

1. **encephalitis** (noun) – it is a sudden sudden inflammation (swelling) of the brain.
2. **encephalopathy** (noun) – a severe brain disease/malfunction caused by the toxins in the blood/viral infection.
3. **foresight** (noun) – forethought, anticipation, planning.
4. **toxin** (noun) – poison.
5. **hypoglycin A** (noun) – toxins (poison) contained in the unripe ackee/achee/lychee fruit.
6. **undernourished** (adjective) – not having enough nutrients/food essential for good health; lean; slim.
7. **intervention** (noun) – action taken to improve medical disorder.
8. **infuse** (verb) – add, introduce, impart.
9. **dextrose** (noun) – the name of a simple sugar that is made from corn and is chemically identical to glucose, or blood sugar.
10. **onset** (noun) – start, beginning, appearance.
11. **appalling** (adjective) – very bad, awful, terrible.
12. **come up with** (phrasal verb) – produce, propose/put forward, submit/recommend.
13. **point to** (verb) – indicate, suggest, denote.
14. **heat wave** (noun) – (a long period of) hot weather, hotness, humidity.
15. **overnight** (noun) – immediately, very quickly, instantly.
16. **well-nourished** (adjective) – well-fed, healthy; having enough nutrients/food essential for good health.
17. **grave** (adjective) – serious, important, significant.
18. **seizure** (noun) – sudden illness, especially a stroke.
19. **reserve** (noun) – stock, store, reservoir.
20. **glycogen** (noun) – a polysaccharide that is the principal storage form of glucose (Glc) in animal and human cells.
21. **midway** (adjective) – halfway, in the middle, at the mid point.
22. **derangement** (noun) – the state of being mentally ill and unable to think or act in a controlled way; mental disorder.
23. **hypoglycaemic** (adjective) – relating to low blood sugar.
24. **golden hour** (noun) – it is also known as golden time, refers to the period of time following a traumatic injury during which there is the highest likelihood that prompt medical and surgical treatment will prevent death.

The litchi link?: on Bihar encephalitis deaths

In Bihar, authorities failed at several levels in preventing deaths due to encephalopathy

The death of over 90 children in about a month in Muzaffarpur district of north Bihar due to low blood sugar level could have easily been prevented with some foresight and early care. Six years ago, a two-member team invited by the State government suspected that a toxin (methylenecyclopropylglycine, MCPG, also known as hypoglycin A) naturally present in litchi fruit was responsible for the mysterious deaths; a large Indo-U.S team

confirmed it in 2017. The two-member team found that undernourished children who ate the fruit during the day and went to bed on an empty stomach presented with serious illness early the next morning. In 2014, the team saved 74% of sick children through a simple intervention — infusing 10% dextrose within four hours of the onset of illness. The recommended prevention strategy — making sure that no child goes to bed without eating a meal — adopted from 2015 ensured a sharp drop in the number of children falling sick. It is appalling that this year the government failed to raise awareness on this strategy. Worse, some doctors came up with alternative explanations for the illness and even pointed to the heat wave.

While the most common causes of acute encephalitis syndrome are traced to a bacteria or a virus and it takes at least a few days before presenting serious symptoms and deaths, the toxin in litchi causes serious problems overnight. While well-nourished children who eat the fruit remain unaffected even if they go to bed on an empty stomach, the under-nourished ones are at grave risk. Blood glucose falls sharply causing severe brain malfunction (encephalopathy), leading to seizures and coma, and **death** in many cases. This is because under-nourished children lack sufficient glucose reserve in the form of glycogen and the production of glucose from non-carbohydrate source is blocked midway leading to low blood sugar level. This causes serious brain function derangement and seizures. While 5% dextrose infusion serves the purpose in cases of general low blood sugar, children suffering from acute hypoglycaemic encephalopathy can be saved only by infusing 10% dextrose within four hours of illness onset. Recovery is rapid and complete if 10% dextrose is infused within the golden hours. Infusing a higher concentration of dextrose is necessary to completely stop the attempt by the body to produce glucose from non-carbohydrate source. If encephalopathy was indeed the cause of death, this simple medical intervention could have saved many lives. Dextrose infusion could have been done even as children were being transported to hospitals in ambulances. The failures were at the stages of both prevention and care.