



# UNDERSTANDING THE HYPOTHALAMUS

The Hypothalamus by Laurence Garey:

Although small, this is one of the most important parts of the grey matter of the brain, for it participates in a number of vital activities. It regulates a variety of hormonal functions by action on the pituitary gland, and it exerts magisterial control over the blood vessels and glands of the body via the autonomic nervous system. It is an integral part of the limbic system, which influences important aspects of our behavior and even our very survival, regulating such functions as emotion, sexual and nutritional appetites, rhythms, and sleep cycles. Some cells of the hypothalamus detect changes in body temperature and chemistry, and participate directly in the control of our temperature and chemical balance.



# HOW CAN I FIND OUT MORE ABOUT HYPOTHALAMIC HAMARTOMAS?

Contact us at [info@hopeforhh.org](mailto:info@hopeforhh.org) with any questions or inquiries you have regarding hypothalamic hamartomas.



Hope for HH provides information and support to hypothalamic hamartoma patients, caregivers, and healthcare providers and promotes research toward early detection, improved treatments, living with HH, and cure.

[www.hopeforhh.org](http://www.hopeforhh.org)

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# UNDERSTANDING HYPOTHALAMIC HAMARTOMAS

Hypothalamic hamartoma (HH) is a rare, non-cancerous brain tumor/lesion that occur in the brain during fetal development and are present at birth.





## HYPOTHALAMUS FUNCTION

- Heart rate and blood pressure
- Body temperature
- Fluid and electrolyte balance
- Appetite and body weight
- Endocrine processes
- Sleep cycles
- Mediation of emotional responses
- Sexual behavior and reproduction

## KNOW THE SYMPTOMS

- Seizures
- Cognitive Impairments
- Emotional Difficulties
- Behavioral Issues
- Endocrine Disturbances

## COMMON SEIZURE TYPES

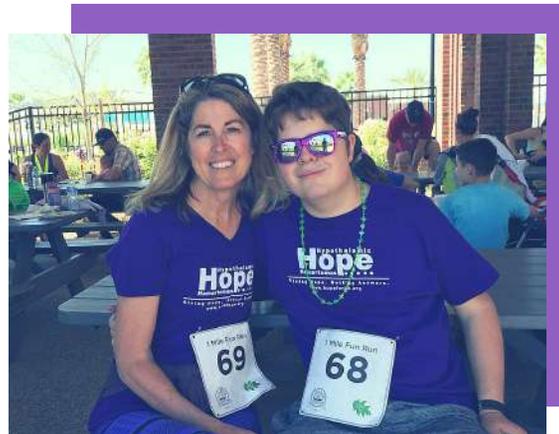
Most any type of seizure can occur with HH with multiple types being common. These can include:

- Gelastic, laughing seizures
- Dacrystic, crying seizures
- Absence seizures
- Complex partial seizures
- Generalized seizures



# QUICK FACTS

- 1 in 200k diagnosed worldwide
- Often goes undiagnosed/misdiagnosed
- Seizures commonly unresponsive to medication
- Can result in cognitive and behavioral deterioration, learning disabilities, endocrine dysfunction and sleep disturbances



## HOW YOU CAN HELP

- Volunteer
- Raise Awareness
- Corporate Matching
- Join us on Social Media
- Submit your HH Story
- Shop Amazon Smile



## PROPER DIAGNOSIS

- HH Frequently Misdiagnosed  
Symptoms range from mild to severe. Some seizures can be difficult to recognize. Endocrine and behavior issues are often the first symptoms to arise. Patients with HH can have normal or abnormal EEGs, but this test is frequently not a definitive diagnosis. Often the diagnosis of epilepsy or a seizure disorder is made; however, the HH is not discovered unless a high resolution MRI is used.
- Magnetic Resonance Imaging (MRI)  
Individuals with a possible hypothalamic hamartoma should undergo high-resolution MRI of the brain with special attention to the area of the hypothalamus. Check our website for the proper MRI protocol.

## TREATMENT OPTIONS

- Antiepileptic Drugs (AEDs)
- Surgical Treatments
- Gamma Knife Surgery (GKS)
- MRI-guided Laser Thermal Ablation
- Stereotactic Radiofrequency Thermoablation
- Interstitial Radiosurgery
- Ketogenic Diet