Prelim Bits 29-03-2022 | Daily UPSC Current Affairs

Alopecia areata

- Alopecia areata is a common non-contagious **auto-immune** disorder that often results in unpredictable hair loss in patches.
- Sometimes, it can lead to the complete loss of hair on the scalp (alopecia totalis) or, in extreme cases, the entire body (alopecia universalis).
- It may also develop slowly and occur again periodically or repeatedly after years between instances.
- The condition can affect anyone regardless of age and gender, though most cases occur before the age of 30.
- **Causes** - The condition is developed after the immune system attacks the hair follicles, resulting in clear patches of hair loss.
- It mostly occurs in people who have a family history of auto-immune conditions, such as diabetes and thyroid.
- The most common causes of baldness in both men and women.
    1. Hereditary or genetic factors and Aging
    2. Loss of essential nutrients & improper diet
    3. Psychological pressure and anxiety
    4. Hormonal changes during puberty, pregnancy, and menopause
    5. Chronic illnesses or auto-immune diseases
    6. Hormonal disorders such as polycystic ovary syndrome (PCOS), which affects women of reproductive age
    7. Environmental factors like pollution, dust, etc.
- **Treatment -** There is no cure for alopecia areata. But, it can be treated using both medical and natural treatment methods.
- The most common medical treatment is the use of **corticosteroids**, an anti-inflammatory drug that can suppress the immune system.
- These are mostly commonly administered through local injections, topical ointment application, or orally. There is also **light therapy**.
- Substances such as zinc and biotin, aloe vera drinks and topical gels, and onion juice are sometimes recommended to be rubbed into the scalp.
- Oils like tea tree, rosemary, lavender, and peppermint, as well as coconut, castor, olive and jojoba oil can be helpful.
- **Anti-inflammatory diet**, which mainly includes meats and vegetables, scalp massages, herbal supplements such as ginseng, green tea, and Chinese hibiscus, etc, are also used to treat alopecia areata.

Reference

1. https://indianexpress.com/article/explained/everyday-explainers/explained-alopecia-areata-auto-immune-disorder-jada-pinkett-smith-7840658/
2. https://www.medicalnewstoday.com/articles/70956
3. https://www.aad.org/public/diseases/hair-loss/types/alopecia

Articulated All-Terrain Vehicles

The Indian Army has issued a Request For Information (RFI) for the supply of Articulated All-Terrain Vehicles to be deployed in Ladakh and Kutch.

- Articulated All-Terrain Vehicle is a twin cabin, tracked, amphibious carrier for off road mobility.
- The special design of this equipment **exerts low ground pressure** on the soil and a **pull-push mode of locomotion** between two cabins facilitates mobility over varied terrains like **snow, desert and slush**.
- A ballistic protection in the cabin body ensures protection to troops travelling in it from small arms fire.
- These vehicles are very useful to move troops or supplies in snow-bound terrains and in marshy/sandy environments.
- They can reach where wheeled vehicles cannot due to deep snow, slush or marshy terrain and can be very effective for patrolling and rapid deployment in operational situations.
- **Usage** - The RFI document specifies that 12 vehicles need to be supplied to Nimu in Ladakh (snow-bound areas) and six to Bhuj in Gujarat (marshy terrain of the Rann of Kutch).
- The RFI document specifies that the vehicle should be able to perform at heights of 18,000 feet in glaciated and snow bound conditions and in salty/dry marshes.

Reference

1. https://indianexpress.com/article/explained/explained-articulated-all-terrain-vehicles-indian-army-7840545/
2. https://www.mod.gov.in/sites/default/files/rfp3252pdf

Gambusia Fish May Do More Harm in the Long-run

- Mosquitofish or *Gambusia affinis* are released into ponds and rural areas, where they feed on mosquito larvae.
- To check the control the disease-spreading mosquito menace, district administrations of certain Indian places started releasing mosquitofish into local water bodies.
- *Gambusia affinis* (western mosquitofish) is a species of freshwater fish of the genus Gambusia.
- This fish is described as a very hardy fish and can adapt to wide variations in temperature as well as to chemical and organic content of the water but does not tolerate very high organic pollution.
- **Guidelines** - According to the National Center for Vector Borne Disease Control, this particular species has been in use in India since 1928.
- [National Center for Vector Borne Disease Control is an umbrella programme for prevention and control of vector-borne diseases.]
- It further states that a single full-grown fish eats about 100 to 300 mosquito larvae per day.
- It has advised states in the past to upscale the use of this fish as a biological control method in rural areas.
- **Problems** - Researchers say that the introduction of Gambusia fish into local waterbodies may actually be harmful in the long run.
- The IUCN lists the *Gambusia affinis* among 100 of the world's worst **invasive alien species.**
- Introduced as a biological control of mosquitoes initial in the early last century, it is a pest in many waterways around the world.
- It is no more effective than native predators of mosquitoes and that one of the main avenues of its spread is continued, intentional release by mosquito-control agencies.

- Mosquitofish are **difficult to eliminate** once established, because female Gambusia can get impregnated and lay fries whenever the situation is favourable.
- Also, the Gambusia can delay or prepone their sexual maturation and alter their body size based on the environment.
- Gambusia fish are often referred to as **plague minnows** due to their explosive spreading, higher reproduction rate and their negative impact on local ecosystems.
- After the introduction, the Gambusia fish hijacks the food web and breaks the existing cycle, causing an imbalance in the ecosystem.
- The fish also negatively affect the aquaculture industry as they prey on the eggs of and compete for resources with economically-important fish.

Reference

https://scroll.in/article/1020480/uttar-pradeshs-use-of-gambusia-fish-to-check-dengue-may-do-more-harm-in-the-long-run

PAHAL Scheme

Under PAHAL Scheme, during the year 2020-21, the Government of India has reimbursed an amount of Rs. 23666 crore to Oil Marketing Companies (OMCs) as subsidy.

Under PAHAL Scheme of Ujjwala Yojana, the subsidy is paid to consumers by OMCs and the same is reimbursed by Government to OMCs.

- Pratyaksh Hanstantrit Labh (PAHAL) or Direct Benefit Transfer of LPG (DBTL) scheme was first launched in 2013 and was modified in 2015.
- It aims to **reduce diversion & eliminate duplicate LPG** connections.
- It required the consumer to mandatorily have an Aadhaar number for availing LPG Subsidy.
- Under the PaHaL scheme, LPG cylinders are sold at market rates and entitled consumers get the subsidy directly into their bank accounts.

Reference

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2. https://digitalindia.gov.in/content/pahal-dbtl#:~:text=The%20PAHAL%20(DBTL)%20aims%20to,directly%20into%20their%20bank%20accounts.
3. https://vikaspedia.in/social-welfare/direct-benefit-transfer/direct-benefit-transfer-of-lpg-dbtl-scheme
4. http://petroleum.nic.in/dbt/whatisdbtl.html

Zojila Pass

The deadline by 2 years for all-weather connectivity with Ladakh through 18-km-long multiple tunnels to cross the Zojila pass.

- Located within the Himalayas mountain range, Zojila or Zoji La is a high mountain pass at an elevation of 3.528m above the sea level.
- It is located in the Kargil district of Ladakh, India.
- The Zozila Pass is frequently named as the entrance to Ladakh in Jammu and Kashmir.
- The pass is situated in the principal Himalayan Mountain Range on the Srinagar-Leh Highway or National Highway 1D (NH1D).

Reference

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2. https://www.dangerousroads.org/asia/india/111-zoji-la-pass-india.html

