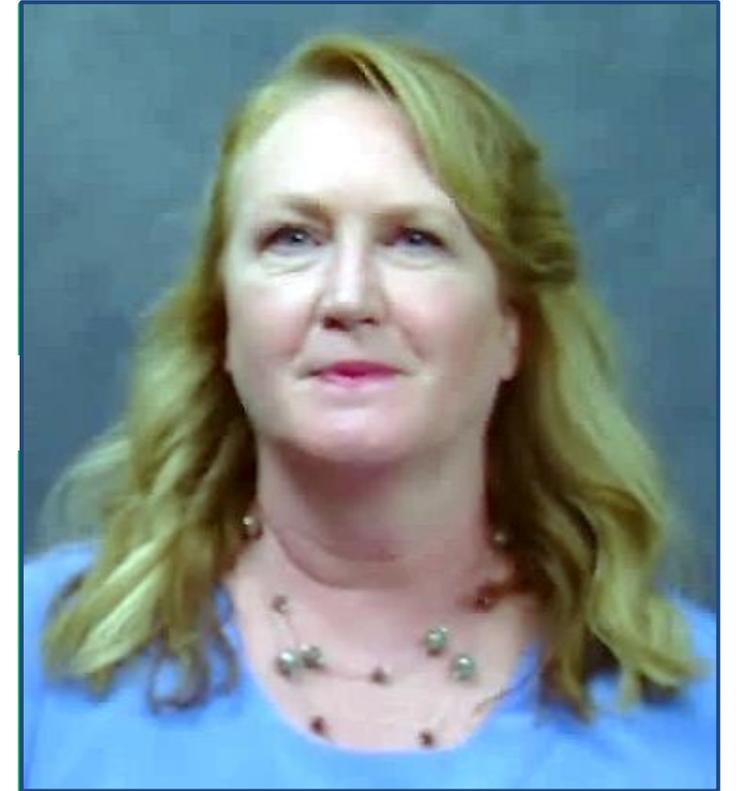
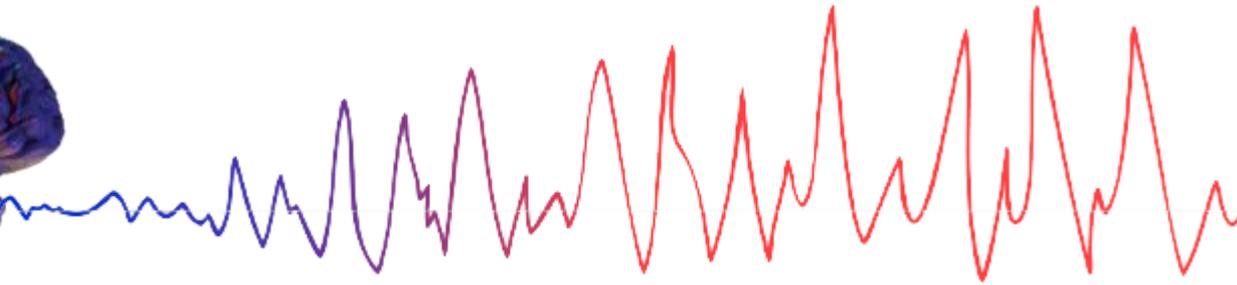
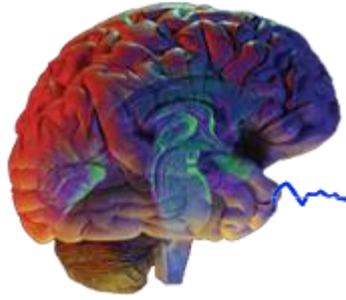


# Epilepsy Care in the School Setting

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Children's Epilepsy Educational Video Series



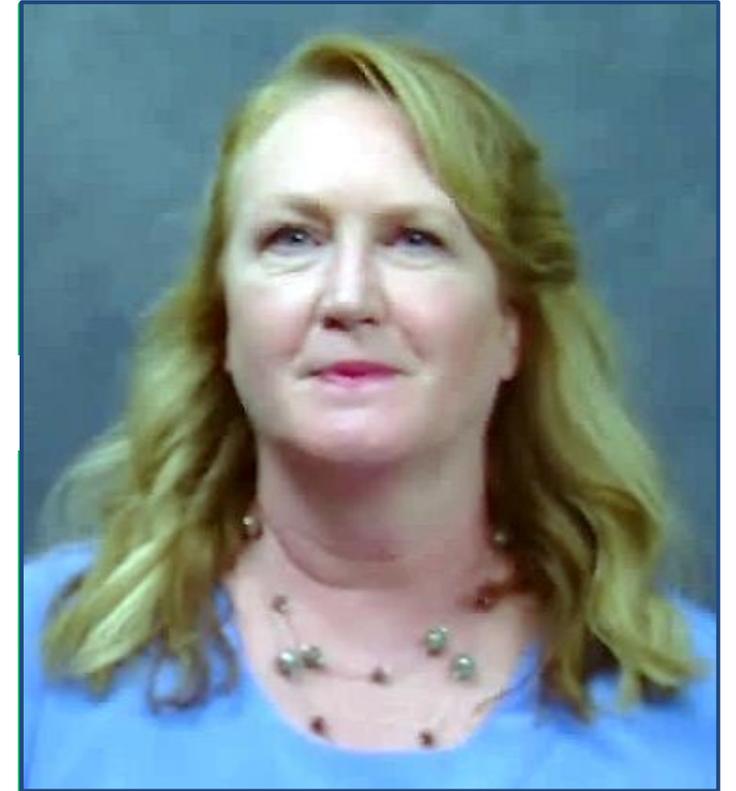


# Epilepsy Care in the School Setting

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## Children's Epilepsy Educational Video Series

Presented by Susan McCallum, MSN, RN  
Children's Comprehensive Epilepsy Center  
404-785-3720  
[www.choa.org](http://www.choa.org)



# Course Disclaimer

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This is general information and not specific medical advice for you, your child, or loved one. Always consult your doctor or other healthcare provider if you have any questions or concerns. Call 911 or go to the nearest emergency department in case of an urgent concern or emergency.

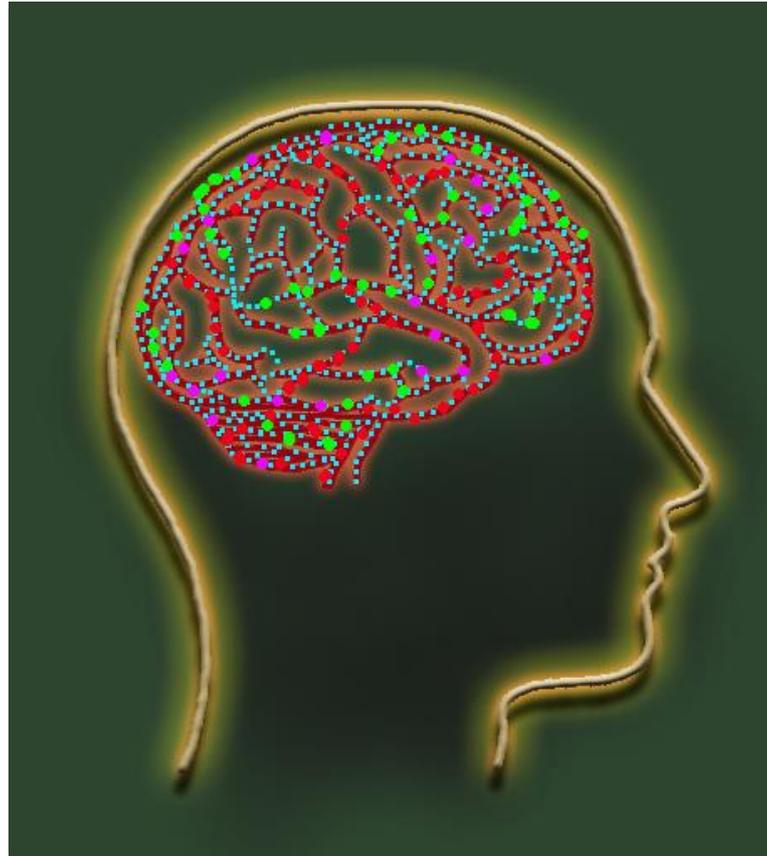


# Educational Activity Disclosure

## Epilepsy Seizure Diagnostics and Treatments - Part 3 of 4

Disclosures	Action
Criteria for Successful Completion	<ul style="list-style-type: none"><li>• View entire recording</li><li>• Completion of evaluation</li></ul>
Conflicts of Interest Statements for Planning Committee	The planning committee members have no relevant financial relationship to declare.
Conflicts of Interest Statements for Faculty/Presenters/ Authors	The content experts/faculty/presenters/authors have no relevant financial relationship to declare.
Commercial Support	No commercial support is being received for this event.
Sponsorship	No sponsorship is being received for this event
Non-endorsement of Products	No products are being displayed at this event
Continuing Education	<p><b><i>This continuing nursing education activity was provided by Children's Healthcare of Atlanta.</i></b> Children's Healthcare of Atlanta is an approved provider of continuing nursing education by the <b>Alabama State Nurses Association</b>, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation.</p> <p><b>Contact hours: 0.5</b> <b>Activity ID: 2017-0508-01</b> <b>Expiration Date: 05/08/2019</b></p>





Credit: Martin Allison

# Epilepsy Seizure Diagnostics & Treatments

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## Children's Comprehensive Epilepsy Center

Presented by Susan McCallum, MSN, RN  
Children's Comprehensive Epilepsy Center  
404-785-3720  
[www.choa.org](http://www.choa.org)

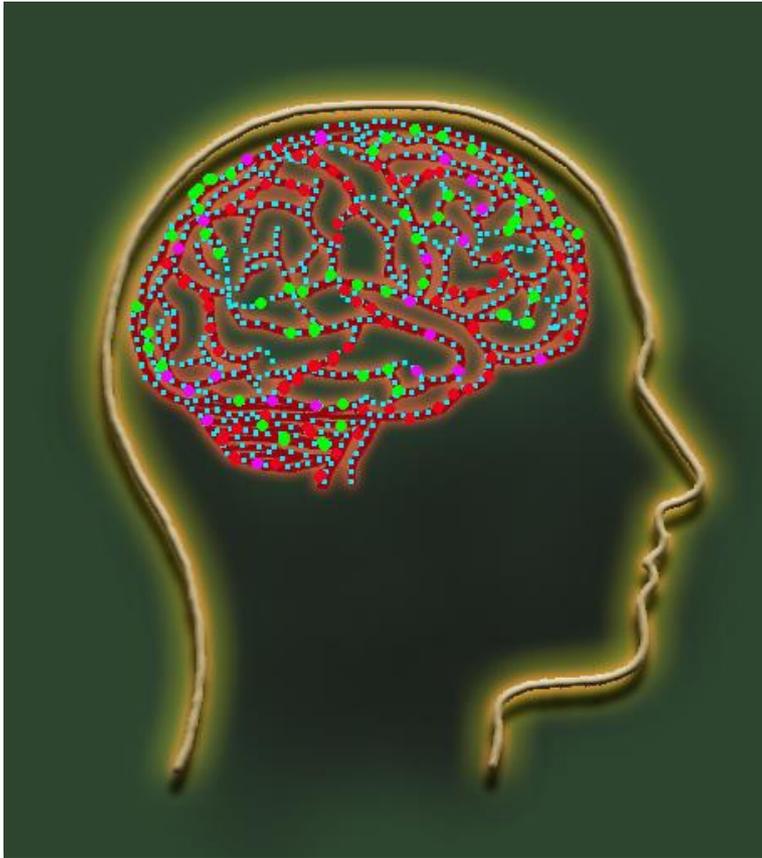
Children's Healthcare of Atlanta



# Main Focus

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This education video is intended for school nurses who:



Credit: Martin Allison

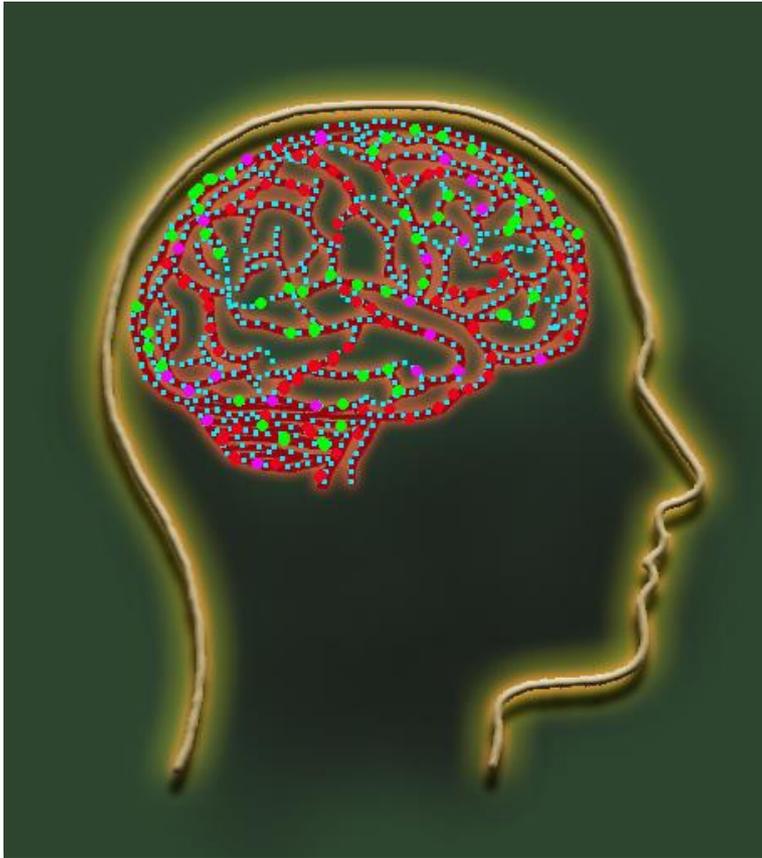


# Main Focus

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This education video is intended for school nurses who:

- Care directly for students with epilepsy



Credit: Martin Allison



# Main Focus

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This education video is intended for school nurses who:

- Care directly for students with epilepsy
- Provide first aid for seizures, including seizure medication



Credit: Martin Allison

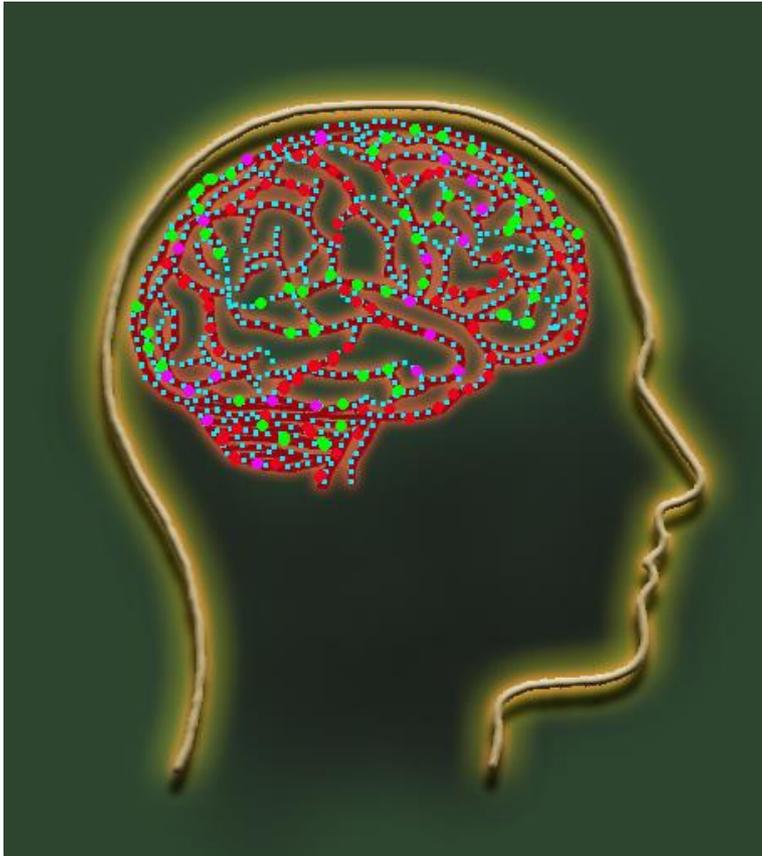


# Main Focus

---

This education video is intended for school nurses who:

- Care directly for students with epilepsy
- Provide first aid for seizures, including seizure medication
- May teach non-licensed school personnel such as teachers, coaches, or after school staff how to respond to students experiencing a seizure

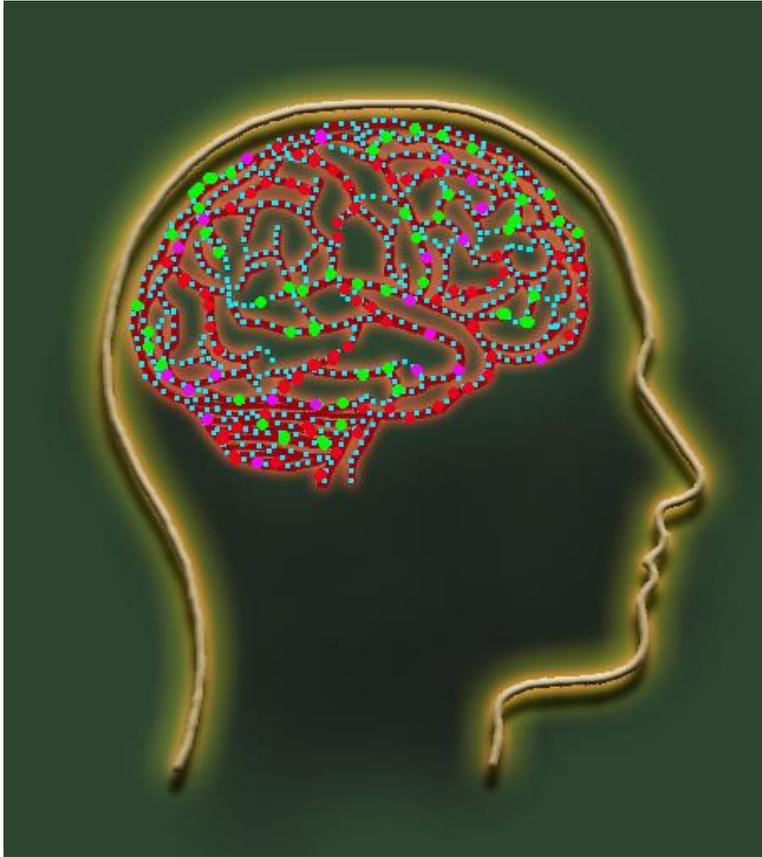


Credit: Martin Allison



# Learning Objectives

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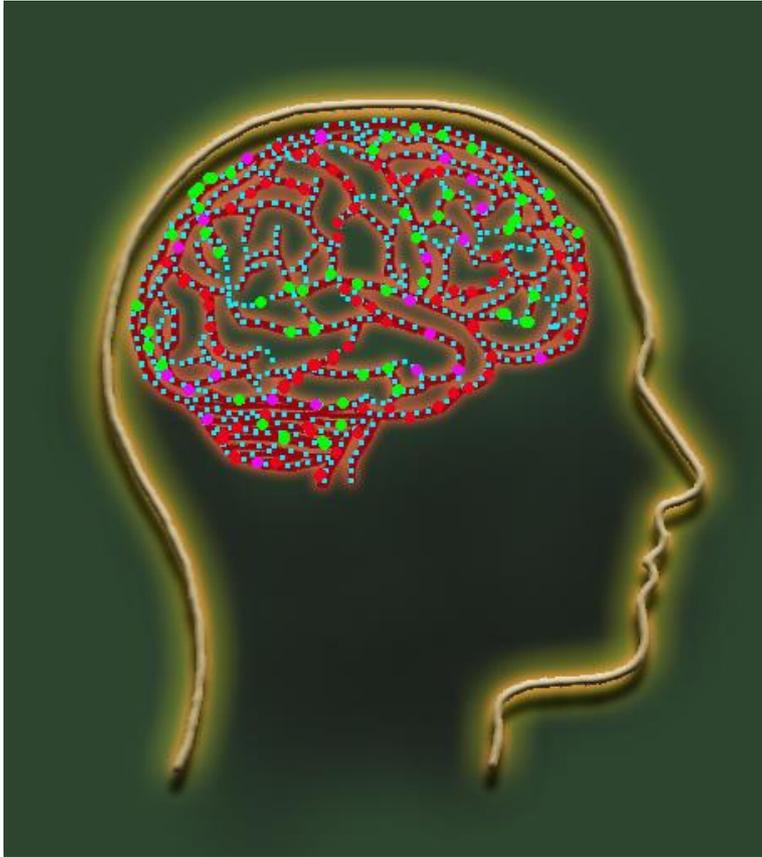
Credit: Martin Allison



# Learning Objectives

---

- Describe common diagnostic testing for individuals experiencing seizures



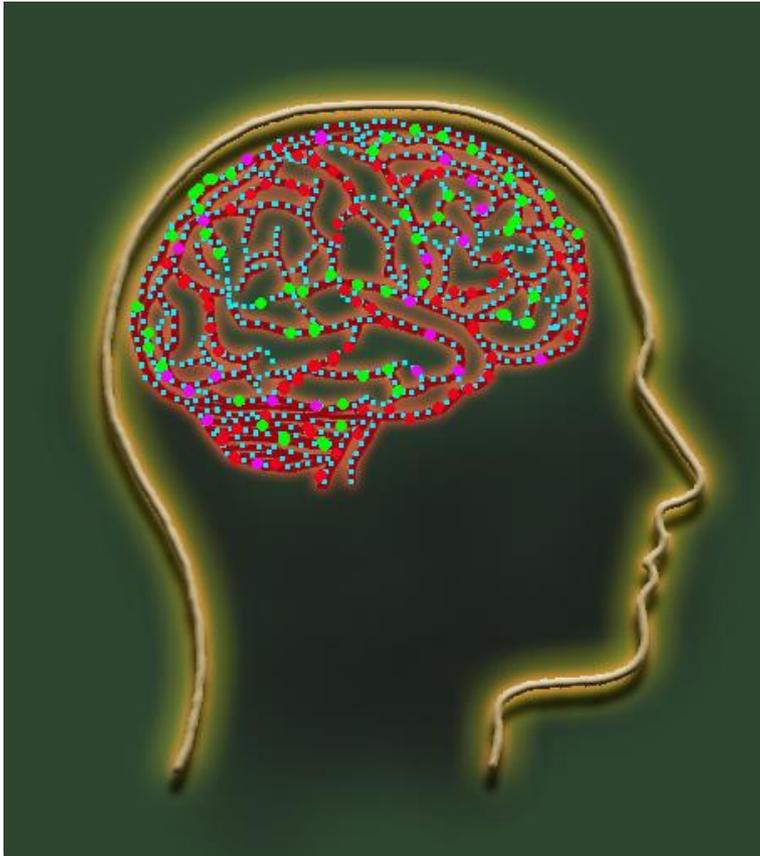
Credit: Martin Allison



# Learning Objectives

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- Describe common diagnostic testing for individuals experiencing seizures
- Discuss treatment options for individuals experiencing seizures



Credit: Martin Allison



# Diagnosics

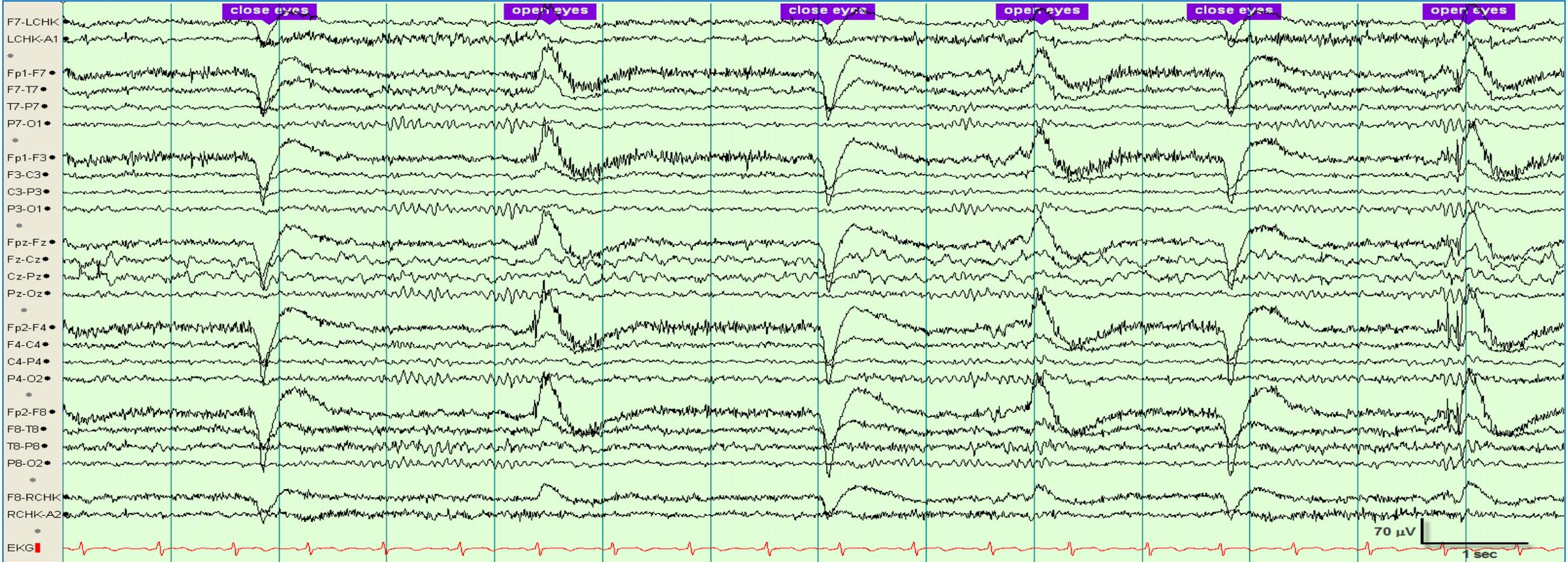
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# Electroencephalogram (EEG)

Credit: Children's Healthcare of Atlanta

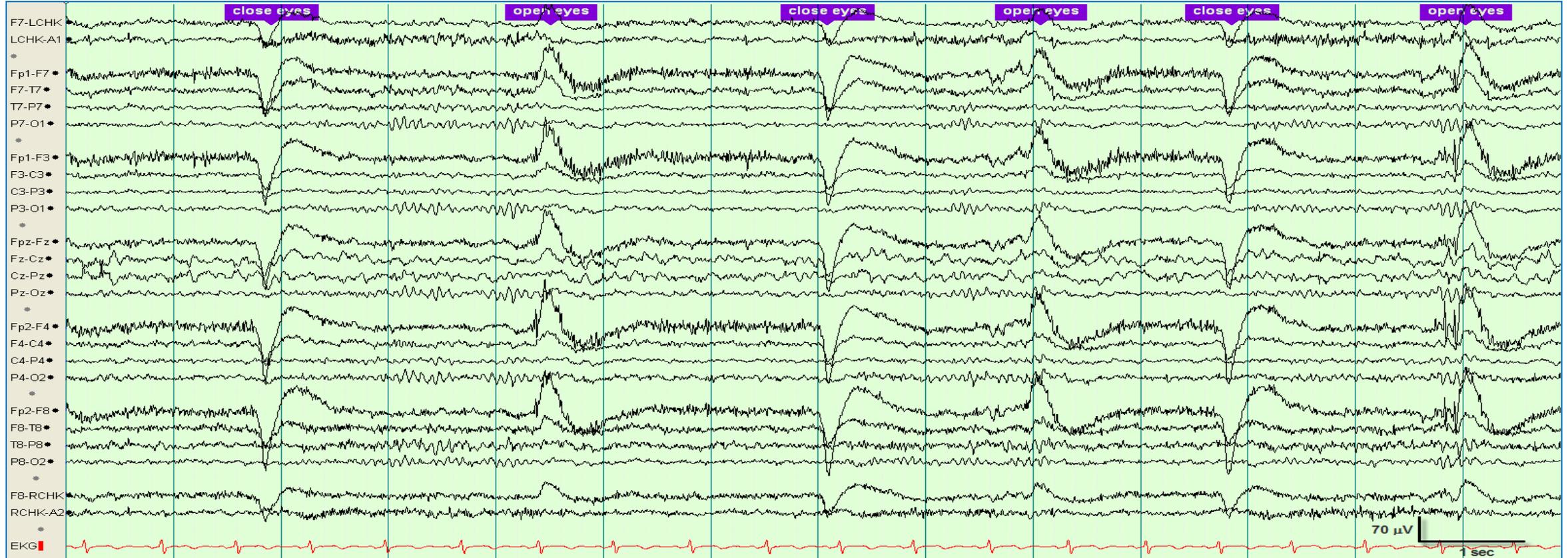
Credit: Susan McCallum



# Electroencephalogram (EEG)

Credit: Children's Healthcare of Atlanta

Credit: Susan McCallum



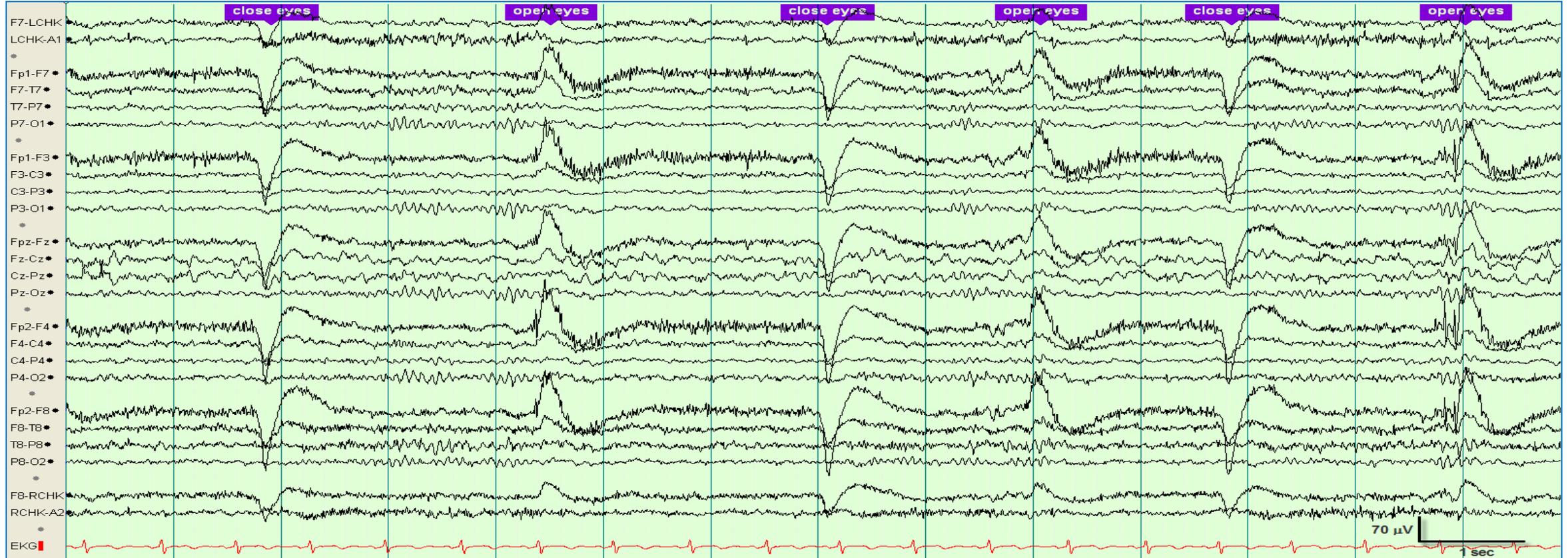
- Recorded brain activities displayed as waves



# Electroencephalogram (EEG)

Credit: Children's Healthcare of Atlanta

Credit: Susan McCallum



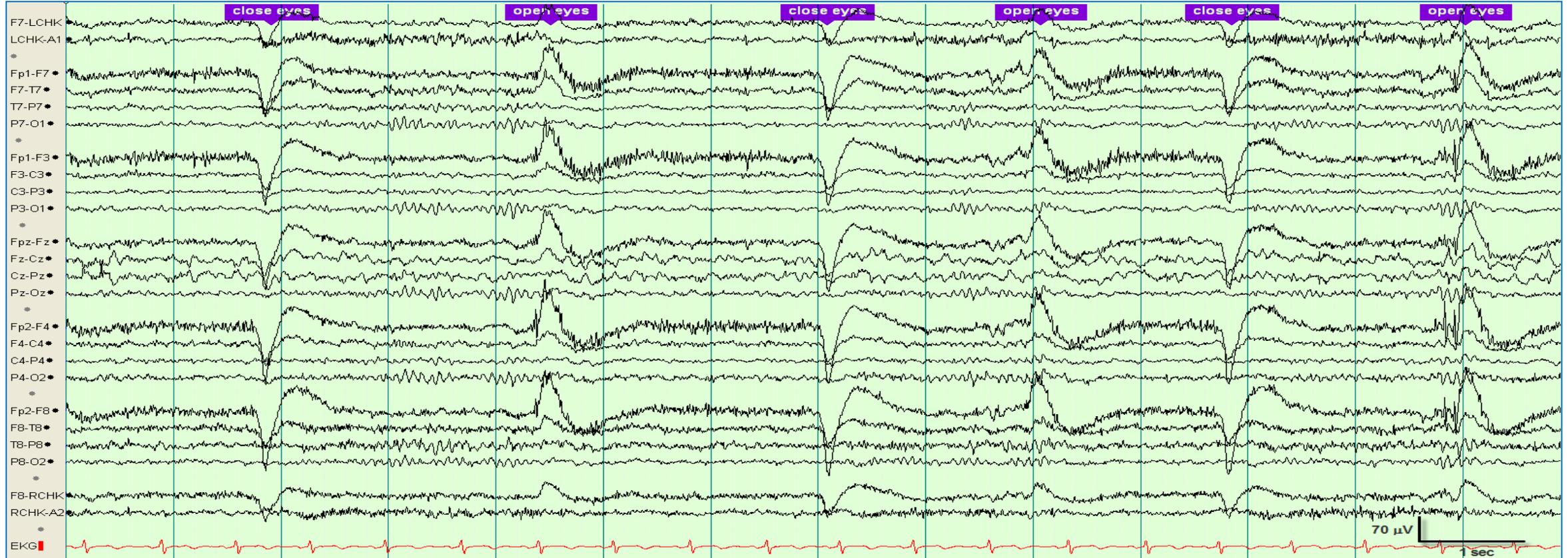
- Machine utilizes electrodes that are attached to scalp



# Electroencephalogram (EEG)

Credit: Children's Healthcare of Atlanta

Credit: Susan McCallum



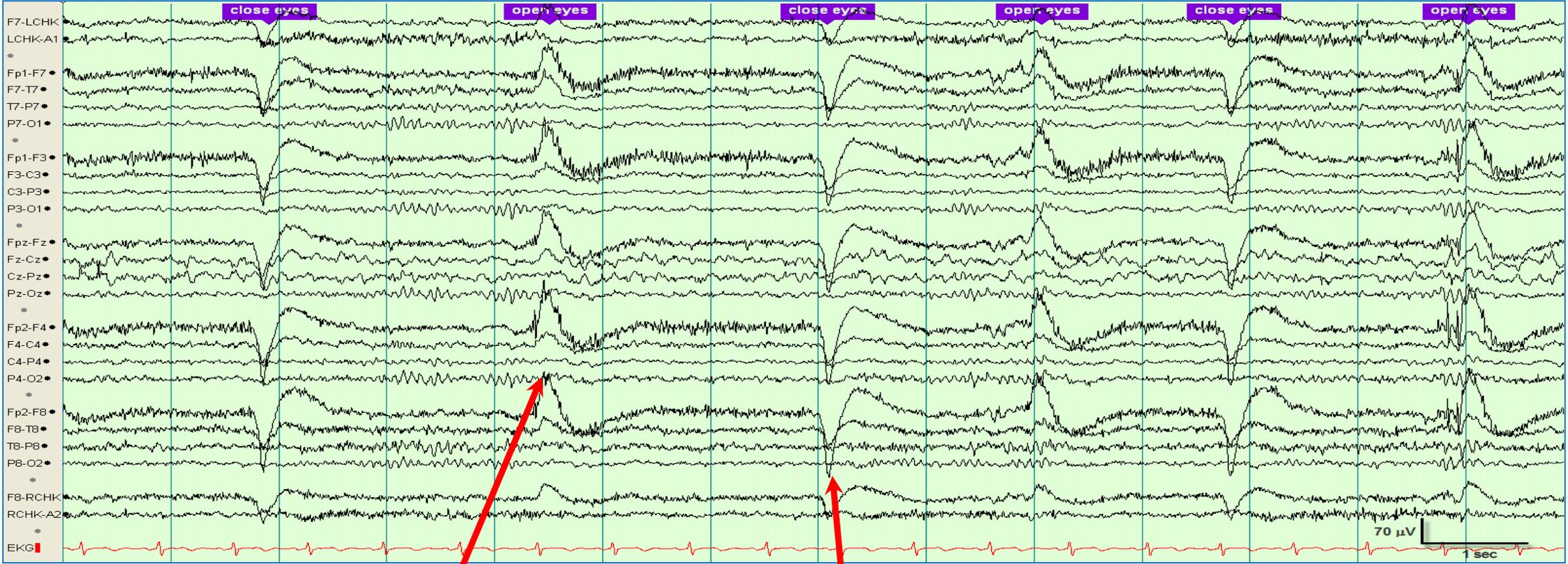
- Recordings written on paper or digitized on a computer monitor



# Electroencephalogram (EEG)

Credit: Children's Healthcare of Atlanta

Credit: Susan McCallum



Spike

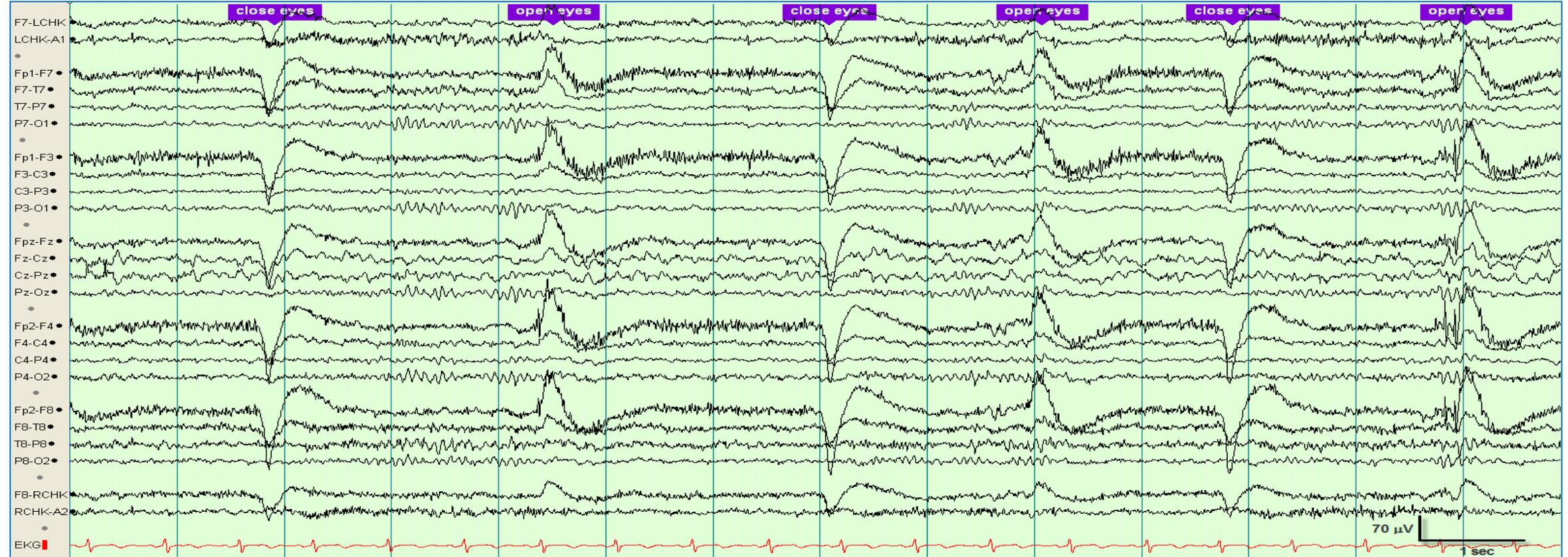
Wave



# Electroencephalogram (EEG)

Credit: Children's Healthcare of Atlanta

Credit: Susan McCallum



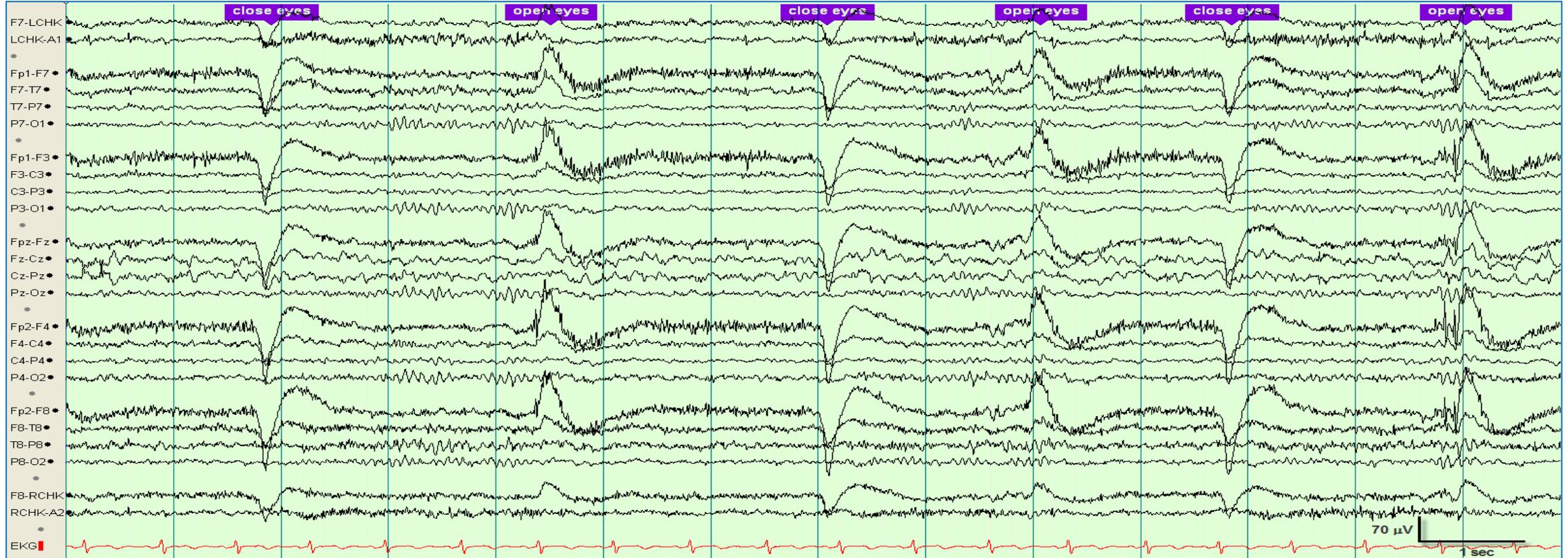
- Confirm the epilepsy diagnosis



# Electroencephalogram (EEG)

Credit: Children's Healthcare of Atlanta

Credit: Susan McCallum



- Classify the type of epilepsy syndrome



# Neuroimaging

---

- Magnetic resonance imaging (MRI)

Credit: Susan McCallum



Credit: Children's Healthcare of Atlanta

# Neuroimaging

---

- Magnetic resonance imaging (MRI)
  - Identify structural abnormalities

Credit: Susan McCallum



Credit: Children's Healthcare of Atlanta

# Neuroimaging

---

- Magnetic resonance imaging (MRI)
  - Identify structural abnormalities
- The use of MRI is particularly important for children:

Credit: Susan McCallum



Credit: Children's Healthcare of Atlanta



# Neuroimaging

- Magnetic resonance imaging (MRI)
  - Identify structural abnormalities
- The use of MRI is particularly important for children:
  - who have developed epilepsy before the age of 2 years

Credit: Susan McCallum



Credit: Children's Healthcare of Atlanta

# Neuroimaging

- Magnetic resonance imaging (MRI)
  - Identify structural abnormalities
- The use of MRI is particularly important for children:
  - who have developed epilepsy before the age of 2 years
  - who have any suggestion of a focal onset from history, examination, or EEG (unless there is clear evidence of benign focal epilepsy)

Credit: Susan McCallum



Credit: Children's Healthcare of Atlanta



# Neuroimaging

- Magnetic resonance imaging (MRI)
  - Identify structural abnormalities
- The use of MRI is particularly important for children:
  - who have developed epilepsy before the age of 2 years
  - who have any suggestion of a focal onset from history, examination, or EEG (unless there is clear evidence of benign focal epilepsy)
  - in whom seizures continue in spite of first-line medication

Credit: Susan McCallum



Credit: Children's Healthcare of Atlanta

# How Can I Use This Information?

---

Pause and think about how you can use the information discussed in this section in your daily practice.



Credit: Deposit Photos



# Treatments

---



# Treatments

- Medicine is the primary way in which seizures are controlled

Credit: Martin Allison



# Treatments

- Medicine is the primary way in which seizures are controlled
- Different medicines help with different kinds of epilepsy and seizures



# Treatments

- Medicine is the primary way in which seizures are controlled
- Different medicines help with different kinds of epilepsy and seizures
- Medications control seizures for about 6 out of 10 people living with epilepsy



Credit: Martin Allison



# Rectal Diazepam (Diastat®)



# Antiepileptic Drugs (AED)

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- Decrease frequency and/or severity of seizures in people with epilepsy

Credit: Martin Allison



# Antiepileptic Drugs (AED)

---

- Decrease frequency and/or severity of seizures in people with epilepsy
- Improve quality of life by:

Credit: Martin Allison



# Antiepileptic Drugs (AED)

---

- Decrease frequency and/or severity of seizures in people with epilepsy
- Improve quality of life by:
  - Maximizing seizure control

Credit: Martin Allison



# Antiepileptic Drugs (AED)

---

- Decrease frequency and/or severity of seizures in people with epilepsy
- Improve quality of life by:
  - Maximizing seizure control
  - Minimizing drug side effects

Credit: Martin Allison



# Antiepileptic Drugs (AED)

- Decrease frequency and/or severity of seizures in people with epilepsy
- Improve quality of life by
  - Maximizing seizure control
  - Minimizing drug side effects
- Treat the symptoms not the underlying condition

Credit: Martin Allison



# Antiepileptic Drugs (AED)

- Decrease frequency and/or severity of seizures in people with epilepsy
- Improve quality of life by
  - Maximizing seizure control
  - Minimizing drug side effects
- Treat the symptoms not the underlying condition
- Do not prevent or cure epilepsy

Credit: Martin Allison



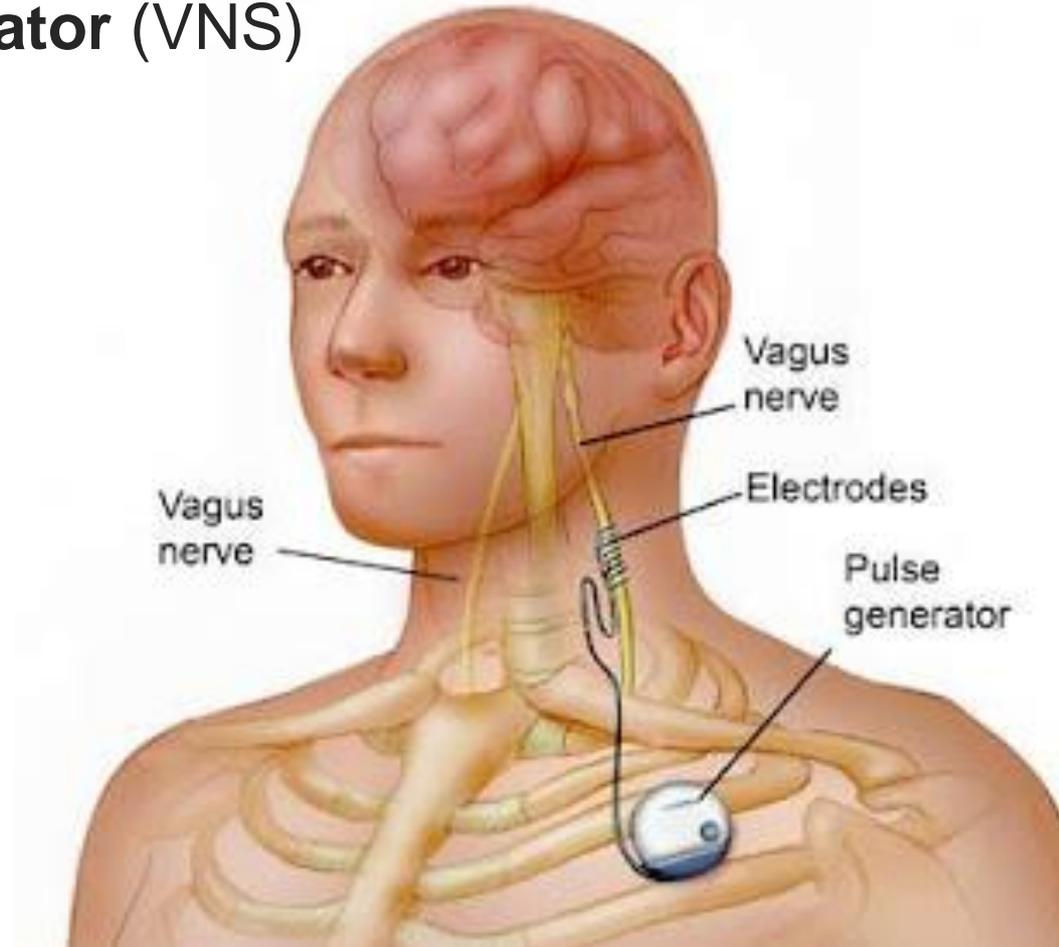
# How to give your child Midazolam



# Non Pharmacological Treatments

---

## Vagus Nerve Stimulator (VNS)

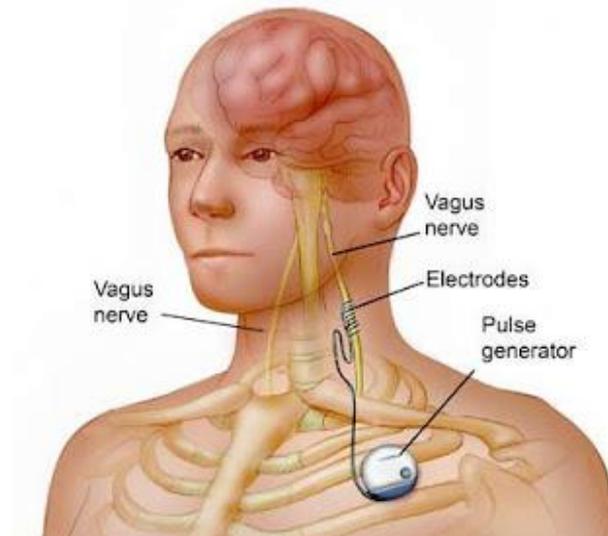


# Non Pharmacological Treatments

---

## Vagus Nerve Stimulator (VNS)

- Continuously sends small electrical pulses through Vagus nerve to the brain

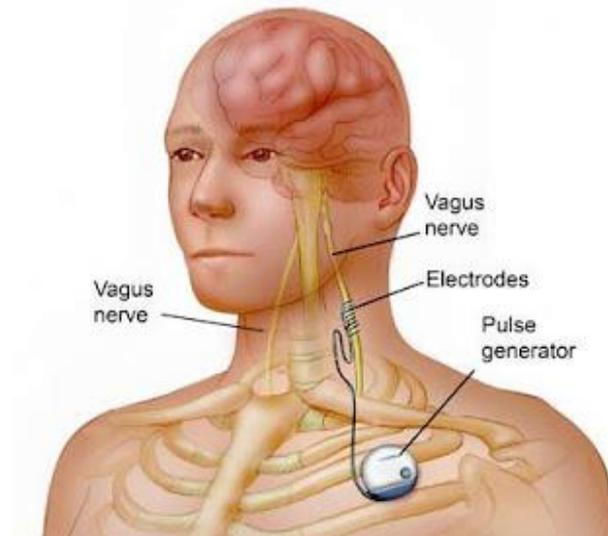


# Non Pharmacological Treatments

---

## Vagus Nerve Stimulator (VNS)

- Continuously sends small electrical pulses through Vagus nerve to the brain
- Helps prevent seizures where they start

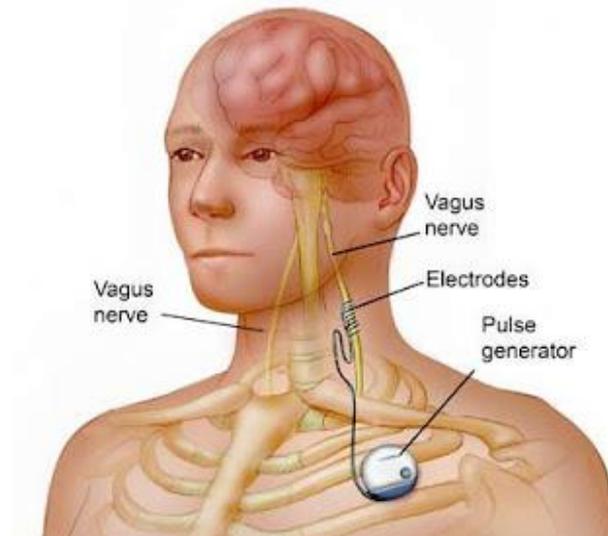


# Non Pharmacological Treatments

---

## Vagus Nerve Stimulator (VNS)

- Continuously sends small electrical pulses through Vagus nerve to the brain
- Helps prevent seizures where they start
- Recommended for those who fail to obtain seizure control with antiepileptic medication



# Non Pharmacological Treatments

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## Ketogenic Diet

Credit: Deposit Photos



# Non Pharmacological Treatments

---

## Ketogenic Diet

- Low carbohydrate, high fat diet

Credit: Deposit Photos



# Non Pharmacological Treatments

---

## Ketogenic Diet

- Low carbohydrate, high fat diet
- Changes the metabolism in the body from burning glucose for energy to burning fat for energy

Credit: Deposit Photos



# Non Pharmacological Treatments

---

## Ketogenic Diet

- Low carbohydrate, high fat diet
- Changes the metabolism in the body from burning glucose for energy to burning fat for energy
- Produces ketone bodies, which cross blood brain barrier to produce energy for the brain

Credit: Deposit Photos



# Non Pharmacological Treatments

---

## Ketogenic Diet

- Low carbohydrate, high fat diet
- Changes the metabolism in the body from burning glucose for energy to burning fat for energy
- Produces ketone bodies, which cross blood brain barrier to produce energy for the brain
- Requires close monitoring by multidisciplinary team

Credit: Deposit Photos

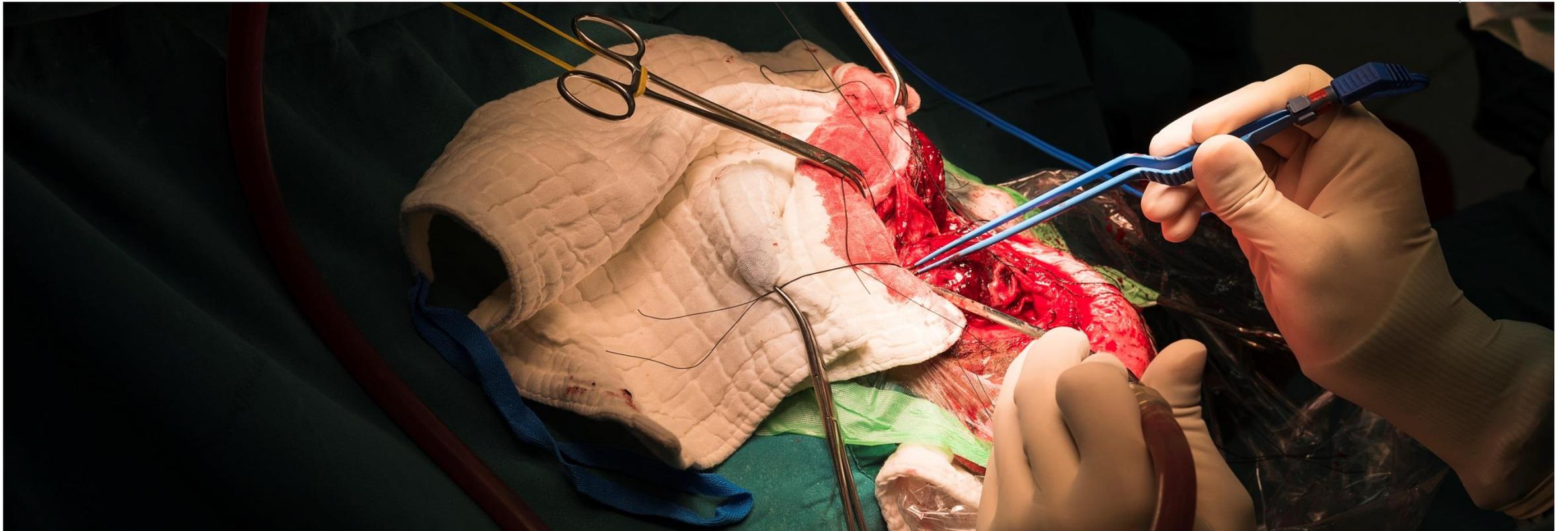


# Non Pharmacological Treatments

---

## Surgery

Credit: Deposit Photos

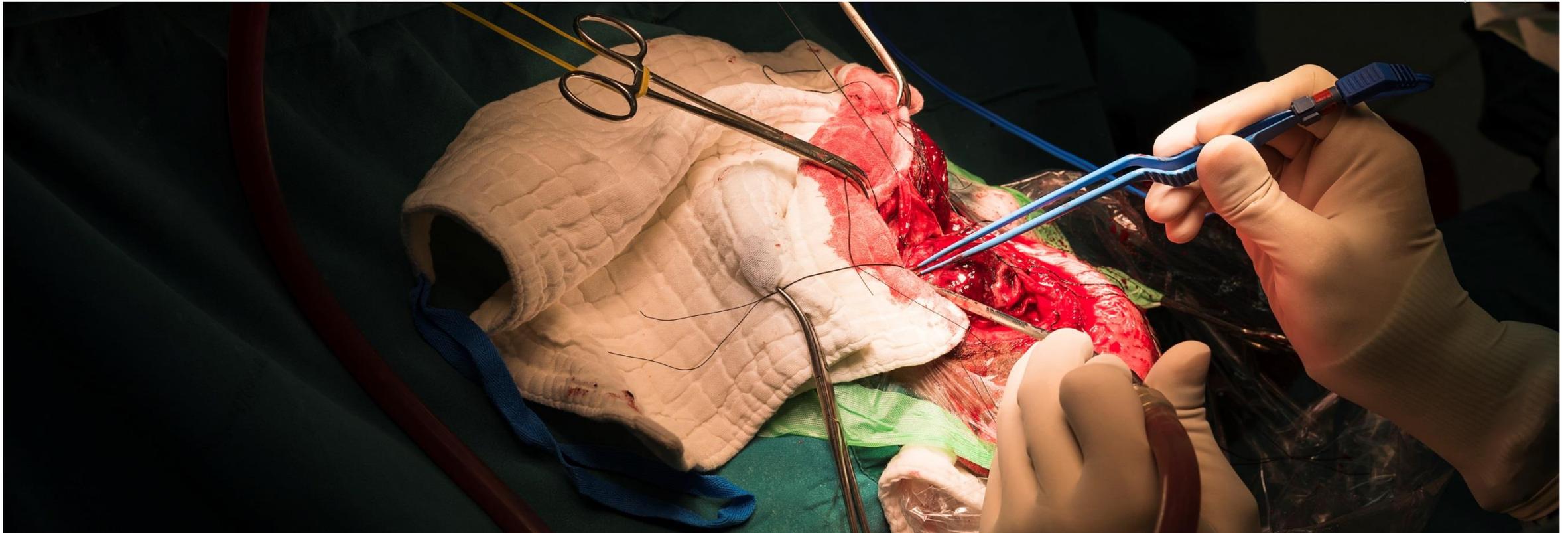


# Non Pharmacological Treatments

---

## Surgery

Credit: Deposit Photos



- Reserved for those whose seizures are not well controlled by seizure medicines

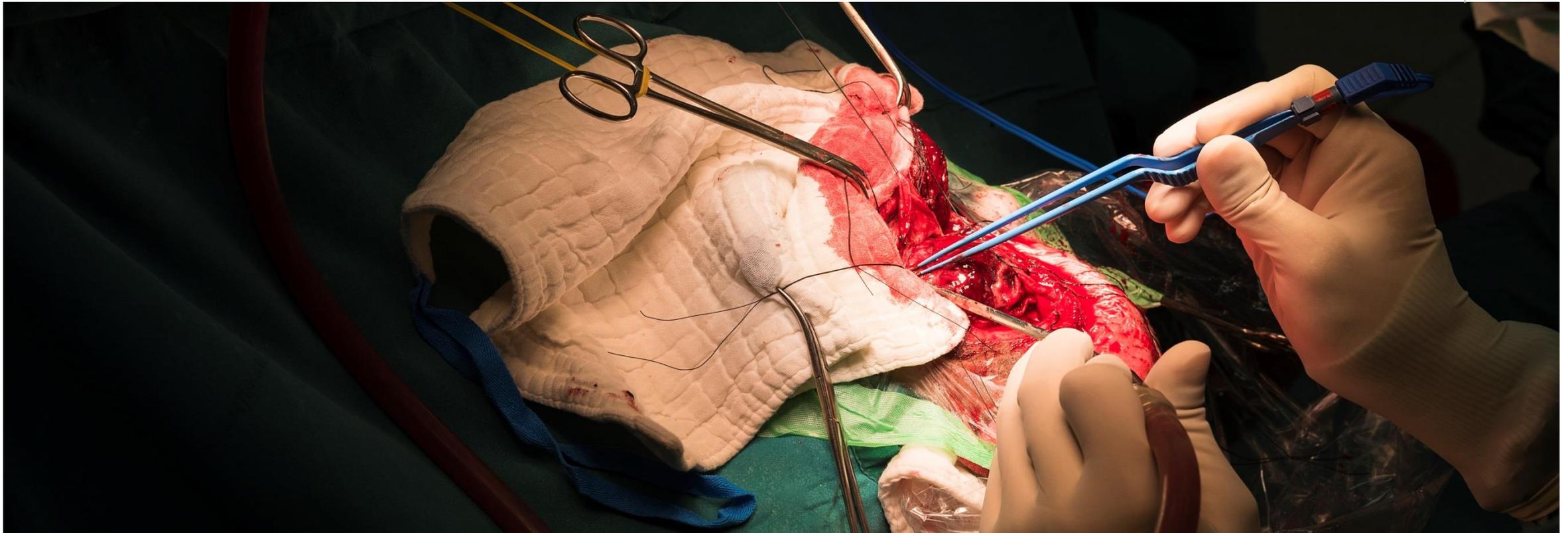


# Non Pharmacological Treatments

---

## Surgery

Credit: Deposit Photos



- Accurately localize and completely remove the region of the brain responsible for the seizure



# How Can I Use This Information?

---

Pause and think about how you can use the information discussed in this section in your daily practice.



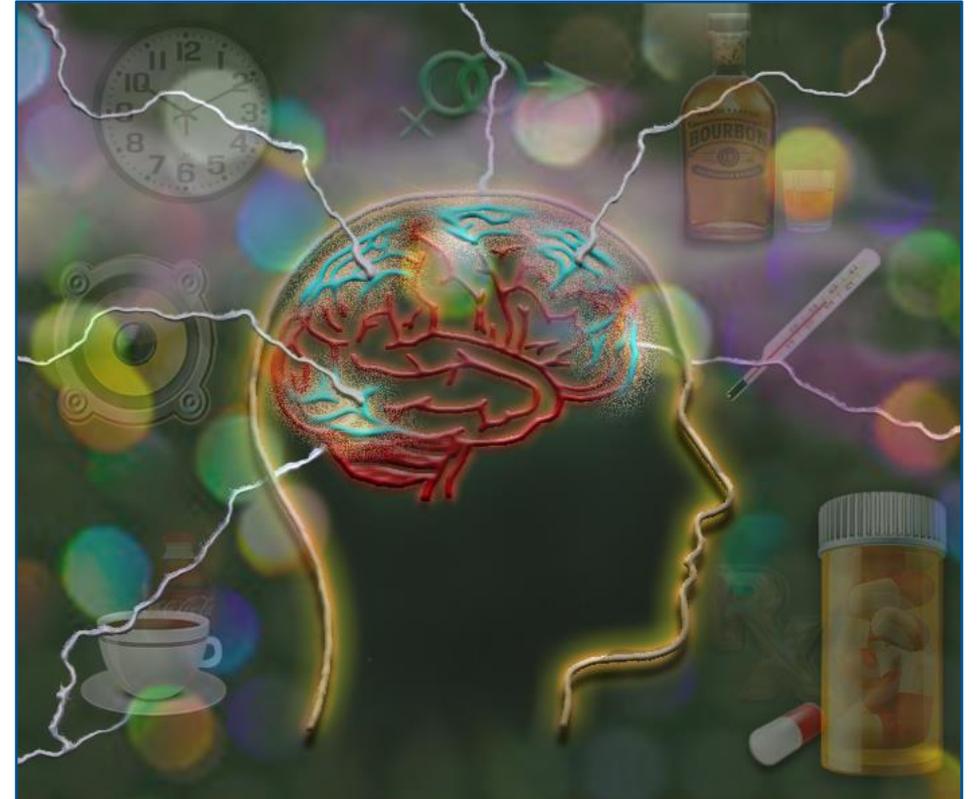
Credit: Deposit Photos



# Review

---

Now that we have:



Credit: Martin Allison

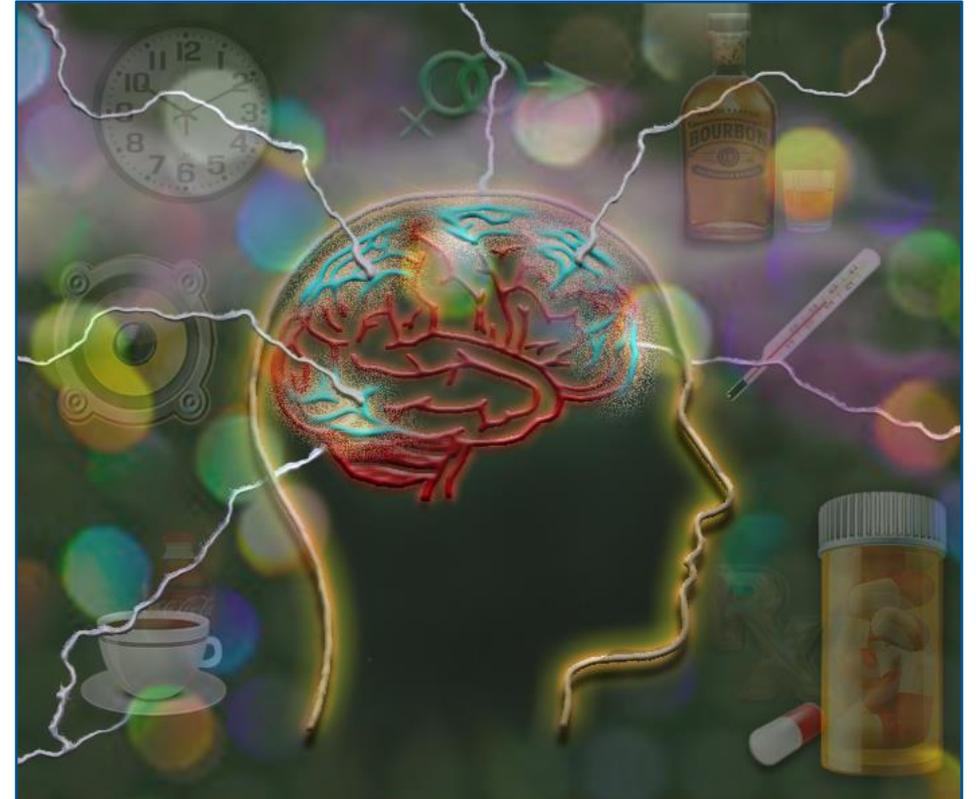


# Review

---

Now that we have:

- Described common diagnostic testing for individuals experiencing seizures



Credit: Martin Allison

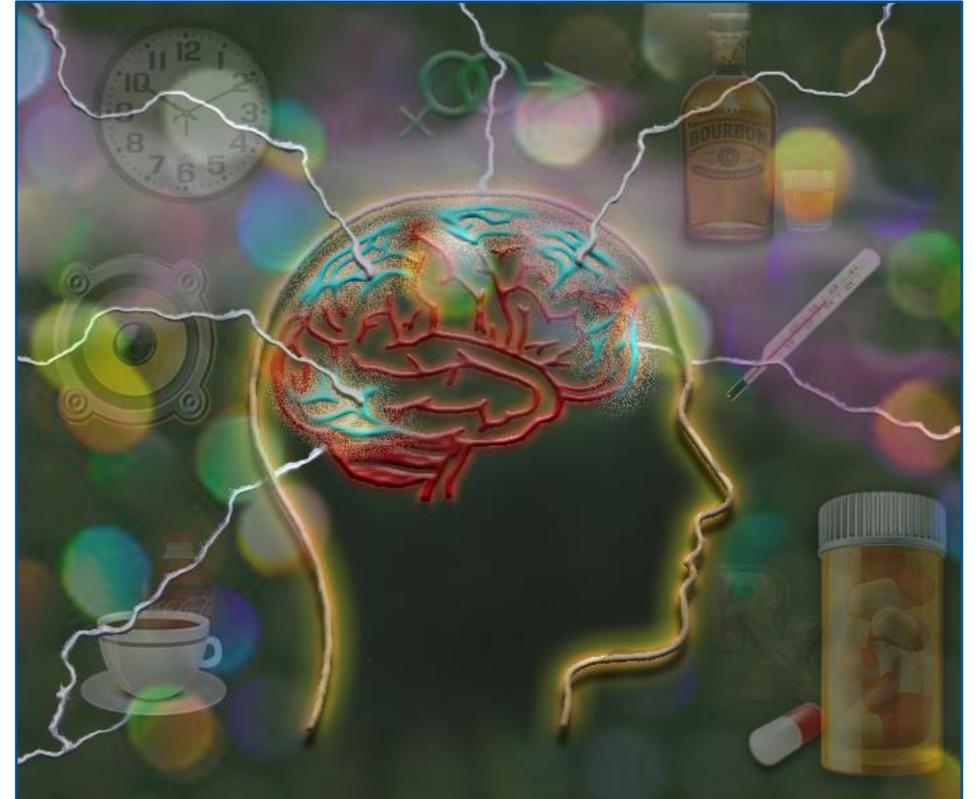


# Review

---

Now that we have:

- Described common diagnostic testing for individuals experiencing seizures
- Discussed treatment options for individuals experiencing seizures



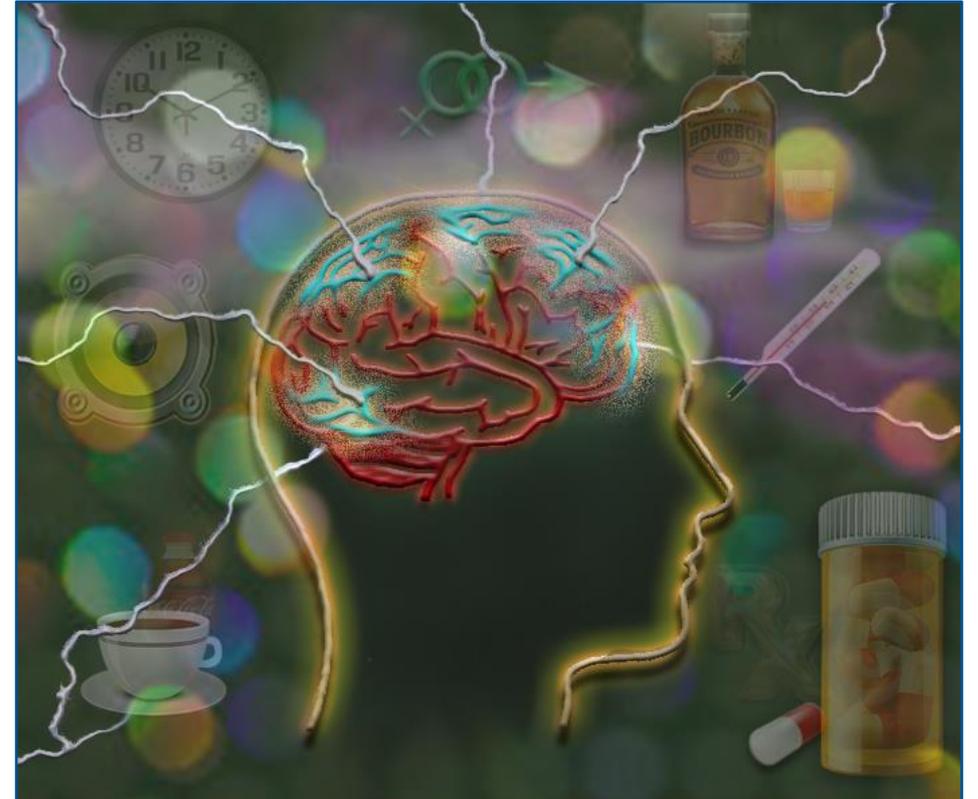
Credit: Martin Allison



# Wrap-Up

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Let's wrap up this video by looking at the Children's Healthcare of Atlanta Epilepsy program and additional resources for you to use.



Credit: Martin Allison



# Resources

Web Address	Resource	3
<a href="http://epilepsy.com">epilepsy.com</a>	Epilepsy Foundation	
<a href="http://seizuretracker.com">seizuretracker.com</a>	Seizure Self Management App (Free)	
<a href="http://cdc.gov/epilepsy">cdc.gov/epilepsy</a>	Center for Disease Control Epilepsy Program	
<a href="http://aesnet.org">aesnet.org</a>	American Epilepsy Society	
<a href="http://webease.org">webease.org</a>	Web Based Self Management Program (Free)	
<a href="http://choa.org/medical-services/neurosciences/epilepsy">choa.org/medical-services/neurosciences/epilepsy</a>	Children's Healthcare of Atlanta Comprehensive Epilepsy Center Susan McCallum 404-785-3720 <a href="mailto:Susan.McCallum@choa.org">Susan.McCallum@choa.org</a>	



# Epilepsy Care in a School Setting

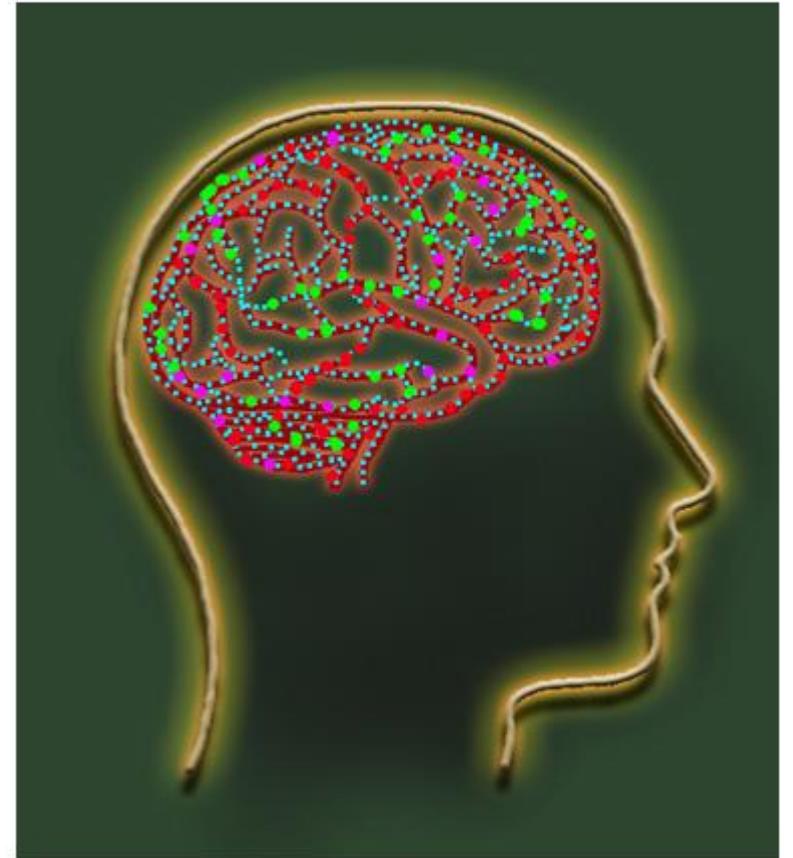
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# Epilepsy Care in a School Setting

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## 1. Overview of Epilepsy



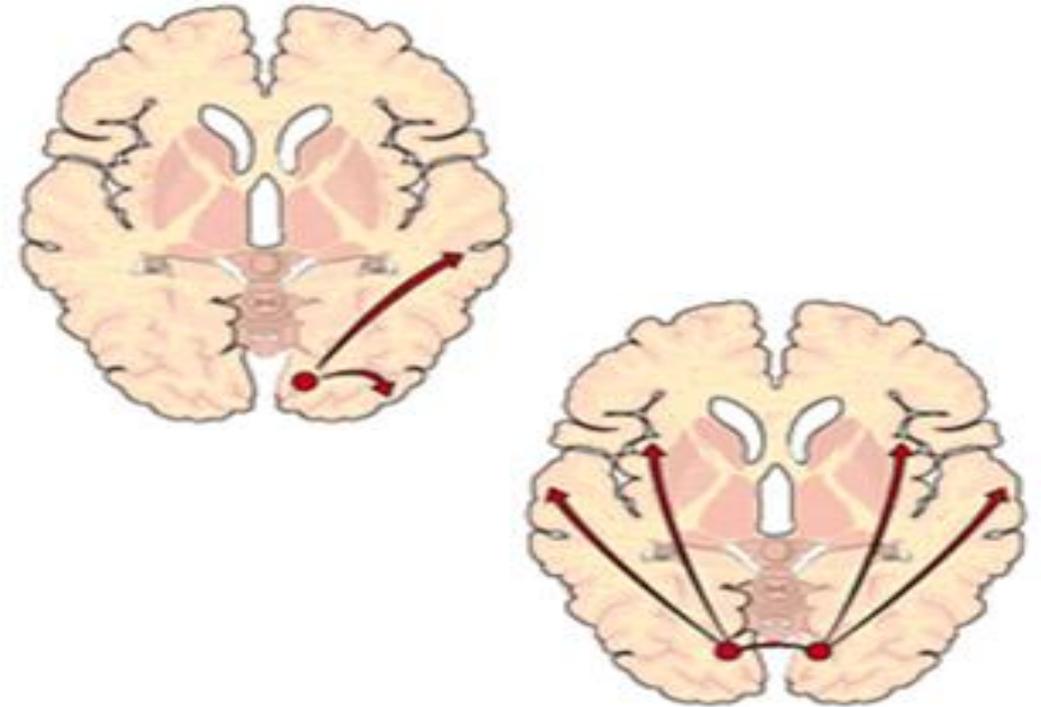
Credit: Martin Allison



# Epilepsy Care in a School Setting

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1. Overview of Epilepsy
2. Seizure Phases and Classifications



# Epilepsy Care in a School Setting

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1. Overview of Epilepsy
2. Seizure Phases and Classifications
3. Seizure Diagnostics and Treatments



Credit: Children's Healthcare of Atlanta

# Epilepsy Care in a School Setting

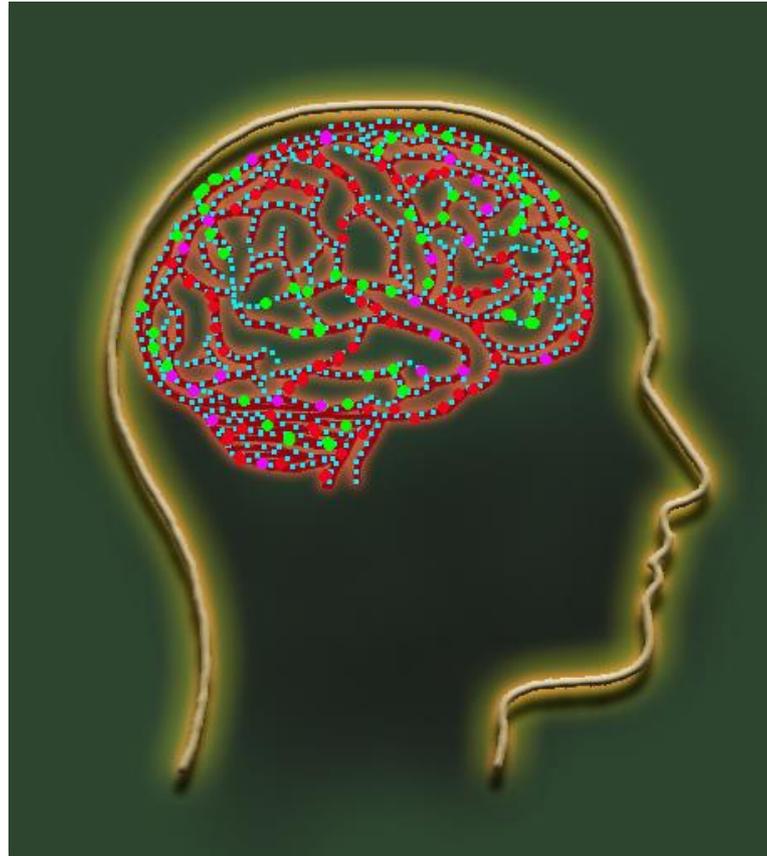
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1. Overview of Epilepsy
2. Seizure Phases and Classifications
3. Seizure Diagnostics and Treatments
4. Seizure First Aid



Credit: Deposit Photos





Credit: Martin Allison

# Epilepsy Seizure Diagnostics & Treatments

---

## Children's Comprehensive Epilepsy Center

Presented by Susan McCallum, MSN, RN  
Children's Comprehensive Epilepsy Center  
404-785-3720  
[www.choa.org](http://www.choa.org)

Children's Healthcare of Atlanta





# School Health Resources

Children's works closely with the school health community throughout the state to provide them with educational materials, training and support.

<https://www.choa.org/schoolhealth>

About Us



View all School Health events 

# Video & Graphic Credits

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## Video Credits



**Rectal Diazepam (Diastat)**...University of Wisconsin – Joint Project with Wisconsin Department of Public Instruction

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**How to Give your Child Midazolam**...Children's Hospital Colorado

## Photo & Graphics Credits

Martin Allison

Susan McCallum

Mayo Foundation for Medical Education and Research

Deposit Photos



Children's Healthcare of Atlanta

