

Epilepsy: Understanding the Condition, Nutrition, and Living Well

By Robert Ferguson

Introduction

Epilepsy is a condition that affects the brain and causes **repeated seizures**. Seizures happen when the brain's electrical signals get mixed up. They can be mild, such as staring into space for a few seconds, or severe, like full-body convulsions (World Health Organization [WHO], 2021).

Even though medicines can help control seizures, many people still struggle. What's often missing is **nutrition**, especially **omega-3 fatty acids** and **polyphenols**, which may help the brain stay healthy and reduce seizures (Wu, Ying, & Gomez-Pinilla, 2004; Shao, Hathout, & Tuchman, 2017).

What Is Epilepsy?

Epilepsy is not just one disease. It is a **group of brain disorders** that all cause repeated seizures (Fisher et al., 2014).

- **Focal seizures** start in one part of the brain and can change movement, feelings, or awareness.
- **Generalized seizures** involve the whole brain and can cause stiff muscles, shaking, or loss of consciousness.

Epilepsy can have many causes:

- **Genetics**, changes in genes can increase the likelihood of seizures (Vezzani, Balosso, & Ravizza, 2019).
- **Brain problems**, like injuries, strokes, or infections (Cormier & Robitaille, 2020).
- **Unknown causes**, sometimes doctors don't know why epilepsy starts.

When Was Epilepsy First Discovered?

People have known about epilepsy for thousands of years. Ancient texts from Mesopotamia, Egypt, and Greece describe seizures. The word "epilepsy" comes from the Greek word *epilambanein*, meaning "to take hold of" or "to seize" (Fisher et al., 2014).

For a long time, people thought epilepsy was caused by spirits or magic. Modern medicine began studying epilepsy in the 1800s and 1900s. The invention of **electroencephalography (EEG)** allowed doctors to see brain activity and diagnose epilepsy more accurately (Fisher et al., 2014).

When Do People Get Epilepsy?

Epilepsy can start at **any age**, but certain times are more common:

- **At birth or in early childhood**, this condition can sometimes be caused by genetic or brain development issues (Vezzani et al., 2019).
- **Other health problems**, injuries, strokes, infections, or brain tumors can trigger epilepsy (Cormier & Robitaille, 2020).
- **During teen or adult years**, some types appear later, like temporal lobe epilepsy (WHO, 2021).

Common Ways to Treat Epilepsy

1. **Medicines (Anti-Seizure Medications [ASM])**
 - Examples include valproate, levetiracetam, and carbamazepine. These medications help control seizures but may cause side effects such as tiredness or memory problems (WHO, 2021).
2. **Surgery**
 - If medicines don't work, doctors may remove the part of the brain causing seizures (Cormier & Robitaille, 2020).
3. **Diet Plans**
 - The **ketogenic diet**, a high-fat, low-carbohydrate regimen, can help some children reduce seizures (Cormier & Robitaille, 2020).
4. **Lifestyle Adjustments**
 - Sleep well, manage stress, and avoid known seizure triggers, like flashing lights (WHO, 2021).
5. **Nutritional Balance: Omega-6/Omega-3 and AA/EPA Ratios**
 - The balance of **omega-6 and omega-3 fatty acids**, particularly the **arachidonic acid (AA) to eicosapentaenoic acid (EPA) ratio**, is important.
 - High omega-6 or elevated AA/EPA ratios can exacerbate inflammation and potentially worsen seizures (Bahagat et al., 2019; Omrani et al., 2019).
 - A balanced intake of omega-3 fatty acids, such as **eicosapentaenoic acid (EPA)** and **docosahexaenoic acid (DHA)**, may help reduce inflammation and support brain health (Wu et al., 2004; Shao et al., 2017).

The Role of Inflammation in Epilepsy

Inflammation is when the body reacts to injury or stress, and it can happen in the brain, too.

- Inflammation causes brain cells to become **overactive**, which can trigger seizures (Vezzani et al., 2019).
- It can **damage neurons** and alter brain chemicals, increasing the likelihood of seizures (Peet & Horrobin, 2002).

Reducing inflammation may help the brain stay calmer and reduce seizure activity (Wu et al., 2004).

How Omega-3s and Polyphenols Can Help

Nutrition plays a big role in brain health. Omega-3 fatty acids and polyphenols help **protect brain cells, reduce inflammation, and balance brain chemicals**.

Omega-3 Fatty Acids

- **Protect neurons**, DHA is a key building block of brain cell membranes (Wu et al., 2004).
- **Reduce inflammation**, helps calm the brain, and may reduce seizures (Peet & Horrobin, 2002).
- **Balance brain chemicals** to prevent overactive signals that can cause seizures (Wu et al., 2004).

Polyphenols

- **Fight oxidative stress** by neutralizing harmful molecules called free radicals (Shao et al., 2017).
- **Reduce inflammation**: compounds like **resveratrol** (found in grapes) and **curcumin** (found in turmeric) help calm the brain (Shao et al., 2017).
- **Protect the brain**, keep neurons healthy, and may improve thinking and memory (Shao et al., 2017).

Food Sources:

- **Omega-3s**: fatty fish, flaxseeds, chia seeds, walnuts.
- **Polyphenols**: berries, grapes, green tea, turmeric, dark chocolate, olive oil.

Supplements: Products like **BalanceOil+** combine omega-3s and polyphenols to improve intake and absorption (Wu et al., 2004; Shao et al., 2017).

The AA to EPA Ratio: Cutting-Edge Research

Scientists in **Japan, Norway, and Europe** study the **AA/EPA ratio** as a key marker of inflammation.

- **AA (arachidonic acid)** promotes inflammation.
- **EPA (eicosapentaenoic acid)** reduces inflammation.
- The ratio shows the balance of these fats. A high ratio indicates increased inflammation, which can affect the brain and lead to seizures.

Many researchers believe that the AA/EPA ratio provides a **more detailed view of inflammation** than traditional markers, such as **C-reactive protein (CRP)**, because it reflects the balance of fats in cell membranes.

By tracking the AA/EPA ratio, scientists can observe how **dietary, supplement, and lifestyle changes** impact inflammation. This is why tools like the **BalanceTest** are so useful; they let you measure your AA/EPA ratio at home and take steps to improve it.

Living with Epilepsy: Realities, Risks, and Inspiration

Epilepsy affects millions, yet many live full, meaningful lives.

Famous People Who Lived with Epilepsy:

- **Fyodor Dostoevsky**, a Russian novelist who wrote about his seizures.
- **Vincent van Gogh**, the Painter, reportedly had temporal lobe epilepsy.
- **Lil Wayne**, a Grammy-winning rapper, has spoken about seizures.
- **Neil Young** is a musician who has managed epilepsy since childhood.
- **Danny Glover**, an Actor who experienced epilepsy as a child.

These examples demonstrate that individuals **with epilepsy can lead productive and normal lives**.

The Reality of Risk

While many live well with epilepsy, **serious risks exist**:

- **Sudden Unexpected Death in Epilepsy (SUDEP)** can occur, often in people with uncontrolled seizures or sleep-related seizures.
- Accidents can happen during a seizure, such as falls, burns, or drowning (Vezzani et al., 2019).

Precautions for Safety

Friends, family, and caregivers can help:

- **Learn seizure first aid**, cushion the head, clear the area, and **never put anything in the mouth**.
- **Medication adherence**, taking medications on time, is critical.
- **Maintain a safe environment**, remove sharp objects, supervise swimming, and consider installing seizure alarms at night.
- **Medical alert identification**, such as bracelets or cards, helps responders act appropriately.
- **Regular checkups** and visits to a neurologist help adjust medications and monitor seizure control.

Combining **medical care, nutrition, and safety precautions** helps people with epilepsy **live safer, healthier, and more active lives**.

Take Action for Better Brain Health and Inflammation Control

Today, it's simple for children and adults to check their **omega-6 to omega-3 ratio** and **AA to EPA ratio** with our **at-home BalanceTest** (dried blood spot test). By monitoring these key inflammatory markers, you can gain a better understanding of and manage inflammation in your body.

Once you know your results, you can take action with an **anti-inflammatory way of eating** and **supplement with BalanceOil+**, which combines **polyphenols from unripe olives** with **omega-3 fatty acids**. This combination is known to improve both ratios and support overall brain and cellular health.

To learn more, contact the person who shared this article with you, email me at robert@dietfreelife.com, or [schedule a free consultation](#) to discuss how you can optimize your omega ratios and reduce inflammation.

Conclusion

Epilepsy is a complex brain condition, but with proper **medication, nutrition, and safety strategies**, people can thrive. **Omega-3 fatty acids, polyphenols**, and a balanced **omega-6 to omega-3 ratio (AA/EPA)** help protect the brain, reduce inflammation, and support overall health. Combining medical treatment with healthy nutrition and safety measures gives people with epilepsy the best chance to live **productive, meaningful, and safe lives** (Wu et al., 2004; Shao et al., 2017; Vezzani et al., 2019; Bahagat et al., 2019).

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