DAILY CURRENT AFFAIRS 10-10-2024

GS-2

1. **National Consumer Commission**
2. **Ultra-Processed and Fast Foods Making India Diabetic**
3. **What does the USCIRF report say about India?**

GS-3

4. **Nobel Prize in Physics 2024**
5. **International Big Cat Alliance (IBCA)**

National Consumer Commission

Syllabus: GS-2: Statutory Bodies

Context:

- NCDRC fined Johnson & Johnson Rs 35 lakh for supplying defective medical devices.
- The case involved a consumer who suffered complications from a faulty hip replacement.
- Highlights the need for strict adherence to medical ethics and protocols.

Hip Replacement Surgery

- **Objective:** Relieve pain, improve hip joint function, and enhance mobility.
- **Hip Implants:**
    - Used for conditions like arthritis or avascular necrosis.
    - Made from materials like metal, ceramic, and plastic.
    - Ball typically made from cobalt-chromium alloy or ceramic.
    - Stem usually made from titanium or cobalt-chromium alloy.

Medical Ethics in Healthcare

- **About Medical Ethics:**
    - Focuses on right conduct in human health, distinguishing between right and wrong actions.
    - Concerns obligations of doctors, hospitals, and society toward patients.
    - Ethical principles often take precedence over legal obligations in guiding medical practices.

Principles of Medical Ethics:

- **Respect for Autonomy:**
    - Patients' rights to make informed choices about their treatment.
    - Importance of obtaining proper informed consent.
- **Beneficence:**
    - Prioritizing patients' health and acting in their best interests during procedures.

- **Non-Maleficence:**
  - Avoiding harm to patients; ensuring necessary care is provided.
- **Justice:**
  - Treating all patients impartially, without discrimination based on religion, race, nationality, or social status.
- **Hippocratic Oath:**
  - Recited by newly graduated doctors.
  - Based on Indian Medical Council (Professional Conduct, Etiquette, and Ethics) Regulations, 2002.
  - Principles: Serving humanity, respecting medical laws, prioritizing patient welfare, maintaining confidentiality, showing gratitude to teachers, fostering collegial respect.

National Consumer Disputes Redressal Commission (NCDRC)

- **About NCDRC:**
  - Quasi-judicial body established in 1988 under the Consumer Protection Act (CPA), 1986.
  - Ensures inexpensive, prompt, and summary resolution of consumer disputes.
  - Headed by a sitting or retired Supreme Court judge or a retired Chief Justice of a High Court.

Provisions of CPA, 1986:

- **Jurisdiction (Section 21):**
  - NCDRC handles complaints valued over Rs 2 crore.
  - Has appellate and revisional jurisdiction over State Commissions and District Forums.
- **Appellate Authority:**
  - Appeals can be made to the State Commission, and further to NCDRC.
  - Appeals to Supreme Court can be filed within 30 days of NCDRC decisions (Section 23).

- **Scope of Coverage:**
  - Covers both 'goods' and 'services.'

Consumer Forums under CPA, 2019

- **District Consumer Disputes Redressal Commission (DCDRC):**
  - For claims up to Rs 50 lakh.
- **State Consumer Disputes Redressal Commission (SCDRC):**
  - For claims between Rs 50 lakh and Rs 2 crore.
- **National Consumer Disputes Redressal Commission (NCDRC):**
  - For claims above Rs 2 crore.

Central Consumer Protection Authority (CCPA)

- **About:**
  - Established under CPA, 2019 (Section 10).
  - Regulates consumer rights violations and unfair trade practices.
  - Operates under the Ministry of Consumer Affairs, Food and Public Distribution.

Powers of CCPA:

- **Consumer Rights:**
  - Protects and enforces consumer rights.
- **Unfair Trade Practices:**
  - Prevents unfair trade practices.
- **Advertisement Regulation:**
  - Penalizes false or misleading advertisements (Section 21 of CPA, 2019).

Issues of Medical Ethics in India

- **Informed Consent:**
  - Often inadequate, especially in clinical trials involving vulnerable populations.
  - **Example:** Controversy over Covid-19 vaccine trials.

- **Patient Privacy:**
  - Lack of robust measures to protect patient data.
  - **Example:** 2023 ESIC database breach exposed sensitive health data.
- **Conflicts of Interest:**
  - Doctors may have financial stakes in treatments recommended.
  - **Example:** Cardiologist in Delhi linked to a stent manufacturing company.
- **Doctor-Patient Trust:**
  - Erosion due to commercialization and lack of transparency.
  - **Example:** Government hospital doctors engaging in private practice with high fees.
- **Regulatory Oversight:**
  - Weak enforcement of ethical guidelines leads to abuse in clinical trials and patient care.

Ultra-Processed and Fast Foods Making India Diabetic

Syllabus: GS-2; Health

Context

- Consumption of ultra-processed and fast foods leading cause of diabetes in India, reveals new study
- The study found that low-AGE diets exhibited improvement in the insulin-sensitivity and reduction in the inflammatory levels compared to high-AGE diets.
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Clinical Trial Links Ultra-Processed Foods to Rising Diabetes in India

- A groundbreaking clinical trial, published in the *International Journal of Food Sciences and Nutrition*, has revealed that a diet high in **advanced glycation end products (AGEs)** is a major contributor to India becoming the world's diabetes capital.
- The study, funded by the Department of Biotechnology, Ministry of Science and Technology, emphasizes the harmful effects of ultra-processed and fast foods on health.

Impact of Low-AGE Diet on Insulin Sensitivity

- The trial found that participants who followed a low-AGE diet experienced significant improvements in insulin sensitivity and a reduction in inflammation, which is a leading cause of diabetes.
- In contrast, individuals on a high-AGE diet showed higher risks of developing type 2 diabetes.

What Are AGEs?

- AGEs are harmful compounds formed when sugars react with fats or proteins during high-temperature cooking, such as frying or roasting.
- These compounds are known to trigger inflammation, a key factor contributing to the development of diabetes.

Rising Prevalence of Diabetes in India

- India is facing a diabetes crisis, with over 101 million individuals currently living with the condition.
- Globally, diabetes, pre-diabetes, and obesity are on the rise.
- While earlier studies from Western countries have linked ultra-processed foods to chronic diseases, this study is the first of its kind in India to suggest that low-AGE diets may reduce diabetes risk.

Findings of the Clinical Trial

- The study involved overweight and obese but non-diabetic adults who were divided into two groups.
- One group followed a low-AGE diet for 12 weeks, while the other consumed a high-AGE diet. High-AGE foods included those prepared by roasting, deep-frying, and shallow-frying, whereas low-AGE foods were cooked by boiling and steaming.
- After 12 weeks, the low-AGE diet group showed significantly improved insulin sensitivity and reduced risk factors for type 2 diabetes compared to the high-AGE diet group.

The Role of Glycation in Diabetes

- Glycation is a **non-enzymatic process** where sugar molecules bind to proteins or fats, leading to harmful reactions in the body.
- This process results in oxidative stress, which can cause inflammation and cell damage, both of which are linked to diabetes.

Expert Recommendations

- Dr. V. Mohan, Chairman of the Madras Diabetes Research Foundation, which conducted the study, emphasized the importance of dietary changes.
- He recommended **reducing the consumption of fried and sugary foods, opting instead for green leafy vegetables, fruits, and boiled foods.**
- These changes can lower dietary AGEs and reduce the risk of type 2 diabetes.

Conclusion: A Healthier Approach to Diet

- This study highlights the potential of low-AGE diets to reduce the risk of diabetes, particularly in a country like India where the prevalence of diabetes is alarmingly high.
- By adopting healthier cooking methods and food choices, individuals can reduce inflammation and improve insulin sensitivity, thereby lowering their risk of type 2 diabetes.

What does the USCIRF report say about India?

Syllabus: GS-2; International Institutions

Context

- The Washington DC-based United States Commission on International Religious Freedom (USCIRF) on October 2 2024 released a country update on India, flagging "collapsing religious freedom conditions".

What is the USCIRF?

- The USCIRF (United States Commission on International Religious Freedom) is an independent, bipartisan U.S. federal government agency established under the 1998 **International Religious Freedom Act (IRFA).**
- It monitors the universal right to **freedom of religion or belief (FoRB)** globally, excluding the U.S.

- The USCIRF bases its assessments on international human rights standards, particularly **Article 18 of the Universal Declaration of Human Rights,** which emphasizes the right to freedom of thought, conscience, and religion.
- Article 18 states, "Everyone has the right to freedom of thought, conscience and religion; this right includes freedom to change his religion or belief, and freedom... to manifest his religion or belief in teaching, practice, worship, and observance."

Difference Between USCIRF and Office of International Religious Freedom (IRF)

- The USCIRF operates separately from the Office of **International Religious Freedom (IRF)**, a part of the U.S. State Department.
- While both bodies release reports on religious freedom, the IRF's findings carry more weight in bilateral relations, whereas the USCIRF's reports are influential in shaping perceptions of a country.

Functions of the USCIRF

The USCIRF monitors religious freedom conditions worldwide through:

- Travel to affected regions
- Research
- Meetings with international human rights groups, NGOs, victims of persecution, and foreign officials
- Annually publishes reports identifying countries that could be designated by the U.S. State Department as:
- **Countries of Particular Concern (CPC):** Nations committing systematic and egregious violations of religious freedom.
- **Special Watch List (SWL):** Nations involved in severe violations of religious freedom but not reaching the CPC threshold.

Policy Impact of USCIRF Recommendations

- If a country is designated as a CPC by the U.S. State Department based on the USCIRF's report, the U.S. government can apply various policy measures, including sanctions.

USCIRF's 2024 Report on India

The report criticizes Indian government actions, citing:

- Legislation like the Citizenship (Amendment) Act (CAA), 2019
- The enforcement of anti-conversion laws, cow slaughter laws, and anti-terrorism laws.
- Claims that Indian officials perpetuated false narratives about religious minorities, resulting in violence and the destruction of places of worship.

- India was recommended as a CPC in USCIRF's 2024 annual report.

India's Response to the Report

- The Ministry of External Affairs (MEA), represented by spokesperson Randhir Jaiswal, rejected the report, calling the USCIRF a "biased organization with a political agenda."
- The MEA asserted that the report misrepresents facts and urged the USCIRF to avoid such "agenda-driven efforts."

Criticism of USCIRF: Is it Biased?

- USCIRF reports are supported by research and credible sources, including domestic and international media.
- However, despite the accuracy of its data, concerns have been raised regarding the timing and agenda of the reports, with many countries viewing the USCIRF as a tool of U.S. foreign policy.

Are USCIRF's Recommendations Binding?

- No, the USCIRF's recommendations are non-binding.
- The U.S. State Department decides whether to adopt these recommendations, considering factors like bilateral relations and broader foreign policy goals.

Nobel Prize in Physics 2024

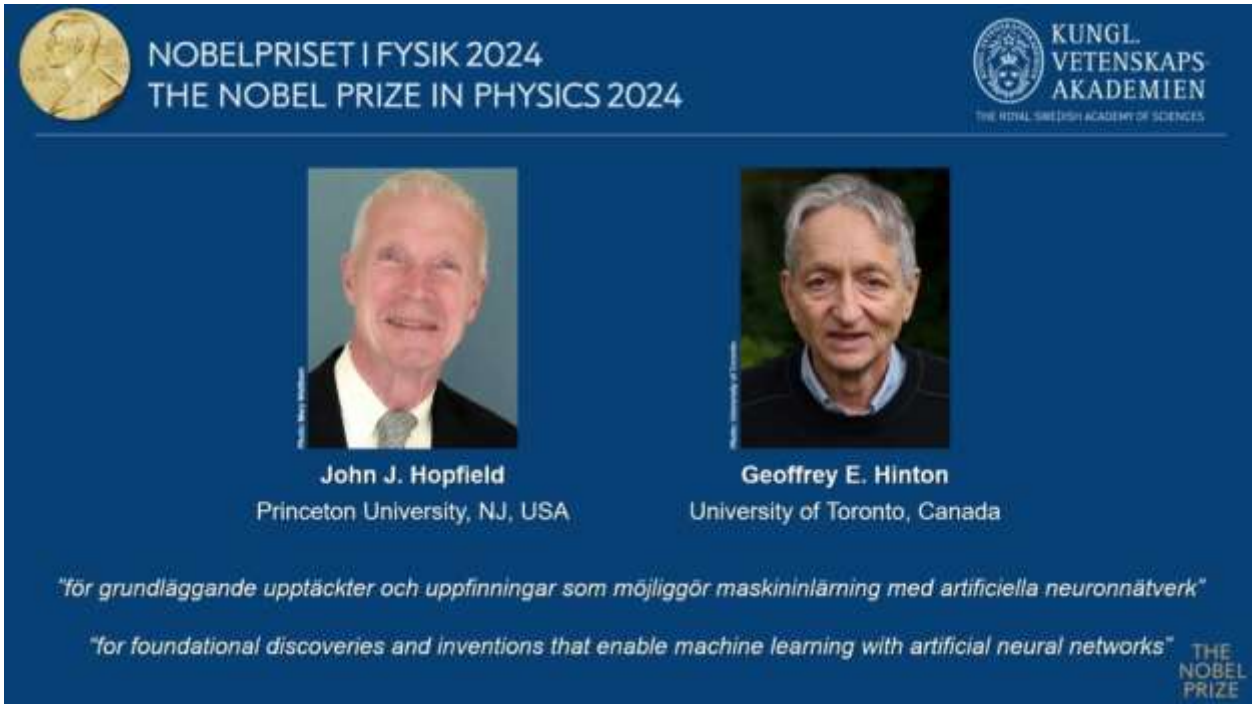
Syllabus: GS-3; Science and Technology

Context

- This article discusses about- Nobel Prize in Physics 2024: How did John Hopfield and Geoffrey Hinton 'helped lay the foundation' for machine learning?

Award Winners

- **John Hopfield (American scientist, aged 91):** Renowned in the field of biological physics, with groundbreaking contributions in creating structures that store and reconstruct information.
- **Geoffrey Hinton (British-Canadian scientist, aged 76):** Known as the **"godfather of Artificial Intelligence (AI),"** contributed to machine learning, particularly in designing neural networks that can independently discover properties in data.



Contribution to Machine Learning

Both Hopfield and Hinton used tools from physics to lay the foundation for modern machine learning, particularly deep learning and neural networks.

John Hopfield

- Created the Hopfield Network, an artificial neural network that mimics the brain's associative memory.
- It stores patterns and can recreate them even when provided with incomplete or distorted input.
- This network was essential in early AI developments to mimic human memory functions.

Geoffrey Hinton

- Developed the Boltzmann Machine, an extension of the Hopfield Network, which could learn from examples.
- The machine recognizes familiar traits in new data without direct instructions, playing a crucial role in the development of large artificial neural networks used today in deep learning.

How Does AI Mimic the Human Brain?

- The human brain processes information through perception, memory, and learning. It can recognize new things based on past experiences (associative memory).

- Modern AI systems, like neural networks, are designed to mimic these functions. While AI cannot "think" like a human, it can copy certain functions such as memory and learning.

Hopfield's Work: Associative Memory and Neural Networks

- Hopfield's network functions similarly to how humans **retrieve memories**. When exposed to stimuli like a scent, humans recall memories associated with that stimulus.
- His neural network, built in the 1980s, stored information as patterns and could recreate these patterns based on partial input.
- This breakthrough laid the foundation for networks used in AI today to process data and reconstruct information.

Hinton's Work: Boltzmann Machine

- Hinton expanded Hopfield's ideas using principles from **statistical physics to create the Boltzmann Machine.**
- This machine learns by identifying patterns in data without needing direct instructions.
- A trained Boltzmann Machine can recognize similarities in data it has not seen before, just like how humans recognize traits in someone they've never met but can link to known traits.
- It became foundational for deep learning, a key component in modern AI.

Concerns About AI

Geoffrey Hinton raised concerns about the rapid advancement of AI, particularly regarding:

- **False Information:** AI tools like ChatGPT can generate misleading content (text, images, videos), making it difficult for individuals to discern truth.
- **Job Displacement:** Hinton predicted that AI could replace many human jobs, causing societal disruptions.

Future Implications of Deep Learning and AI

- The Nobel Prize press release emphasizes the power of deep learning but warns that its future use will depend on how humans choose to apply these potent tools.
- It stresses the importance of responsible AI use to avoid potential harm.

International Big Cat Alliance (IBCA)

Syllabus: GS-3; International Institutions- Conservation efforts

Context

- The Union cabinet chaired by Prime Minister Narendra Modi approved the proposal of India to become a member country of the International Big Cat Alliance (IBCA) by signing and ratification of the Framework Agreement on the establishment of the International Big Cat Alliance (IBCA), the union environment ministry said.

About

- **Launch:** Announced in 2023 by India during the Global Tiger Summit.
- **Objective:** To conserve big cat species and their habitats globally through joint efforts by member nations.
- **Member Countries:** IBCA focuses on uniting countries that are home to the world's big cats, including:
- **Tiger Range Countries (TRC):** India, Russia, Nepal, Bhutan, Bangladesh, Thailand, etc.
- **Other Big Cat Countries:** Includes nations with populations of lions, leopards, cheetahs, jaguars, snow leopards, and pumas.

Key Features

Species Focus:

- Tiger
- Lion
- Leopard
- Cheetah
- Snow Leopard
- Puma
- Jaguar

Funding and Support:

- India pledged initial support, including a large financial contribution to foster global big cat conservation.
- Focus on technology transfer, capacity building, and exchange of best practices among member nations.

Goals and Objectives

- **Habitat Conservation:** Protect and restore big cat habitats through global cooperation.
- **Human-Wildlife Conflict Mitigation**: Implement solutions to reduce conflicts between big cats and local communities.
- **Poaching and Illegal Wildlife Trade**: Work towards reducing poaching and curbing the illegal trade of wildlife parts, especially for tigers and leopards.
- **Sustainable Development**: Promote coexistence of human development and wildlife conservation through sustainable methods.

India's Role

- **Leadership**: India plays a leading role in big cat conservation, being home to more than 70% of the world's wild tigers and having a successful track record with Project Tiger.
- **Initiatives:** India's ambitious Cheetah reintroduction program (2022) and efforts in tiger population growth align with the objectives of IBCA.

Challenges

- **Climate Change:** Impact of rising temperatures and changing landscapes on big cat habitats.
- **Funding:** Need for sustained global financial support for long-term conservation efforts.
- **Cooperation:** Ensuring consistent collaboration and data sharing among member nations.