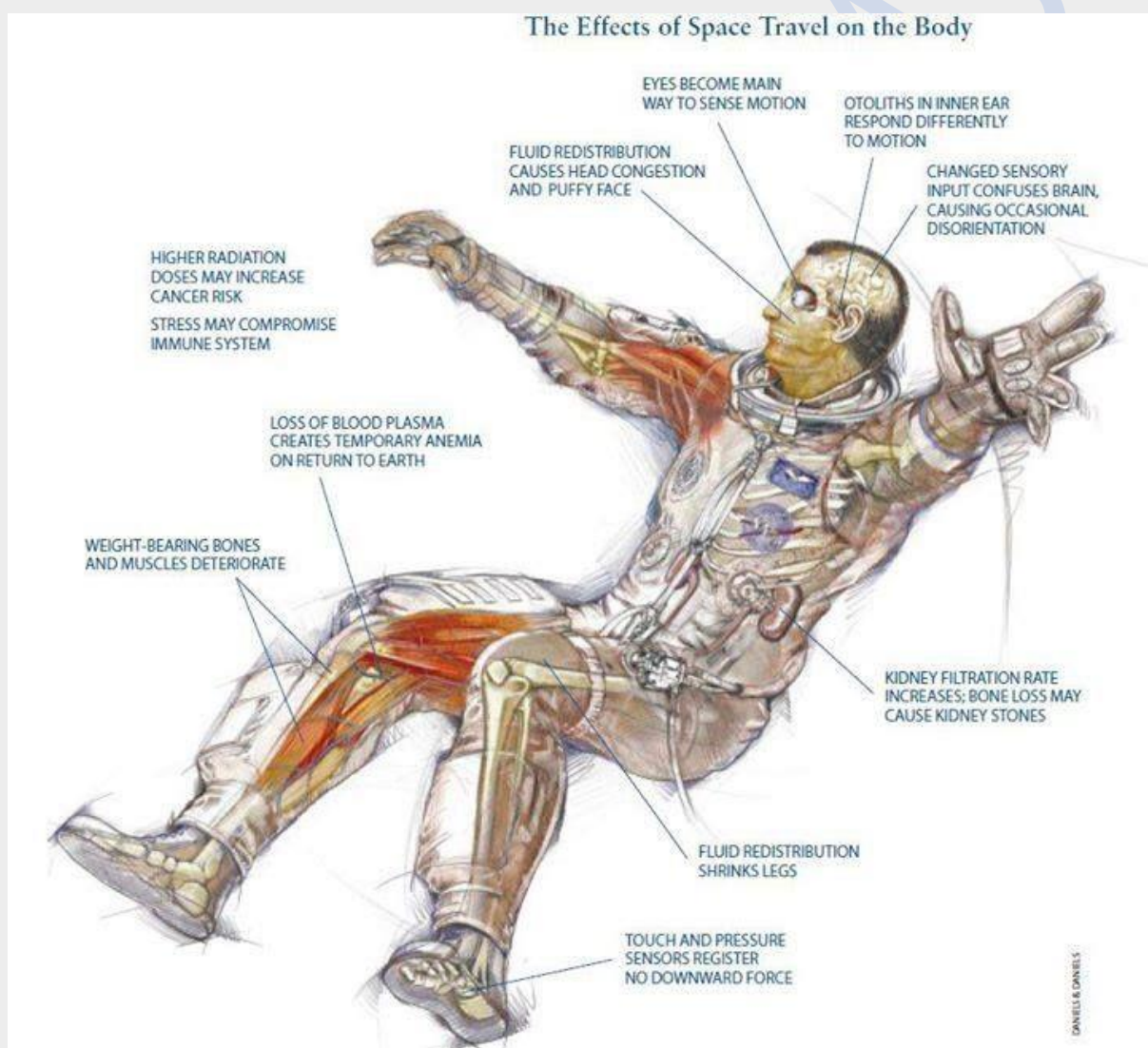


1. How do astronauts recoup after space stay?

Why Now?

On March 19, a SpaceX capsule bearing astronauts Sunita Williams, Barry Wilmore, Aleksandr Gorbunov (Mr. Gorbunov is from Russia's Roscosmos), and Nick Hague splashed down in the Gulf of Mexico. The four were returning from the International Space Station (ISS). Of them, Ms. Williams and Mr. Wilmore stayed for nine-month on the ISS. NASA — which employs Mr. Hague, Ms. Williams, and Mr. Wilmore — has a regimen in place for the trio to help re-adapt to gravity.



How does extended spaceflight affect humans?

Microgravity affects the body in many ways as mentioned in the diagram above, including allowing fluids to flow more easily towards the brain, reducing muscle tension, and lowering bone density. Astronauts thus maintain a strict routine of exercises and dieting onboard the ISS, tailored among other things to help work the body and engage the brain.

Impact varies

While more and more people have gone to space with each new decade, the data about the effects of spaceflight on their bodies and minds is insufficient to make proper conclusions. This is because the number of spacefaring individuals is still relatively small; human bodies differ on a variety of parameters; and missions have different spaceflight profiles. There are also indications that extended spaceflight can affect parts of male and female bodies differently, but researchers have said they don't yet have enough data to confirm.

What does physical rehabilitation entail?

Physical therapy ensures crew members' bodies are able to readjust to the earth's gravity without injury.

Physiotherapist may assess the need for massage therapy for crew members from the day of their return. In the subsequent week, crew members undergo "physical reconditioning" exercises for two hours every day: warm-up exercises on elliptical, rowing, and bicycle trainers; tasks to exercise the back and lower limbs and to improve gait; and stretching. In the week after, the exercises expand to include jogging and playing ball-games in water.

Relevance: GS Prelims; Science & Technology

Source: The Hindu

2. Grok AI

Elon Musk Grok AI

The social media platform X (formerly Twitter) has been abuzz in India for the past week over the responses its built-in AI chatbot, Grok 3, has been giving. Apart from its politically colourful replies, Grok is also getting attention for its sarcastic tone.



The name, Grok

Grok means "to understand profoundly and intuitively". It comes from American writer Robert A Heinlein's 1961 novel *Stranger in a Strange Land*. The book's protagonist, Valentine Michael Smith, was born on Mars and raised by Martians. When he comes to Earth as an adult, he brings in words from the Martian language — one of

which was 'Grok'.

The tone

Grok was created by X.AI, a start-up launched by Musk. On November 3, 2023 X.AI put out a blog post announcing Grok, and saying that those who "hate humour" should not use it.

Grok has also come under scrutiny for some of its 'woke' replies (taking positions loosely considered left-liberal), despite Musk criticising AI rival ChatGPT for alleged wokeness. Musk has said this is tough to remove, because there is so much woke content on the internet.

Relevance: GS Prelims; Science & Technology

Source: Indian Express

3. Lohiaite: Followers of Ram Manohar Lohia

Background



March 23 marked the 115th birth anniversary of one of the tallest leaders of 20th century India, Dr Ram Manohar Lohia (1910-1967). Leaders across political parties, from Prime Minister Narendra Modi to Samajwadi Party leader Akhilesh Yadav, paid their respects.

Hailing from Uttar Pradesh, Lohia completed his higher education in Europe. He returned to India in 1932 and joined the independence movement as part of the Indian National Congress, but later critiqued the party and its leaders for doing little to dismantle caste and class hierarchies.

Many decades after his passing and even in a drastically different political landscape, parties have continued to echo his espousal of social justice and

describe themselves as 'Lohiaites'.

What Was Lohia's Ideology?

Lohia formed the Congress Socialist Party (CSP) within the Congress in 1933. It became an independent party in 1947, known as the Socialist Party. Later iterations continued to emphasise democratic socialism as their core philosophy.

He also shared some of Mahatma Gandhi's ideals, including opposition to capitalism, and promoting the village economy. However, their views greatly diverged on the question of caste. While acknowledging the inequalities of the caste system, Gandhi sought to reform it from within, while Lohia staunchly believed that the entire system had to be dismantled.

He propounded "Seven Revolutions" – against gender inequality; against political, economic and spiritual inequalities based on the colour of the skin; against inequalities between backward and advanced groups or castes and in favour of special opportunities for the backward castes; etc.

In his opposition to foreign rule and Western imperialism, Lohia was arrested more than 25 times, including during the freedom movement and the Goa Liberation Movement.

What Explains Lohia's Continued Political Appeal?

From the late 1960s, the Congress party's hitherto unchallenged dominance of electoral politics began weakening. Leadership struggles post Jawaharlal Nehru's death, increasing factionalism and other factors contributed to the rise of non-Congress leaders and parties.

Veteran socialist leader JP Narayan shared many commonalities with Lohia, including his call for a Total Revolution. He re-emerged as a key figure in the 1970s and criticised the Indira Gandhi government. In the wake of the Emergency rule she imposed in 1975, the first non-Congress government came to power.

Many young leaders who participated in anti-Congress movements were inspired by the likes of JP and Lohia. They came from non-elite backgrounds and emerged as key political figures in multiple states — like Karnataka Chief Minister Siddaramaiah, Bihar Chief Minister Nitish Kumar, and others.

Relevance: GS Prelims & Mains Paper II; Governance

Source: Indian Express

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