



Hypoglycaemia and Acute Encephalitis Syndrome

In the outbreak of acute encephalitis syndrome (AES) in Bihar, witnessing around 350 cases and 103 deaths till now, **most of these deaths have been attributed to hypoglycaemia**, or low blood sugar.

- Hypoglycaemia is a commonly seen sign among patients of AES, and the link has been the subject of research over the years.

About AES

- [Acute Encephalitis Syndrome \(AES\)](#) is a broad term involving several infections, and affects young children. The syndrome can be caused by viruses, bacteria or fungi. In India, the most common cause is the virus that causes Japanese Encephalitis (JE).
- The syndrome is also caused by infections such as **scrub typhus, dengue, mumps, measles**, and even **Nipah or Zika virus**.

How is Hypoglycaemia linked to AES?

- Hypoglycaemia is not a symptom but a sign of AES. The combination of AES with hypoglycaemia is unique to Muzaffarpur (Bihar), Vietnam and Bangladesh.
- In Bihar, convulsions in children (which is AES) are found in combination with hypoglycaemia. This hypoglycaemia is caused by malnourishment and lack of proper diet.
- **Methylene Cyclopropyl Glycine (MCPG)** which has been known to be a content of litchi fruit has been shown to cause hypoglycaemia in experimental animals.
- When litchi harvesting starts in May, it is common for children to feed on fallen litchis and sleep without food. The toxin in litchi lowers blood sugar level during the night, and these children are found unconscious in the morning.
- The attributing factors to **hypoglycaemic AES** are **malnutrition, heat, lack of rain, and entero-virus**.
- A team from the Centers for Disease Control, Atlanta, and Christian Medical College, Vellore, has concluded that heat, humidity, unhygienic conditions and malnutrition, unique to these areas, together contribute to the rise in AES.
- Incidence is higher in litchi fields around which malnourished children live.

How is the government tackling AES?

- The Bihar government introduced **free vaccines** at all primary health centres. The current coverage is 70%.
- The central and state governments have conducted **awareness campaign** since February asking people not to expose their children to sun, ensure a proper diet and increase fluid intake.
- **Early hospital referral** and standard treatment for convulsions, high fever and vomiting can save lives.

