

Dietary Management



The ketogenic diet is a medically supervised diet that may be a suitable treatment option for some children and adolescents with epilepsy who do not respond to medication. Some controlled trials show evidence that the ketogenic diet is effective, although how much seizure activity is reduced will vary. The diet is high fat (80%), low carbohydrate (5%), with controlled protein (15%) diet that ensures the body will burn fat rather than carbohydrate and protein for energy, thus producing ketones. The build-up of ketones is maintained through a strict meal plan.

Before starting the diet, the child needs to be assessed by a paediatric neurologist and other experts at a ketogenic diet clinic (generally in a hospital setting), to determine if they are a suitable candidate. If they are deemed suitable, they can be put on the ketogenic diet during a 4-5 day hospital stay, where a ketogenic formula may be administered. The child will be looked after by a team of experts, and tests will be performed on admission and throughout the stay to monitor their progress. Parents are provided with information, advice and support to understand the diet and maintain it when their child is discharged from hospital.

The ketogenic diet is generally only suitable for children with poorly controlled seizures, and is not considered a long-term treatment. Evidence shows it can be effective for certain childhood epilepsy syndromes such as epilepsy with [myoclonic atonic seizures](#) (formerly known as Doose Syndrome or myoclonic atstatic epilepsy), and can be implemented after diagnosis in conjunction with medication treatment. The diet has been used since the 1920s for the treatment of epilepsy, although relatively little is known about how it works. While it has been thought that the high ketone state (ketosis) caused by the diet contributes to seizure control, how this occurs is still uncertain. Recent research has looked at how the diet impacts on the gut microbiota and neuron stability, and the influence this might have on seizure activity.

The ketogenic diet can be difficult to follow due to its strictness, although can be an effective treatment for some children with epilepsy with appropriate planning, support and commitment. The



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ketogenic diet is best considered as a treatment therapy and must not be initiated at home due to the potential for significant side effects. Children on the ketogenic diet need regular monitoring at a dedicated hospital ketogenic diet program.



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