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## Prelim Bits 01-07-2022 | UPSC Daily Current Affairs

### Diabetes

*The International Diabetes Foundation estimates that 537 million people across the world are afflicted with diabetes.*

- Diabetes is a chronic (long-lasting) health condition that affects how our body turns food into energy.
- Most of the food we eat is broken down into sugar (glucose) and released into your bloodstream.
- When blood sugar goes up, it signals the pancreas to release insulin.
- Insulin allows the blood sugar into the body's cells for use as energy, and then stores the rest in the liver and other organs for future use.
- If a person has diabetes, either their body does not make enough insulin or can't use the insulin it makes as well as it should.
- When there isn't enough insulin or cells stop responding to insulin, too much blood sugar stays in your bloodstream. Over the time, this can cause serious health problems.

### Types of Diabetes

- There are three main types of diabetes - Type 1, Type 2, and Gestational diabetes (diabetes while pregnant).
- Type 1 diabetes is largely genetic in nature, while Type 2 depends on the lifestyle of the individual.
- Approximately 5-10% of the people who have diabetes have type 1, while 90-95% of people with diabetes have type 2.
- **Type 1 diabetes** is thought to be caused by an autoimmune reaction that stops your body from making insulin.
- Symptoms of type 1 diabetes often develop quickly. It is usually diagnosed in children, teens, and young adults.
- Injecting molecule insulin every day will be needed for type 1 diabetes.
- Currently, no one knows how to prevent type 1 diabetes.
- **Type 2 diabetes** is caused when your body does not use insulin well and can't keep blood sugar at normal levels.
- It is largely lifestyle-based and does not need insulin injection.
- It is age-related; it often develops at the age of 45 and beyond.
- It develops over many years and is usually diagnosed in adults (but more and more in children, teens, and young adults).
- It's seen more among urban populations than in rural populations.
- **Gestational diabetes** is caused by the insulin-blocking hormones that are produced during pregnancy.

- This type of diabetes only happens during pregnancy. It is often seen in people with preexisting pre-diabetes and a family history of diabetes.
- About 50% of people diagnosed with gestational diabetes go on to develop type 2 diabetes.

An ICMR-funded study has estimated that there are about 77 million diabetic patients across India today.

## Prevention of Type 2 Diabetes

- While the Type 1 Diabetes is not preventable, the Type 2 Diabetes can be prevented if an individual makes lifestyle changes, like
  1. Losing small amount of weight,
  2. Eating a healthy diet,
  3. Reducing total carbon intake in the food, and
  4. Doing physical exercise regularly.
- Brisk 30-minute-walk five times a week, or cycling for 10 minutes a day, or weight-lifting or yoga can also help prevent Type 2 diabetes.
- To fight diabetes, it is best to consume a high-fibre diet, with low carbohydrate intake.
- In India, people who eat rice as staple food can add wheat (which has higher fibre content) to their diets, along with high-protein grains, maize, carrots, cabbage, pulses and vegetables in their daily diets.
- For non-vegetarians, eggs, fish and mutton offer high fibre and proteins.

## Reference

1. <https://www.thehindu.com/sci-tech/fighting-the-type-2-diabetes-pandemic/article65560993.ece>
2. <https://www.cdc.gov/diabetes/basics/diabetes.html>
3. <https://www.healthline.com/health/diabetes/types-of-diabetes>

## Yasuni National Park

*Decades of oil drilling in the Yasuni national park is deteriorating the area.*

- The Yasuni National Park and Biosphere Reserve is a **Humid Tropical Rain Forest** located in the Amazon region of **Ecuador**.
- Established in 1979, the Yasuní National Park is one of the world's most biodiverse regions.
- Yasuni National Park is home to 40% of Ecuador's crude oil reserves - in the Ishpingo-Tiputini-Tambococha (ITT) oil fields.
- Exploring the region's oil reserves has threatened many native species and habitats, as well as the lifestyle of the indigenous Waorani people.
- In 2007, Ecuador initiated a unique plan to preserve a portion of the forest within its borders, which lies in Yasuní National Park.
- Ecuador agreed to forgo development of heavy oil deposits beneath the Yasuní rainforest if other countries and private donors contributed half of the deposits' value to a UN-administered trust fund for Ecuador.
- In 2013, however, Ecuador abandoned the plan.

## Reference

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[ty/article6556971ece](https://www.britannica.com/place/Yasuni-National-Park)

2. <https://education.nationalgeographic.org/resource/yasuni-national-park>
3. <https://en.unesco.org/biosphere/lac/yasuni>
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## ISRO's POEM Platform

*Besides placing three Singaporean satellites in precise orbit, the Indian Space Research Organisation (ISRO) has also successfully launched the PSLV Orbital Experimental Module (POEM) of the PSLV-C53 Mission.*

PSLV-C53 is the second dedicated commercial mission of NewSpace India Limited (NSIL). It is designed to orbit DS-EO satellite. This is the 55th mission of PSLV and 15th mission using PSLV-Core Alone variant.

- The ISRO's Polar Satellite Launch Vehicle (PSLV) is a 4-stage rocket where,
  1. The first 3 spent stages fall back into the ocean, and
  2. The final stage (PS4) ends up as space junk, after launching the satellite into orbit.
- The PSLV Orbital Experimental Module (POEM) is an **orbital platform** that performs in-orbit scientific experiments using the spent final stage (PS4) of the PSLV.
- The 'POEM' is a technological upgrade over what ISRO had initially attempted in 2019, during the launch of PSLV-C44 mission.
- For the first time, in PSLV-C53 mission, the PS4 stage would orbit the earth as a "stabilized platform" to perform experiments. The PS4 stage is carrying six payloads.
- **Stabilization** - POEM has a dedicated Navigation Guidance & Control (NGC) system for attitude stabilisation, which stands for controlling the orientation of any aerospace vehicle within permitted limits.
- The NGC will act as the platform's brain to stabilize it with specified accuracy.
- POEM will derive its power from solar panels mounted around the PS4 tank, and a Li-Ion battery.
- It will navigate using 4 sun sensors, a magnetometer, gyros & NavIC.
- It carries dedicated control thrusters using Helium gas storage. It has been enabled with a tele-command feature.

## Reference

1. <https://indianexpress.com/article/explained/everyday-explainers/explained-what-is-isros-poem-platform-8001754/>
2. <https://www.isro.gov.in/launcher/pslv-c53-ds-eo-mission>
3. <https://www.wionews.com/science/in-a-first-isros-poem-will-remain-stable-in-space-and-facilitate-science-experiments-492950>

## Prosopagnosia

- Prosopagnosia, also known as **face blindness**, is a cognitive disorder.
- In this **neurological condition**, the patient finds it difficult to recognise familiar faces and is unable to recognise people who he/she has known earlier, by face.
- However, the patient will be able to recognise another individual through voice and/or other gestures.

- **Causes** - This condition arises when there is some problem in the Temporo-Occipital area of the right side of the brain.
- There are 2 types of prosopagnosia:
  1. Developmental prosopagnosia - where a person has prosopagnosia without having brain damage. It is caused by congenital conditions
  2. Acquired prosopagnosia - where a person develops prosopagnosia after brain damage, often following a stroke, hampered blood circulation, haemorrhage or head injury.
- The occurrence of the disorder could also be attributed to degenerative conditions, including Alzheimer's disease, Parkinson's disease, but this happens very rarely.
- **Risk factors** - People develop conditions like brain haemorrhage and stroke mostly after the age of 50.
- Those who suffer from hypertension, diabetes and smokers, too, develop a high risk of developing prosopagnosia.
- **Symptoms** - This varies across patients.
- Since the disorder involves the Occipito Temporal area, it can lead to some symptoms like loss of vision.
- Individuals might experience drowsiness due to edema or swelling in the region.
- **Treatments** - The treatment of this cognitive disorder will be in accordance with the treatment of the underlying cause.
- If the disorder is caused by a stroke, then that has to be contained first.
- If the underlying cause is a tumour, then an operation, chemotherapy or radiotherapy can be used.
- If it is caused by haemorrhage, then it will have to be treated accordingly.

## Reference

1. <https://indianexpress.com/article/lifestyle/health/shenaz-treasury-face-blindness-cause-treatment-7998952/>
2. <https://www.nhs.uk/conditions/face-blindness/#:~:text=Prosopagnosia%2C%20also%20known%20as%20face,or%20all%20of%20their%20life.>

## iGOT Karmayogi

*Ministry of Road Transport and Highways (MoRTH) has urged its officials to register for the service of the e-learning platform iGOT Karmayogi.*

- **Integrated Government Online Training (iGOT)** platform is an online training platform launched by the Department of Personnel and Training.
- It was launched for the capacity building of frontline workers to tackle the pandemic.
- It is hosted on the Digital Infrastructure Knowledge Sharing (DIKSHA) platform of the Human Resources Development Ministry.
- **iGOT Karmayogi** is an e-learning platform developed as an integral part of the Digital India stack for **capacity building of all government employees**.
- It is designed for providing necessary digital infrastructure to upload courses and conduct online training.
- It will allow the ministry to provide training resources and opportunities to its employees at a hitherto impossible scale.
- **Mission Karmayogi** is the biggest bureaucratic reform initiative that was launched in 2020.
- It is aimed at building capacity to make government employees more creative, proactive, professional and technology-enabled, ending the culture of working in silos and ensuring transparency.

- **Related Links** - [Mission Karmayogi](#)

## Reference

1. <https://www.newindianexpress.com/nation/2022/jul/01/e-learning-platform-igot-karmayogi-ready-to-give-lessons-to-babus-2471673.html>
2. <https://dopttrg.nic.in/igotmk/>
3. <https://www.dnaindia.com/india/report-centre-launches-igot-training-module-for-frontline-covid-19-warriors-2820319>



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