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Autism and Dietary Therapy Case Report and Review of the Literature

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Abstract

We report the history of a child with autism and epilepsy who, after limited response to other interventions following her regression into autism, was placed on a gluten-free, casein-free diet, after which she showed marked improvement in autistic and medical symptoms. Subsequently, following pubertal onset of seizures and after failing to achieve full seizure control pharmacologically she was advanced to a ketogenic diet that was customized to continue the gluten-free, casein-free regimen. On this diet, while still continuing on anticonvulsants, she showed significant improvement in seizure activity. This gluten-free casein-free ketogenic diet used medium-chain triglycerides rather than butter and cream as its primary source of fat. Medium-chain triglycerides are known to be highly ketogenic, and this allowed the use of a lower ratio (1.5:1) leaving more calories available for consumption of vegetables with their associated health benefits. Secondary benefits included resolution of morbid obesity and improvement of cognitive and behavioral features. Over the course of several years following her initial diagnosis, the child's Childhood Autism Rating Scale score decreased from 49 to 17, representing a change from severe autism to nonautistic, and her intelligence quotient increased 70 points. The initial electroencephalogram after seizure onset showed lengthy 3 Hz spike-wave activity;

14 months after the initiation of the diet the child was essentially seizure free and the electroencephalogram showed only occasional 1-1.5 second spike-wave activity without clinical accompaniments.

[autism](#) [dietary therapy](#) [ketogenic diet](#)

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