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The Ketogenic Diet (KD) for the management of Refractory Epilepsy

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The Ketogenic Diet (KD) is a high fat, adequate protein and low carbohydrate diet. The hallmark of the KD is the production of ketone bodies by the liver which becomes the brain's primary source of energy. The KD has been applied in individuals with refractory or also known as drug-resistant epilepsy since the 1920s. The diet was discovered by the observation of decreased seizure frequency during episodes of fasting. In 1921, Dr. Wilder at Mayo clinic suggested the KD for the long-term management of epilepsy. In terms of this suggestion, it was stated that the benefits of fasting could be recreated through the implementation of a KD. Additionally, the KD could be sustained for a much longer period as it compensates for the clear disadvantages associated with a prolonged period of fasting. Initial anti-seizure drug (as standalone therapy) control seizures in approximately half of patients with newly diagnosed epilepsy. The remaining half of the patients, normally those suffering from drug-resistant/refractory/intractable epilepsy, may benefit from the KD. Systemic reviews of KD therapies in children with refractory epilepsy suggest that 33 - 56% of children achieve $\geq 50\%$ seizure reduction and approximately 16% achieve seizure freedom. The KD and variants thereof has shown promising results in those (from infancy to adulthood) suffering from refractory epilepsy and should be recommended by medical professionals after two trials of anti-seizure medication has proven to be unsuccessful.

Biography

Elzette Struwig completed her BDietetics degree at the University of Pretoria, South Africa, after which she worked internationally in the development of ketogenic diet and ketogenic diet products for epilepsy. She has also undergone her Ketogenic diet training at Matthew's Friends KwetoCollege in the UK. Elzette is now the director of Metabolica Med, a ketogenic diet and low-carbohydrate, high-fat dietetics practice in Pretoria, South Africa.

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