chains and economic partnerships
- **Opportunities for Regional Powers** – When major powers embrace isolationism, regional players (e.g., India, China, EU) can expand their influence in global governance.

The Rise of "Restraint"

- **Alternative Framework** – "Restraint" advocates for strategic selectivity in international engagements, prioritizing core national interests while avoiding unnecessary conflicts.
- **Key Principles** – Prioritizing national interests, working with allies and recognizing the limits of US power.
- **Middle Path –** Restraint offers a balance between complete disengagement and unrestrained global activism.

India's Foreign Policy

- **Non-Alignment vs. Isolationism** – India never pursued isolationism; its non-alignment emphasized decision-making independence.
- **Strategic Autonomy** – Current approach maintains freedom of action while actively engaging globally.
- **Multi-alignment** – Unlike isolationism, India engages with various powers simultaneously to maximize benefits while avoiding dependency.
- **Selective Engagement** – Similar to "restraint," India prioritizes sovereignty while participating in multilateral institutions.

Comparison between U.S. and India Approaches

- **U.S.** – Oscillates between interventionism and isolationist tendencies; remains economically integrated globally.
- **India** – Avoids binding alliances while building strategic partnerships; balances protectionism with global market integration.
- **Key Difference** – U.S. isolationism involves withdrawal from commitments, while India's approach emphasizes engagement without entanglement.

Reference

1. Down to Earth | Isolationism

Public Health Education in India

Why in the news?

The U.S. withdrawal from WHO and cuts to United States Agency for International Development (USAID) funding have impacted global public health, affecting the job market for Master of Public Health (MPH) students, including India.

- **Historical Context** – Public health education in India dates back to the colonial era but was initially embedded within medical teaching.
- The *All India Institute of Hygiene and Public Health*, Kolkata, established in 1932, marked a significant milestone.
- Prior to 2000, public health specialists were primarily from community medicine backgrounds, with limited numbers.
- Many Indians pursued Master of Public Health (MPH) degrees abroad due to limited domestic options.
- **Current Scenario** – Since 2000, there has been an exponential growth in institutions offering MPH courses, from just one to over 100.
- This expansion coincided with the launch of the *National Rural Health Mission (2005)*, which initially created opportunities.
- ***Article 47*** of the Constitution underscores the state's responsibility to improve public health.
- The COVID-19 pandemic highlighted the urgent need for a specialized public health workforce.
- International aid constitutes only 1% of India's total health expenditure, making it relatively resilient to funding cuts.

Challenges of public health education in India

- **Supply-Demand Mismatch** – A rapid increase in MPH programs has outpaced job creation, leading to intense competition for limited positions.
- Government recruitment has plateaued, and the private sector prioritizes other specializations.
- **Quality of Education** – Lack of standardized curricula and outcome measures,

despite the Health Ministry's framework.
- Insufficient practical learning opportunities and faculty shortages with real-world experience.
- Absence of a dedicated regulatory body to oversee MPH training, leading to varied quality.
- **Funding Constraints** – Reduced international aid impacts the development sector, which relies heavily on external funding.
- National research and health development funding remain significantly underfunded.
- The changing global funding situation has impacted the availability of funding for Indian projects.
- **Geographical Disparities** – Uneven distribution of MPH institutions, with populous and hilly states lacking adequate training facilities.
- This leads to unequal access to quality Public Health education.
- **Private Sector Dominance** – The growing private healthcare sector prefers hospital and business management over public health expertise.
- This limits job opportunities for MPH graduates.

Way forward

- **Job Creation** – The creation of public health positions at all levels of the health system can be prioritised.
- Dedicated public health cadres within state governments could be established.
- **Regulatory Framework** – A robust regulatory mechanism could be implemented through a dedicated body or a specialized division within existing agencies like the NMC or UGC.
- The curriculum standards could be set and minimum training requirements while allowing for institutional innovation.
- **Practical Training** – Practical learning opportunities could be integrated within public health systems into all MPH programs.
- **Regional Equity** – The growth of public health institutions in underserved states can be fostered.
- **National Funding** – Increase national funding for public health research and development.
- **Standardized Curriculum** – A mandatory standardized curriculum could be implemented.

References

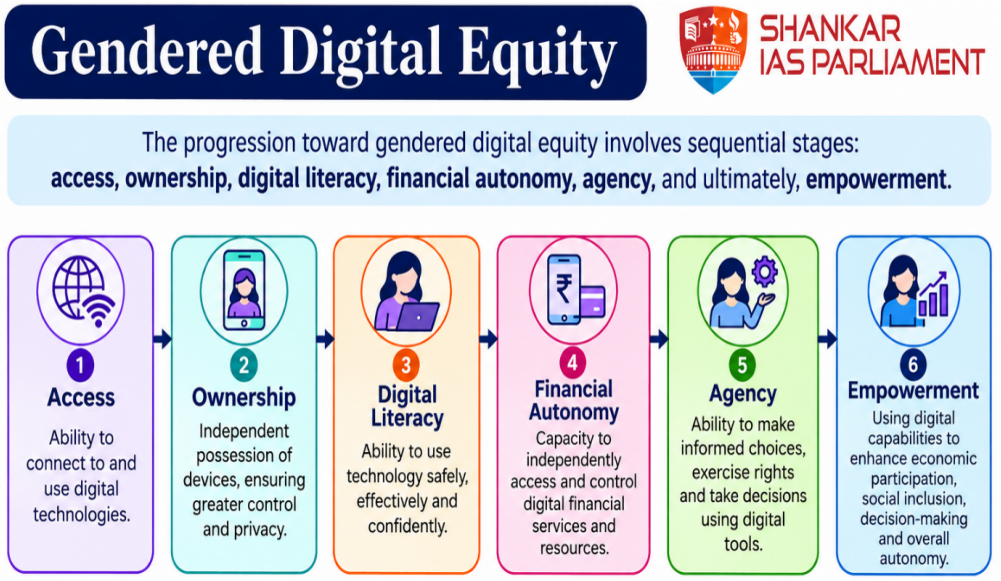
1. The Hindu | Public Health Education in India

Raisina Dialogue

Why in the news?

The 10th edition of the Raisina Dialogue, India's flagship conference on geopolitics and geo-economics, is scheduled from March 17 to 19, 2025, in New Delhi.

- **Aim** – To bring together leaders and thinkers from around the world.
- **Launched in** – 2016 by the *Ministry of External Affairs* as a "flagship Indian international dialogue".
- **Theme** – Kalachakra - People, Peace and Planet.
- **6 thematic pillars** – The address pressing global challenges through discussions across 6 thematic pillars.



- **Similar events** – Munich Security Conference and Singapore's Shangri-La Dialogue.

Key Issues that are expected to be discussed in the dialogue are:

- **Ukraine Conflict & U.S.-Russia Relations** – The presence of Ukraine's Foreign Minister Andrii Sybiha and U.S. Director of National Intelligence Tulsi Gabbard signals intense discussions on *ceasefire negotiations* and shifting global alliances.
- **Trump's Foreign Policy Shifts** – The impact of U.S. President Donald Trump's policies on global trade, NATO relations, and Indo-Pacific strategy will be debated.
- **Quad and Indo-Pacific Strategy** – A high-level panel comprising naval leadership from India, Australia, Japan, and the U.S. will discuss *expanding maritime cooperation*, reflecting India's commitment to countering Chinese assertiveness.
- **Nuclear and Security Concerns** – International Atomic Energy Agency (IAEA) chief Rafael Grossi's participation highlights ongoing nuclear non-proliferation challenges, including the Iran nuclear issue.

Notable Trends

- **Pakistan's Non-Participation** – Given ongoing hostilities, Pakistani delegates have been traditionally absent from the Raisina Dialogue, reaffirming India's policy of limited engagement.
- **Russia's Reduced Presence** – The absence of Russian Foreign Minister Sergey Lavrov, who previously faced intense scrutiny over the Ukraine war, underscores the shifting diplomatic landscape.
- **China's Minimal Representation** – The inclusion of an academic from Fudan University reflects a cautious but improving engagement following last year's Modi-Xi

Jinping meeting.

References

1. The Hindu | Raisina Dialogue

Linguistic Secularism

Why in the News?

Recently the National Education Policy (NEP) has sparked controversy over alleged Hindi imposition.

- **Linguistic secularism** – It refers to the principle of equal treatment and accommodation of all languages within a multilingual society.

> *Indian language laws are designed to be accommodative, aiming to secure "linguistic secularism" by respecting the aspirations of speakers of different languages.*

Constitutional Provisions

- **Article 343** – Declares Hindi in Devanagari script as the *official language* of the Union.
- **Article 29(1)** – Grants both majority and minority, the right to conserve its distinct language, script or culture.
- **Article 19** – Includes the right to choose the medium of instruction at the primary level.

Judicial rulings on Linguistic Secularism

- **U.P. Hindi Sahittya Sammelan vs State of U.P. (2014) –** The mode of development or evolution of language in the country should be organic.
- Indian language laws were not rigid but accommodative – that aims to secure linguistic secularism.
- **Sunil K.R. Sahastrabudhey vs Director, IIT Kanpur (1982) –** Article 351 lays down a duty on the Union to promote the spread of Hindi language to develop it so that it may serve as a medium of expression for all the elements of the composite culture of India,
- ***Yet there is no right conferred on any citizen*** to compel an institution to impart education in that particular language.
- **State of Karnataka vs Associated Management of Primary & Secondary Schools** – The fundamental right to speech and expression under Article 19 included the freedom of a primary class student to choose the language of instruction.
- The state cannot impose control over such a choice.
- **Pierce v. Society of Sisters of Holy Names in 1924** – The supreme court had taken

a leaf from the U.S. Supreme Court's conclusion that a child is not a mere creature of the State.
- Those who nurture him and direct his destiny have the right coupled with the high duty to recognise and prepare him for additional obligations".

216th Report Law Commission
• **Chairperson** – Justice A.R. Lakshmanan • The report titled "Non-feasibility of Introduction of Hindi as a Compulsory Language in the Supreme Court of India." • **Finding** – Language is an emotional issue with unifying potential, but imposition could be counterproductive.

Reference

The Hindu| Supreme Court Stance on Linguistic Secularism

Notifiable Disease

Why in the News?

Recently, there have been calls to designate cancer as a notifiable disease in India.

- **Notifiable Disease** – A notifiable disease is one that physicians are legally required to report to public health authorities.
- The primary purpose of disease notification is to ensure that *contagious diseases* are kept under check.
- **Legal mandate** – Notification of infectious diseases is a legal mandate, and failing to report designated diseases could lead to legal consequences.
- **Infectious diseases** – These diseases typically include infectious diseases such as tuberculosis, cholera, malaria, and COVID-19.
- **Epidemic Diseases Act, 1897** – This act provides the legal framework for notifying diseases in India.
- **Integrated Disease Surveillance Programme (IDSP)** – The IDSP monitors notifiable diseases in India.
- The list of notifiable diseases differs from state to state as state governments are responsible for bringing out the notification.
- **Snake bite** – In 2024, the Indian government asked states to announce snakebites a notifiable disease to improve reporting and response mechanisms.
    - In **2024,** snakebite was made a notifiable disease, *despite being a non-communicable condition.*
- **Cancer as notifiable disease** – There has been argument to make *cancer as notifiable disease* to enhance surveillance, early detection and resource allocation.

Issues in Designating Cancer as a Notifiable Disease:

- **Lack of immediate public health threat** – Unlike infectious diseases, cancer does

not spread through direct transmission or cause sudden outbreaks.
    - Cancer requires long-term management rather than emergency interventions.
- **Complex diagnosis** – It is a diverse group of diseases rather than a single condition, and its detection often requires complex diagnostic procedures.
- **Legal burden** – Mandatory reporting could impose unnecessary legal obligations on physicians.
- **Social stigma** – Cancer still carries social stigma, discouraging patients from seeking timely diagnosis.
- **Privacy concerns** – Notifiability generally does not account for privacy because disease notification is meant to preserve public health over individual confidentiality.

Alternative Approach

- The World Health Organization advocates mainly cancer registries, which mention notification as an option at the *individual level alone*.
    - Expanding the National Cancer Registry Programme (NCRP).
    - *Encourage voluntary reporting* for accurate data collection.
    - *Enhancing cancer screening initiatives* for early detection.
    - Implementing robust follow-up mechanisms to track treatment outcomes.

India's National Cancer Registry Programme (1982) functions as a data collection mechanism for compiling crucial information on the demographics of cancer patients.

Reference

The Hindu | Should cancer be a notifiable disease

One Liners 18-03-2025

History, Art and Culture

Potti Sriramulu

Tributes paid to Potti Sriramulu on his birth anniversary.

• **Born on** – 16th March 1901, in Madras.

• **Freedom fighter** – Potti Sreeramulu was a freedom fighter known for his pivotal role in the creation of Andhra State.

• He sacrificed his life after undertaking a hunger strike for 56 days to form separate Andhra state.

• It was the ***1st*** step towards the formation of *States on linguistic basis* across the country.

• **Died on** – 15 december 1952.

• **Title** – *Amarajeevi*, for his supreme sacrifice for the cause of the people of Andhra.

Polity & Governance

Bodoland Territorial Council (BTC)

Recently, Bodoland Territorial Council chief calls for more funding for tribal languages.

• **Established in** – *2003,* under the 6th Schedule of the Constitution of India.
• It is an *autonomous region* in Kokrajhar district, Assam.
• **Aim** – To bring accelerated progress to one of the most backward region in the state of Assam with special focus on the development of the *Bodo people*.
• **Administration** – It administers the *Bodoland Territorial Region (BTR)*, comprising 4 districts
- Kokrajhar, Chirang, Baksa, and Udalguri, located on the north bank of the Brahmaputra River.
• **Communities coverage –** Bodos , Assamese , Bengalis, Koch-Rajbongshis, Rabhas, Garos , Adivasis, Muslims and Nepalies, etc.

Promotion of Research and Innovation in the Pharma-MedTech Sector (PRIP) Scheme

Recently, an Industry dialogue organised on the PRIP Scheme in Mumbai.

• **Launched in –** *2023.*
• **Launched by** – Department of Pharmaceuticals.
• **Nodal Ministry** – Ministry of Chemicals and Fertilizers.
• **Goal** – To transform India into a *global powerhouse for Research & Development* (R&D) in the Pharma MedTech sector.
• **2 components:**
- To establish Centres of Excellences (CoEs) at the 7 existing National Institutes of Pharmaceutical Education & Research (NIPERs)
- To accelerate investments in the R&D ecosystem within the sector.

Hyperloop Project

Union Minister of Railways visited the Hyperloop testing facility at IIT Madras.

• **Hyperloop** – It is a *high-speed train that runs in a vacuum* in a tube.
• **Hyperloop Project** – It is to be developed at the Integral Coach Factory (ICF), Chennai.
• The Ministry has been provided financial funding and technical assistance to the project
• **Hyperloop test tube** – It is 410 meters long and is the *longest Hyperloop test facility in Asia*.
• It will soon be the world's longest tube.

National Consumer Helpline (NCH) 3.0

• **NCH** – It is a *hassle-free, speedy, and cost-effective* platform created to resolve consumer grievances.
• **NCH 3.0** – It is a technological transformation of NCH with Artificial Intelligence (AI) to resolve complaints in a shorter time.
• **Aim** – To reduce resolution time from *45 to 7 days*.
• It is a place where the consumer complaints to be *resolved at the pre-litigation stage* itself.

Bilateral Relations

India-New Zealand Ties

• India-New Zealand announced a launch of *Free Trade Agreement (FTA) negotiations.*
• **Aim** – To achieve balanced outcomes that enhance supply chain integration and improve market access.
• It is a longstanding partnership founded on shared democratic values, strong people-to-people ties, and economic complementarities.

Environment

Indian Roller

• **Scientific name** – Coracias Benghalensis.
• It is a *non-migratory bird*, but it moves seasonally and formerly known as Neelkanth (in Hindi) and Blue Jay.
• **Distribution** – West Asia to the Indian Subcontinent.
• **State bird of** – Karnataka, Telangana, and Odisha.
• **Conservation status** – Least Concern.

Security

Bongosagar 2025

• It is an *India-Bangladesh Naval Exercise* going to be conducted in the Bay of Bengal.
• **Participation:**
  - INS Ranvir – Indian Navy.
  - BNS Abu Ubaidah – Bangladesh Navy.
• **Range of operations** – Surface firing, tactical manoeuvres, underway replenishment, Visit- Board-Search- Seizure (VBSS) cross boarding and communication drills.

Science

Resuscitation Academy in India

• **Established by** – Emergency Management and Research Institute Green Health Services (EMRI GHS), is a pioneer in ambulance service provider in India.
• It is the *India's 1st Resuscitation Academy*, Hyderabad.
Resuscitation *means to revive someone from apparent death or from unconsciousness.*
• **Objective** – To enhance cardiac arrest survival rates in India.
  - Telangana currently has one ambulance for every 64,500 people.
• **Goal** – To further improve this ratio to one ambulance per 50,000 people.

Miscellaneous

Gora Techno Hub

• It is an *interactive workshop*, engaging lectures and hands-on experiments the Techno Hub plans to ignite curiosity and passion in young minds.
• **Launched by** – Atheist Centre, Vijayawada.
• **Objective** – To promote STEM (Science, Technology, Engineering and Mathematics) education and scientific advancements for children.

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