

EPILEPSY FACT SHEET

Catamenial Epilepsy

What Is Catamenial Epilepsy?

Catamenial epilepsy is an increase in the frequency of seizures in women with drug resistant epilepsy. It aligns with the change in hormone levels throughout the menstrual cycle. These hormone changes result in enhanced neuronal excitability, which is attributed to having more seizures. The most common pattern found in catamenial epilepsy is an increase in seizure frequency right before or during menses.

There is no universally accepted definition of catamenial epilepsy. A widespread definition is the doubling of seizure frequency during a particular menstrual phase. According to this definition, about 30% of women with drug resistant epilepsy have catamenial epilepsy.

Causes

Ovarian hormones play a role in catamenial epilepsy, but the exact cause is unknown. Potential causes include:

- **Cyclical hormones:** The hormone called estrogen has a pro-convulsant effect and the hormone called progesterone has an ant-convulsant effect. Because of this, the surge of estrogen at ovulation and the fall in progesterone at menses (when bleeding occurs) may be associated with increased seizures.
- **AEDs:** Hormones released throughout the menstrual cycle can affect the breakdown of AEDs in the body. This means that an increase in particular hormones can decrease the amount of AEDs available for the body to use.
- **Water & Electrolyte Balance:** Water and electrolyte balance affects many organs, including the brain. As this balance changes through the menstrual cycle, it can affect seizure activity.

Treatment

All treatments of catamenial epilepsy should be carried out with the support of your health care practitioner. Just like all epilepsy treatments, there is currently no treatment option that is effective for everyone.

- First, optimize your AED therapy.
- Progesterone: The most studied treatments for catamenial epilepsy are hormonal including natural progesterone supplementation, synthetic progestogens and menstrual suppressive therapies.
- Tailor your AED therapy: If low AED concentrations are found during certain phases of your cycle, adjusting your AED dosage or supplementing with a different AED may be helpful. Only change your AED routine under the supervision of your health care practitioner. Currently there is no strong research evidence showing the effectiveness of non-hormonal treatments.

How Do I Know If I Have Catamenial Epilepsy?

Determining if there is a relationship between seizures and menstruation can help optimize epilepsy treatment.

There are three patterns of catamenial epilepsy.

C1 = seizures around the start of your menstrual cycle

C2 = seizures occurring at the end of your period for a couple of days

C3 = seizures occurring during the days between your periods

Diagnosis is established through keeping a detailed diary of:

1. Your menstruation for at least 3 cycles
2. Daily seizure occurrence
3. Missed medications
4. Sleep habits
5. Stressors
6. Changes in physical activity
7. Changes in diet
8. Illness

The diary can also help rule out other secondary reasons for increased seizures, an important step in determining if you have catamenial epilepsy. Share this diary with your physician to help determine if you have catamenial epilepsy. It is not guaranteed that you will find a correlation between your menstrual cycle and seizure occurrence.



HOW TO DOCUMENT MENSTRUATION

Menstrual cycles are 24 – 35 days, with the average cycle lasting 28 days. There are 3 phases in each cycle: follicular, ovulation and luteal. Day 1 is the first day of menses and ovulation occurs around day 14. With the support of your doctor, you can learn how to check exactly when you begin each phase in the cycle, your progesterone levels, and your AED levels. All of these factors can contribute to the patterns of your seizures.

To help record details of your menstrual cycle, you can use smartphone apps such as Clue, Period Calendar, Flo Period Tracker, or My Calendar.

*This information sheet provides general information for the public; it is not medical advice.
All questions about catamenial epilepsy should be discussed with your physician.*



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