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Current affairs summary for prelims

2 March, 2024

National Birth Defect Awareness Month 2024

Context: *Dr. V.K. Paul, a member of NITI Aayog, launched the National Birth Defect Awareness Month 2024.*

- **Theme**: The theme for this year's campaign is "Breaking Barriers: inclusive support for children with birth defects.
- **Focus**: The campaign aims to raise awareness about prevention, early identification, and timely management of birth defects.
- **Background**:
  - The National Birth Defect Awareness Month aims to raise awareness for all birth defects and improve care and treatment for children.
  - Birth defects contribute significantly to perinatal, neonatal, and under-five morbidity and mortality, with six percent of children born with birth defects worldwide.
  - In India, birth defects contribute to 4.9% of neonatal mortality and 5.7% of under-five mortality, emphasizing the need to address this issue.
  - The Rashtriya Bal Swasthya Karyakram (RBSK) focuses on early identification and management of birth defects, screening children at various levels to minimize disability and improve health outcomes.

Selected Health Conditions for Child Health Screening & Early Intervention Services	
Defects at Birth 1. Neural tube defect 2. Down's Syndrome 3. Cleft Lip & Palate / Cleft palate alone 4. Talipes (club foot) 5. Developmental dysplasia of the hip 6. Congenital cataract 7. Congenital deafness 8. Congenital heart diseases 9. Retinopathy of Prematurity	**Deficiencies** 10. Anaemia especially Severe anaemia 11. Vitamin A deficiency (Bitot spot) 12. Vitamin D Deficiency. (Rickets) 13. Severe Acute Malnutrition 14. Goiter
Diseases of Childhood 15. Skin conditions (Scabies, fungal infection and Eczema) 16. Otitis Media 17. Rheumatic heart disease 18. Reactive airway disease 19.Dental conditions	**Developmental delays and Disabilities** 21. Vision Impairment 22. Hearing Impairment 23. Neuro-motor Impairment 24. Motor delay 25. Cognitive delay 26. Language delay
20. Convulsive disorders	27. Behavior disorder (Autism) 28. Learning disorder 29. Attention deficit hyperactivity disorder
30. Congenital Hypothyroidism, Sickle cell anemia, Beta thalassemia (Optional)	

- **What are Birth Defects?**
  - **Prevalence**: Birth defects affect 1 in every 33 babies born in the United States annually, totalling approximately 120,000 babies each year.
  - **Nature**: Birth defects encompass structural changes present at birth that can affect any part of the body, potentially impacting appearance, functionality, or both. Severity varies from mild to severe.
  - **Identifying Birth Defects:**
    - **Detection**: Birth defects may be identified before birth, at birth, or afterward, with most being discovered within the first year of life.
    - **Diagnostic Methods**: While some defects are visible, others require specialized tests such as echocardiograms, x-rays, or hearing tests for detection.
  - **Causes and Risk Factors:**
    - **Timing**: Most birth defects occur during the first three months of pregnancy, with some arising later in gestation.
    - **Etiology**: While causes vary, factors contributing to birth defects include genetics, environmental influences, and maternal behaviors. However, the precise interplay remains incompletely understood.
    - **Risk Factors:** Various factors, such as maternal smoking, alcohol consumption, certain medications, medical conditions, infections during pregnancy, fever, and advanced maternal age, may elevate the risk of birth defects.
  - **Prevention Strategies:**
    - **Preconception Care:** Regular prenatal care and early initiation are crucial for minimizing risks.
    - **Folic Acid Supplementation:** Daily intake of 400 micrograms of folic acid at least one month before conception is recommended.
    - **Avoidance:** Eliminating alcohol consumption, smoking, and certain medications during pregnancy is advised.
    - **Infection Prevention:** Taking precautions to prevent infections during pregnancy is essential.
    - **Control of Medical Conditions:** Managing existing medical conditions, such as diabetes, before conception can mitigate risks.
  - **Living with a Birth Defect:**
    - **Specialized Care:** Babies with birth defects often require specialized care and interventions for survival and optimal development.
    - **Early Intervention:** Early identification and referral through state birth defects tracking programs facilitate timely access to necessary services.
    - **Resource Utilization:** Seeking guidance from medical professionals, including geneticists and genetic counsellors, can provide valuable support and information for families navigating the challenges associated with birth defects.

Improvised Explosive Devices (IEDs)

Context: *An explosion at Bengaluru's Rameshwaram Cafe in the Whitefield area on March 1 left nine people injured, likely due to an improvised explosive device (IED).*

- **Definition of IEDs:**
  - IEDs, or Improvised Explosive Devices, are homemade bombs created and deployed outside traditional military contexts.
  - They are often crafted from easily accessible materials, including military-grade explosives or common household items.
  - These devices are frequently used in acts of terrorism, asymmetric warfare, and urban conflicts due to their relatively simple construction and devastating impact.
  - The term "IED" became widely recognized during conflicts like the Northern Ireland conflict and the Iraq War, where such devices were extensively used against military and civilian targets.
- **Components of IEDs:**
  - The key components of an IED include:

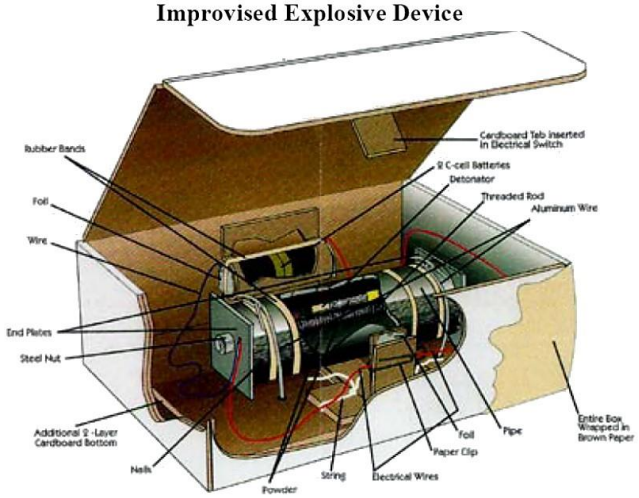
- **Switch (activator):** Initiates the detonation process.
- **Initiator (fuse):** Triggers the explosive reaction.
- **Container (body):** Houses the explosive materials and components.
- **Charge (explosive):** The primary destructive substance within the device.
- **Power source (battery):** Provides energy to activate the detonator.

- Each component plays a crucial role in the functioning of the IED, contributing to its destructive capability and reliability.

➢ **Effects of IEDs:**

- IEDs are designed to inflict damage and casualties on personnel and vehicles, as well as to disrupt enemy operations.
- The detonation of an IED can cause various injuries, including blast trauma, shrapnel wounds, burns, and concussions.
- Anti-personnel IEDs often incorporate additional fragmentation materials such as nails or ball bearings to maximize harm to individuals within the blast radius.
- The psychological impact of IED attacks can also be significant, instilling fear and uncertainty among civilian populations and military personnel alike.

Improvised Explosive Device



➢ **Deployment Methods of IEDs:**

- IEDs can be activated through a variety of means, including:
- Remote control devices operated by individuals at a safe distance.
- Pressure-sensitive triggers, such as pressure plates or tripwires, that activate upon contact.
- Victim-operated switches designed to detonate when a target unknowingly triggers the device.
- Some sophisticated IEDs are capable of daisy-chaining, where multiple devices are linked together to maximize the impact on a target or convoy.

➢ **Types of IEDs:**

- Common types of IEDs include:
  - **Vehicle-borne IEDs (VBIEDs):** These utilize vehicles as the delivery mechanism for explosives, often in the form of car bombs.
  - **House-borne IEDs (HBIEDs):** Buildings rigged with explosives to collapse on entering troops, creating deadly booby-trapped structures.
  - **Roadside IEDs:** Placed along roadways to target military convoys or civilian vehicles passing by.
- The choice of IED type depends on the objectives and resources of the individuals or groups deploying them.

➢ **Additional Considerations:**

- IEDs present a significant threat due to their versatility, ease of construction, and potential for mass casualties.
- Security forces and civilian populations must remain vigilant against the threat posed by IED attacks and take appropriate measures to mitigate risks.
- Efforts to counter IEDs involve a combination of intelligence gathering, counter-terrorism operations, and community engagement to disrupt networks and prevent attacks.
- Ongoing research and development are essential to stay ahead of evolving tactics and technologies employed by those who use IEDs for malicious purposes.

Obesity Burden in India

Context: *In 2022, according to The Lancet, 44 million women and 26 million men in India were reported as obese.*

➢ **Prevalence:**

- In 2022, there were 70 million adults living with obesity in India.
- The number of obese women was nearly double that of men, with 44 million women and 26 million men affected.

➢ **Childhood Obesity:**

- Among children aged 19 and under, 5.2 million girls and 7.3 million boys were obese.
- This data was reported in a global study published in The Lancet on February 29, 2024.

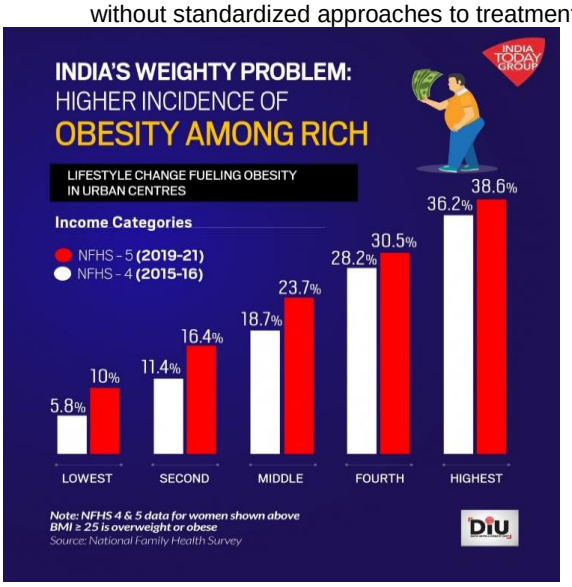
➢ **Trends in Obesity Rates:**

- **Increase Over Time:**
  - Obesity rates in India saw a significant increase from 1990 to 2022.
  - For women, the obesity rate rose from 1.2% in 1990 to 9.8% in 2022.
  - Similarly, for men, the obesity rate increased from 0.5% in 1990 to 5.4% in 2022.
- **Global Comparison:**
  - India ranked 182nd highest in the world for obesity prevalence in women and 180th highest for men in 2022.
  - These rankings were based on a study conducted by the NCD Risk Factor Collaboration and the World Health Organization.

➢ **Underweight Trends:**

- **Decline Over Time:**
  - Rates of underweight decreased significantly among both adults and children from 1990 to 2022.
  - In 1990, underweight was more prevalent than obesity in many countries, including India.

- **Current Rates:**
  - In 2022, the underweight rate decreased to 13.7% for women and 12.5% for men, compared to 41.7% and 39.8%, respectively, in 1990.
  - Among adolescents and children, the underweight rate decreased from 27.3% in 1990 to 20.3% in 2022 for girls and from 45.1% to 21.7% for boys.
- **Causes and Recommendations:**
  - **Contributing Factors:** Factors contributing to the shift from underweight to obesity dominance included changes in eating habits and reduced physical activity over three decades.
  - **Urgency of Action:**
    - Urgent economic and agricultural policies are needed to address poverty and improve food security.
    - Prevention and management strategies for obesity should be prioritized, including promoting healthy nutrition and physical activity.
  - **Policy Recommendations:**
    - Policies to prohibit the advertising of unhealthy foods, regulate the sale of unhealthy foods to children, and promote clear nutrition labelling are essential.
    - Government initiatives should provide community spaces for exercise and promote healthy lifestyle choices.
- **Clinical Guidelines:**
  - Lack of standardized clinical guidelines for obesity treatment highlights the need for established protocols.
  - New pharmacological treatments for obesity are being evaluated but may have limited impact without standardized approaches to treatment.



NEWS IN BETWEEN THE LINES

VSHORADS Missile

Recently, India has conducted two successful flight tests of a very short-range air defence missile off the coast of Odisha.

About VSHORADS Missile:

- The Very Short Range Air Defence System (VSHORADS) is a **fourth-generation**, MANPADS (**man-portable air-defense system)** developed by India.
- It was developed by the **Research Centre Imarat** (RCI) in collaboration with other Defence Research and Development Organisation (**DRDO**) laboratories and Indian industry partners.
- This missile incorporates several novel technologies, including a miniaturized **Reaction Control System** (RCS) and integrated avionics, enhancing its effectiveness in engaging targets.
- It is propelled by a **dual-thrust solid motor**, providing the necessary thrust for intercepting and neutralizing airborne threats.

The Vedic Clock

Recently, the Prime Minister Narendra Modi inaugurated the Vedic Clock in Ujjain as part of the 'Vikramotsav' celebration in Madhya Pradesh.

About the Vedic Clock:

- The Vikramaditya Vedic Clock is **the world's first 'Vedic Clock**,' designed to display time according to the ancient Indian traditional **Panchang time calculation** system.
- Positioned on an 85-foot tower within **Jantar Mantar in Ujjain, Madhya Pradesh**, the clock serves as a symbol of India's rich cultural heritage in timekeeping.
- The clock not only displays time but also **provides information on planetary positions, Muhurat, astrological calculations and predictions**.
- It indicates both **Indian Standard Time (IST) and Greenwich Mean Time (GMT).**
- The clock **calculates time from one sunrise to another**, dividing the period between the two sunrises into 30 parts.
- Each hour consists of 48 minutes, as per the Indian Standard Time (IST).

Maternity Benefit Act 1961

Recently, the Calcutta High Court ruled that discriminating between contractual and permanent employees regarding maternity leave eligibility is impermissible as it infringes upon Article 14 and the Maternity Benefit Act 1961.

About Maternity Benefit Act1961:

- The Maternity Benefit Act of 1961 is an act that regulates the **employment of women in certain establishments before and after childbirth.**
- The Act states that every woman is entitled to maternity benefits, which are paid at the rate of the average daily wage for the period of her actual absence.

- The Act applies to **mines, factories, circus, industry, plantation** and **shops** and establishments employing ten or more persons, except employees covered under the Employees State Insurance act, 1948.
- It mandated **six weeks' leave post-delivery or miscarriage**, with paid maternity leave capped at twelve weeks.
- Women were required to have worked for at least **160 days in the preceding 12 months** in the establishment to qualify for maternity benefits.

Maternity Benefits (Amendment) Act 2017:

The Act was amended in 2017 to bring about significant changes:

- The amendment extended maternity leave to **26 weeks after childbirth**, applicable solely to biological mothers.
- It introduced provisions for **adoptive or surrogate mothers, granting them 12 weeks of maternity** benefit from the child's handover date.
- The amendment allowed women to work from home after **availing maternity benefits if the nature of their work permitted.**

Juice Jacking

Recently, the Reserve Bank of India (RBI) issued a cautionary message advising mobile phone users against charging their devices using public ports, citing security risks associated with a cyberattack known as "juice jacking."

About Juice Jacking:

- Juice jacking is a **cyberattack method** where **hackers manipulate public USB charging ports** to install malware or alter hardware, allowing them to steal data from connected devices.
- Hackers tamper with public charging ports in locations **like airports, hotels and shopping centers,** infecting them with malware or making hardware modifications.
- It poses a significant risk to **personal** and **financial data security,** as hackers can remotely access and steal sensitive information from connected devices.
- To mitigate the risk of juice jacking, **mobile phone users are advised to use personal chargers and avoid connecting their devices to public USB ports**.
- Additionally, employing a **virtual private network** (VPN) and ensuring devices have up-to-date security updates are recommended.

Place in News

Italy

The recent 2nd India-Italy Consular Dialogue held in New Delhi focused on enhancing bilateral cooperation regarding shared consular matters.

Italy (Capital: Rome)

Location: Italy is a boot-shaped peninsula located in southern Europe.

Boundaries:

- Italy shares its land borders with **France**, **Switzerland**, **Austria**, **Slovenia**, **Vatican City** and **San Marino.**
- It is surrounded by the **Mediterranean Sea**, including the **Adriatic Sea**, **Ionian Sea**, **Tyrrhenian Sea** and **Ligurian Sea**.

Physical Features:

- The highest point in Italy is **Monte Bianco**, also known as Mont Blanc in French, which is part of the Alps mountain range.
- The major rivers in Italy include the **Po, Tiber, Arno, Adige and Ticino.**
- **Mount Etna** is the highest and most active volcano in Europe, located on the east coast of Sicily.

POINTS TO PONDER

- Which squadron of the Indian Air Force has been recently set to be awarded the President's Standard? **- No 45 'Flying Daggers'**
- Which domestic airport has been recently declared an international airport for 10 days? **- The Jamnagar airport**
- which country has recently replaced its Ambassador to WTO following a strong protest from India regarding her comments on New Delhi's rice procurement program? **- Thailand (Pimchanok Vonkorpon Pitfield)**
- To whom will the 2024 Tyler Prize for environmental achievement be awarded for his groundbreaking contributions to the development of the Planetary Boundaries framework? **- Johan Rockstrom**
- Where did the Defence Research and Development Organisation (DRDO) successfully conduct the flight test of Very Short Range Air Defence System (VSHORADS) recently? **- at Chandipur, Odisha Coast**