



# 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](#)**