



WHO Report on Hypertension

Context: WHO has released its first ever report on Hypertension and its impact on the World.

Key findings

- A WHO report suggests that in India, effective blood pressure management by 50% of hypertensive individuals could prevent around 4.6 million deaths by 2040.
- India has 188.3 million people with hypertension, but only 37% are aware of their condition.
- Globally, about 33% of the population has hypertension, and slightly over half have been diagnosed, according to the report.
- Approximately 4 out of every 5 people with hypertension are not adequately treated worldwide.
- Scaling up coverage could avert 76 million deaths between 2023 and 2050.
- Hypertension affects 1 in 3 adults worldwide and can lead to serious health problems like stroke, heart attack, heart failure, and kidney damage.
- The number of people with hypertension doubled from 650 million to 1.3 billion between 1990 and 2019.
- Nearly half of people with hypertension globally are unaware of their condition.

Risk Factors and Lifestyle

- Risk factors for hypertension include older age, genetics, high-salt diets, lack of physical activity, and excessive alcohol consumption.
- Lifestyle changes like adopting a healthier diet, quitting tobacco, and being more physically active can help lower blood pressure.
- Prevention, early detection, and effective management of hypertension are highly cost-effective interventions in healthcare.
- Improved hypertension treatment programs have economic benefits that outweigh costs by about 18 to 1.

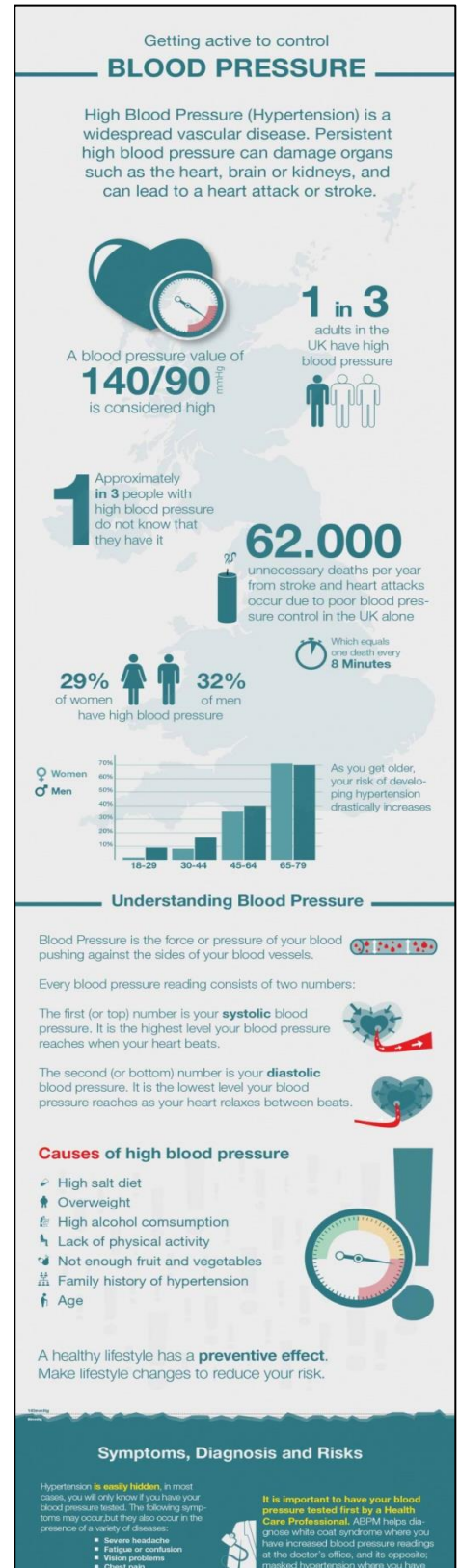
Successful Models

- Over 40 low- and middle-income countries, including Bangladesh, Cuba, India, and Sri Lanka, have improved hypertension care with the HEARTS package, enrolling over 17 million people in treatment programs.
- Countries like Canada and South Korea have implemented comprehensive national hypertension treatment programs, achieving over 50% blood pressure control in adults with hypertension.
- Effective, sustained national hypertension control programs lead to fewer strokes and heart attacks and longer, healthier lives.

Promotion of Tribal Products for North East Region' (PTP-NER 2.0)

Context: TRIFED is set to commence the second phase of the 'Promotion of Tribal Products for North East Region' (PTP-NER 2.0) scheme on September 21, 2023.

- TRIFED initiated the 'Promotion of Tribal Products for North East Region' (PTP-NER) scheme in two phases.
- Phase 1 (PTP-NER 1.0) involved reaching out to over 2500 artisans from 44 tribes. Out of these, 1056 artisans were empaneled, and 1465 were identified for training capsules.
- During Phase 1, over 3100 tribal products were procured by TRIFED. These products included textiles, forest produce, bamboo items, jewelry, pottery, paintings, and more.
- Phase 2 (PTP-NER 2.0) is set to launch from September 21 to November 10, 2023, with teams from TRIFED, North Eastern Handicrafts and Handlooms Development Corporation (NEHDC), and State Administration visiting 29 districts in the North East Region to showcase tribal artisans' cultural richness and heritage.
- The scheme aims to strengthen and promote livelihood opportunities for tribal artisans by increasing their production capacity through technology and improving their access to markets through effective marketing and attractive packaging.



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- The scheme's first phase covered eight states and 38 districts, conducting 64 Tribal Artisans Empanelment Melas (TAeM) in April-May, 2023.

PTP-NER 1.0

About	Description
Nodal Ministry	Ministry of Tribal Affairs
Type	Central Sector Scheme
Aim	Strengthen livelihood opportunities for tribal artisans through improved procurement, logistics, and marketing of tribal products from North Eastern States
States Covered	Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura, and Sikkim
Nodal Agency	Tribal Cooperative Marketing Development Federation (TRIFED)
Key Features	Facilitates backward and forward linkages through incubation support, aggregation, skill and entrepreneurship development, sourcing and procurement, marketing, transportation, and publicity
Tribal Artisans Melas	Central government organizes TAMs in April and May to showcase tribal products. Empanelment of tribal artisans is done directly or through Tribal Artisan Melas (TAMs)
Partners	North Eastern Handicrafts and Handlooms Development Corporation (NEHHDC), India Post, and North Eastern State Government Departments/Agencies

Tribal Cooperative Marketing Development Federation of India (TRIFED)

- TRIFED is a statutory body established in August 1987.
- It holds national-level cooperative status as recognized by the Government of India.
- TRIFED's focus is on institutionalizing the trade of Minor Forest Produce (MFP) and Surplus Agricultural Produce (SAP) collected or cultivated by tribal communities.
- The organization helps tribal people manufacture products for both national and international markets in a sustainable manner.
- TRIFED supports the formation of Self Help Groups (SHGs) among tribal communities and provides training to them.
- **Objectives of TRIFED:**
 - TRIFED's primary objective is to promote marketing development for tribal people, as a significant portion of their income comes from manufacturing and producing tribal products.
 - It serves as both a market developer and a service provider to empower tribal communities.
 - TRIFED assists tribal communities with tools and training to enhance their market presence and production capabilities.
 - The organization strives to establish a systematic and scientific approach to tribal development.
 - The ultimate goal is to promote the social and economic growth of different tribes in the country, who rely on their handicrafts for sustainable livelihoods.

Post Office Bill

Context: The Post Office Bill, 2023 is one of the bills to be discussed during the ongoing special session of the Indian Parliament.

- The Indian Post Office Act of 1898 is being replaced by a new bill.
- This new legislation pertains to the regulation of India Post, which functions as a government department.
- The bill abolishes the government's exclusive privilege of providing letter delivery services.
- The specific services to be offered by India Post will be determined by established rules and regulations.
- The Director General of Postal Services will be appointed to lead India Post and will have the authority to create regulations on various matters, including service tariffs and the distribution of postage stamps.
- The government will be able to intercept items sent through India Post under specific circumstances, including those related to national security and public order.
- India Post will generally not be held liable for its services, except in cases where liability is outlined in the governing rules and regulations.

Features of the Bill

- **Exclusive Privileges of the Central Government:** The Bill removes the central government's exclusive privileges for postal services, allowing India Post to issue postage stamps exclusively.
- **Prescribed Services:** The Bill grants India Post the flexibility to provide services as prescribed by the central government, eliminating the need for specific service definitions in the legislation.
- **Director General's Regulatory Powers:** The Bill empowers the Director General of Postal Services to create regulations on various aspects, including service charges and postage stamp distribution.
- **Interception of Postal Articles:** The Bill broadens the grounds for intercepting postal articles, including state security, public order, and violations of the law, with authorized officers appointed by the central government.
- **Examination of Postal Articles for Prohibited Goods or Duty:** The Bill removes the power of India Post officers to examine postal articles for prohibited goods or duty, allowing them to transfer such items to customs or specified authorities.

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- **Exemptions from Liability:** The Bill retains exemptions from liability for the government and officers, with the central government having the authority to prescribe liability through Rules.
- **Removal of Offences and Penalties:** The Bill eliminates specific offenses and penalties, except for the recovery of unpaid amounts as arrears of land revenue.

Some lesser-known facts about India Post

- The Government Savings Bank Act of 1873 (5 of 1873) was enacted in 1881 and led to the establishment of Post Office Savings Banks (POSB) in India on April 1, 1882, except in the Bombay Presidency. POSBs were not established in Calcutta or Howrah in the Bengal Presidency.
- Postal life insurance was introduced on February 1, 1884, as a welfare measure for the employees of the Posts & Telegraphs Department, following a government dispatch in 1882.
- The Indian Telegraph Act of 1885 was enacted to regulate telegraph services in India.
- The Indian Post Office Act of 1898, passed on March 22, 1898, and effective from July 1, 1898, regulated postal services. It succeeded Act III of 1882 and Act XVI of 1896.
- The Indian Wireless Telegraphy Act of 1933 governed wireless telegraphy in India.
- India witnessed the world's first official airmail flight on February 18, 1911, covering a distance of 18 kilometres in 27 minutes. Henri Pequet, a French pilot, carried approximately 6,000 letters and cards across the Ganges from Allahabad to Naini. This historic flight included a letter to King George V of the United Kingdom.
- In August 2011, India Post established a floating post office on Dal Lake in Srinagar, Kashmir.
- Telegraphy and telephony initially operated as part of the postal service before becoming separate departments.
- A unique telegraph office operated in Lhasa, the capital of Tibet, until the People's Republic of China annexed Tibet.
- The Posts and Telegraphs departments merged in 1914 but later separated again on January 1, 1985.

Primary Reference Time Clock (PRTC)

Context: C-DOT and CSIR-National Physical Laboratory have teamed up to create a NavIC-based Primary Reference Time Clock for the Telecom Sector, guaranteeing precise and traceable Indian Standard Time (IST).

- This agreement is part of the TTDF scheme by the DoT, supporting domestic telecom product development for rural areas.
- The project aims to create a device providing precise Indian Standard Time (IST) traceability within ± 20 ns to TSPs and ISPs.
- Benefits include reduced GPS dependency, enhanced cyber security, fewer call drops, and synchronized telecom services to CSIR-NPL's IST.
- Precise time synchronization is vital for cyber security in critical transactions through TSPs and ISPs.
- The initiative seeks "One nation, One time," highlighting Indian R&D potential and encouraging collaboration for "Atmanirbhar Bharat."

Importance of Synchronization in Telecommunications:

- Accurate synchronization is crucial for the proper functioning of services on digital telecommunications networks.
- Without synchronization, issues like bit slips can occur, leading to performance degradation.
- Telecommunication networks rely on primary reference clocks and synchronization units for accurate timekeeping.

Clock Synchronization in Telecommunications:

- Ideally, telecommunications network clocks should be synchronous, running at identical rates or the same mean rate with a fixed relative phase displacement within a specified range.
- In practice, they may be mesochronous but are often referred to as synchronous in common usage.

Components of Synchronization in Telecommunications:

- **Primary Reference Clock (PRC):**
 - Modern telecom networks use highly accurate primary master clocks meeting international standards for long-term frequency accuracy (better than 1 part in 10^{11}).
 - Atomic clocks or GPS disciplined oscillators are typically employed to achieve this level of accuracy.
- **Synchronization Supply Unit (SSU):**
 - SSUs play a vital role in ensuring reliable synchronization distribution within the network.
 - Key functions include filtering synchronization signals to remove higher frequency phase noise, providing multiple outputs for local equipment synchronization, and maintaining high-quality output even when the input reference is lost (holdover mode).

Quality Metrics for Synchronization:

In telecom networks, two essential parameters are used to measure synchronization performance:

- **Maximum Time Interval Error (MTIE):** Measures the worst-case phase variation of a signal concerning a perfect signal over a specific time period.
- **Time Deviation (TDEV):** Involves a statistical analysis of the phase stability of a signal over a given time period.

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NEWS IN BETWEEN THE LINES

World Alzheimer's Day



Date: World Alzheimer's Day is observed on September 21st each year.

Purpose: The day is dedicated to raising global awareness about Alzheimer's disease and related dementia conditions.

Theme: 'Never Too Early, Never Too Late.'

Alzheimer's Disease: Alzheimer's is a progressive and irreversible brain disorder characterized by memory loss, cognitive decline and behavioral changes. It is the most common cause of dementia in older adults.

Global Impact: Alzheimer's is a major public health concern worldwide, affecting millions of individuals and their families. The disease poses significant social and economic challenges.

Statue of Oneness



Today, Madhya Pradesh Chief Minister Shivraj Singh Chouhan is scheduled to unveil the 'Statue of Oneness'. In Omkareshwar, Madhya Pradesh.

Location: It is situated in Omkareshwar, Madhya Pradesh, on the banks of the Narmada River, approximately 80 km from Indore.

Monument Description: The 'Statue of Oneness' stands on a 54-foot-high pedestal and has a total height of 108 feet. It is a multi-metal sculpture.

Adi Shankaracharya's Significance: Adi Shankaracharya, who was born in Kerala, played a crucial role in connecting India culturally during a time of cultural disintegration. He traveled over 1,600 kilometers through forests to gain knowledge in Omkareshwar.

Ekatmadham Project: In addition to the statue, the Ekatmadham project will be initiated in Omkareshwar to ensure the tradition of knowledge continues for future generations.

Indian National Trust for Art and Cultural Heritage

About:

- Indian National Trust for Art and Cultural Heritage (INTACH) is a non-profit organization founded in 1984 with its headquarters located in New Delhi.
- The primary objective of INTACH is to raise awareness about India's rich cultural and historical heritage and promote its preservation.
- It is involved in the preservation and promotion of various forms of heritage, including architectural, natural, material and intangible cultural heritage.
- INTACH provides training and capacity-building programs for conservation professionals, craftsmen, and heritage preservation communities.

The organization collaborates with local authorities to focus on preserving monuments not covered by the Archaeological Survey of India (ASI).



National Human Rights Commission

About:

- National Human Rights Commission (NHRC) is an independent statutory body established under the Protection of Human Rights Act (PHRA), 1993.
- It is responsible for protecting and promoting human rights in India by reviewing and addressing human rights violations and making recommendations for their protection and promotion.
- NHRC was established in conformity with the Paris Principles (1991), adopted at the first international workshop on national institutions for the protection of human rights.
- NHRC comprises a Chairperson, five full-time Members and seven deemed Members, each with specific qualifications.
- The President of India appoints the Chairperson and Members based on the recommendations of a committee consisting of several key officials.



Recovery of RNA from Tasmanian Tiger



Recently, the Scientists have accomplished a first-time achievement by recovering RNA (ribonucleic acid) from the remains of an extinct Tasmanian tiger (thylacine).

Significance of RNA Recovery:

- RNA, a genetic material similar to DNA, was extracted from the desiccated skin and muscle of a Tasmanian tiger specimen stored since 1891.
- This marks the first instance of RNA retrieval from an extinct species, offering valuable insights into its biology.

RNA vs. DNA:

- RNA and DNA are fundamental molecules in cell biology.
- DNA carries genetic code, while RNA carries genetic information from DNA and regulates protein synthesis and cell metabolism.

Tasmanian Tiger Background:

- The Tasmanian tiger was a carnivorous marsupial resembling a wolf with distinctive stripes.
- Human arrival in Australia and European colonization led to their extinction.
- The last-known Tasmanian tiger died in 1936.

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Mithun



What is Mithun?

Mithun is a distinctive bovine species native to Northeast India. It is a semi-domesticated animal with cultural and economic significance in the region.

Economic Potential Unleashed:

- Adult mithun's impressive weight range: 400-650 kg.
- Mithun can be sold for Rs 2 lakh or more.
- The meat's value soars at Rs 300 per kg.

Conservation Complexity:

- Food Safety and Standards Authority of India (FSSAI) recognition as a "food animal."
- Vision of establishing it as "premium meat" in the international market.

Tharosaurus Indicus



Recently, the IIT Roorkee scientists studied dinosaur fossils from the Middle Jurassic era in the Thar desert (Jaisalmer Basin) by the Geological Survey of India.

About Tharosaurus Indicus:

- Tharosaurus Indicus belongs to the family Dicraeosauridae and the superfamily Diplodocoidea.
- These fossils are the oldest known diplodocoid sauropod fossils in the world.
- The dinosaur's name, "Tharosaurus indicus," reflects its Indian origin, with "Tharo" derived from the Thar desert.
- Sauropods, in general, are known for their colossal size, with some exceeding 100 feet, but dicraeosaurid sauropods like Tharosaurus were smaller.
- These dinosaur fossils date back to the Middle Jurassic period, making them approximately 167 million years old.
- Sauropods first appeared during the Jurassic period, around 200 million years ago, and continued to exist until the late Cretaceous period, when dinosaurs went extinct.

Place in News

Canada

Canada (Capital: Ottawa)

Recently, the United States and Australia have expressed their support for Canada's call to seek India's cooperation in an ongoing probe.

Location: Canada is located in North America and is the second-largest country in the world by total area.

Bordering Countries: Canada shares its longest international land border with the United States.

Geographical Features:

Coastline: Canada boasts the world's longest coastline, stretching along the Atlantic Ocean, the Pacific Ocean, and the Arctic Ocean.

Lakes: Canada is home to numerous lakes, including the Great Lakes, which are shared with the United States.

Mountain Ranges: The Canadian Rockies, Coast Mountains, and Appalachian Mountains are significant mountain ranges in Canada.

Rivers: Canada has many major rivers, including the St. Lawrence River, the Mackenzie River and the Fraser River.



POINTS TO PONDER

- ❖ **What are the two scientists who discovered Alzheimer's disease.** - Alois Alzheimer and Emil Kraepelin
- ❖ **In which year did the ownership of The Hindu pass on to Kasturi Ranga Iyengar?** -April 1905
- ❖ **The graph where a star's brightness versus its color is plotted, and main sequence stars appear along a prominent diagonal band, is called what?** -Hertzsprung-Russell (H-R) Diagram
- ❖ **Who was the German engineer responsible for building the first train powered by electricity?** -Werner von Siemens
- ❖ **On which specific day does Samvatsari, the last day of Paryushan, fall, and what significant event is associated with it in Jainism?** - Ananth Chaurdsashi, Nirvana

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