Epilepsy management in people with epilepsy of childbearing potential (PWECP) requires optimizing seizure control and minimizing the risk of fetal adverse effects.
Engage in joint decision-making with PWECP

Recommend ASMs and doses that optimize both seizure control and fetal outcomes should pregnancy occur at earliest opportunity preconceptionally.

Minimize the occurrence of convulsive seizures

Be cautious in attempting to remove or replace an ASM controlling convulsive seizures, even if it is not an optimal with regard to the risk to the fetus.

1. General counseling recommendations

2. ASM changes in pregnancy

Designed by Alina Ivaniuk and Parthvi Ravat. Based on 10.1212/WNL.0000000000209279
Monitor ASM levels throughout pregnancy as guided by individual ASM pharmacokinetics and patient clinical presentation.

Adjust ASM dose in case of:

- ASM levels decrease
- Seizure control worsening (observed or anticipated)

Counsel PWECP receiving following ASMs about limited data on pregnancy-related outcomes in these drugs:

- Acetazolamide
- Eslicarbazepine
- Ethosuximide
- Lacozamide
- Nitrazepam
- Perampanel
- Piracetam
- Pregabalin
- Rufinamide
- Stiripentol
- Tiagabine
- Vigabatrin
Preventing major congenital malformations (MCM)  

2.4%–2.9% risk of MCM in general population

Counsel patients about risk of MCM taking the general population risk as comparison

Consider lamotrigine, levetiracetam, or oxcarbazepine in PWECP if clinically feasible

Avoid valproic acid if clinically feasible

Counsel PWECP considering or on valproic acid that the risk of MCMs is highest compared to other ASMs

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Avoid following ASMs to reduce risk of malformations:

Cardiac
- Phenobarbital

Oral clefts
- Phenobarbital
- Topiramate

Urogenital/renal
- Valproic acid

Fetal MCM screening
Recommend *fetal screening for MCMs* (e.g., anatomical ultrasound) for PWECP who are treated with any ASM during pregnancy.

Recommend *fetal cardiac screening* for PWECP treated with *phenobarbital* during pregnancy.
Counsel PWECP that the **prevalence of intrauterine death does not differ** in monotherapy with different ASMs.

Avoid valproic acid or topiramate in PWECP to minimize the risk of offspring being born **small for gestational age**.

Recommend **fetal growth screening** throughout pregnancy among PWECP treated with valproic acid or topiramate.
Counsel PWECP treated with or considering valproic acid that in utero exposure to it is associated with decreased IQ.

Avoid valproic acid to reduce the risk of poor neurodevelopmental outcomes.

Screen development in children exposed to any ASM in utero born to PWECP.

Prescribe at least 0.4 mg of folic acid to reduce risk of neural tube defects, ASD, and decreased IQ.