

AJO-Neo: Device to Measure Neonatal Bilirubin Level

Why in News

Recently, researchers from the S.N. Bose National Centre For Basic Sciences (SNBNCBS), Kolkata have developed a device called "AJO-Neo" to measure neonatal bilirubin level.

 SNBNCBS is an autonomous research Institute under the Department of Science and Technology (DST), Government of India.

Key Points

Description:

- AJO-Neo is a non-contact and non-invasive spectrometry-based technique for measurement of neonatal bilirubin level without limitations of other available bilirubin meters.
- Bilirubin is a yellowish substance in the blood. It forms after red blood cells break down, and it travels through liver, gallbladder, and digestive tract before being excreted.
 - It is a necessary process in the **body's clearance** of waste products that arise from the destruction of aged or abnormal red blood cells.

Significance:

- The screening of bilirubin level in new-borns is necessary to reduce incidents of a type of brain damage called kernicterus that can result from high levels of bilirubin in a baby's blood.
 - Kernicterus leads to Neuro-psychiatry problems in neonates.

Advantages:

- It is reliable in measuring bilirubin levels in **preterm, and term neonates** irrespective of gestational or postnatal age, sex, risk factors, feeding behavior or skin color.
- The device delivers an instantaneous report (about 10 seconds) to a concerned doctor.
 - The conventional "blood test" method takes more than 4 hours to generate the report.

Source: PIB