AAN Summary of Evidence-based Guideline for CLINICIANS

MANAGEMENT ISSUES FOR WOMEN WITH EPILEPSY—FOCUS ON PREGNANCY OBSTETRICAL COMPLICATIONS AND CHANGE IN SEIZURE FREQUENCY

This is a summary of the American Academy of Neurology (AAN) guideline regarding management and care of women with epilepsy (WWE) during pregnancy. Recommendations are presented for obstetric or other health complications, change in seizure frequency, risk of status epilepticus, and rate of continued seizure freedom during pregnancy.

Please refer to the full guideline at www.aan.com for more information.

OBSTETRICAL COMPLICATIONS

Do WWE have an increased risk of pregnancy-related complications?	
Good evidence	Counseling of WWE who are pregnant or are contemplating pregnancy should reflect that there is probably no substantially increased risk (greater than 2 times expected) of Cesarean delivery for WWE taking antiepileptic drugs (AEDs) (**Level B**[†]).
	Counseling of WWE who are pregnant or are contemplating pregnancy should reflect that there is probably no substantially increased risk (greater than 2 times expected) of late pregnancy bleeding for WWE taking AEDs (**Level B**).
	Counseling of WWE who are pregnant or are contemplating pregnancy should reflect that there is probably no moderately increased risk (greater than 1.5 times expected) of premature contractions or premature labor and delivery for WWE taking AEDs (**Level B**).
Weak evidence	Counseling of WWE who are pregnant or are contemplating pregnancy should reflect that there is possibly a moderately increased risk (up to 1.5 times expected) of Cesarean delivery for WWE taking AEDs (**Level C**).
	Counseling of WWE who are pregnant or are contemplating pregnancy should reflect that there is possibly a substantially increased risk of premature contractions and premature labor and delivery during pregnancy for WWE who smoke (**Level C**).
Insufficient evidence	Counseling of WWE who are pregnant or are contemplating pregnancy should reflect that there is insufficient evidence to support or refute an increased risk of pre-eclampsia, pregnancy-related hypertension, or spontaneous abortion (**Level U**).

EPILEPSY-RELATED COMPLICATIONS

Do WWE have an increased risk of epilepsy-related complications during pregnancy?	
Good evidence	Counseling of WWE who are pregnant or are contemplating pregnancy should reflect that seizure freedom for at least 9 months prior to pregnancy is probably associated with a high likelihood (84–92%) of remaining seizure free during pregnancy (**Level B**).
Insufficient evidence	Counseling of WWE who are pregnant or are contemplating pregnancy should reflect that there is insufficient evidence to support or refute an increased risk of a change in seizure frequency or status epilepticus (**Level U**).

CLINICAL CONTEXT*

There was no conclusive evidence of an increased risk of many obstetrical complications often associated with WWE during pregnancy. This raises the possibility that there is no true difference in the rates of obstetrical complications in WWE compared to the general population.

Further, the findings do not suggest high rates of status epilepticus, increased seizure rate, or increased risk of seizure relapse during pregnancy for WWE who are seizure free. The available data indicate that seizure-free WWE will remain seizure free during pregnancy, which is another reason to strive for seizure freedom in WWE planning pregnancy.

**Clinical context slightly abridged. See the published guideline for the complete text.*

This guideline summary is evidence-based. The AAN uses the following definitions for the level of recommendations and classification of evidence for prognosis and screening.

†**Classification of Recommendations: A** = Established as effective, ineffective or harmful (or established as useful/predictive or not useful/predictive) for the given condition in the specified population. (Level A rating requires at least two consistent Class I studies.)** **B** = Probably effective, ineffective or harmful (or probably useful/predictive or not useful/predictive) for the given condition in the specified population. (Level B rating requires at least one Class I study or two consistent Class II studies.) **C** = Possibly effective, ineffective or harmful (or possibly useful/predictive or not useful/predictive) for the given condition in the specified population. (Level C rating requires at least one Class II study or two consistent Class III studies.) **U** = Data inadequate or conflicting; given current knowledge, treatment (test, predictor) is unproven.

**In exceptional cases, one convincing Class I study may suffice for an "A" recommendation if 1) all criteria are met, 2) the magnitude of effect is large (relative rate improved outcome > 5 and the lower limit of the confidence interval is > 2).

Classification of Evidence for Rating of a Prognostic Article: Class I = A cohort study of a broad spectrum of persons at risk for developing the outcome (e.g., target disease, work status). The outcome is defined by an acceptable reference standard for case definition. The outcome is objective or measured by an observer who is masked to the presence of the risk factor. Study results allow calculation of measures of prognostic accuracy. **Class II** = A case control study of a broad spectrum of persons with the condition compared to a broad spectrum of controls or a cohort study of a broad spectrum of persons at risk for the outcome (e.g., target disease, work status) where the data was collected retrospectively. The outcome is defined by an acceptable reference standard for case definition. The outcome is objective or measured by an observer who is masked to the presence of the risk factor. Study results allow calculation of measures of prognostic accuracy. **Class III** = A case control study or a cohort study where either the persons with the condition or the controls are of a narrow spectrum where the data was collected retrospectively. The outcome is defined by an acceptable reference standard for case definition. The outcome is objective or measured by an observer who did not determine the presence of the risk factor. Study results allow calculation of measures of a prognostic accuracy. **Class IV** = Studies not meeting Class I, II, or III criteria including consensus, expert opinion or a case report.

Classification of Evidence for Rating of a Screening Article: Class I = A statistical, population-based sample of patients studied at a uniform point in time (usually early) during the course of the condition. All patients undergo the intervention of interest. The outcome, if not objective, is determined in an evaluation that is masked to the patients' clinical presentations. **Class II** = A statistical, non-referral-clinic-based sample of patients studied at a uniform point in time (usually early) during the course of the condition. Most patients undergo the intervention of interest. The outcome, if not objective, is determined in an evaluation that is masked to the patients' clinical presentations. **Class III** = A sample of patients studied during the course of the condition. Some patients undergo the intervention of interest. The outcome, if not objective, is determined in an evaluation by someone other than the treating physician. **Class IV** = Studies not meeting Class I, II, or III criteria including consensus, expert opinion or a case report.

This is an educational service of the American Academy of Neurology (AAN). It is designed to provide members with evidence-based guideline recommendations to assist with decision-making in patient care. It is based on an assessment of current scientific and clinical information and is not intended to exclude any reasonable alternative methodologies. The AAN recognizes that specific patient care decisions are the prerogative of the patient and the physicians caring for the patient, and are based on the circumstances involved. Physicians are encouraged to review carefully the full AAN guidelines so they understand all recommendations associated with care of their patients.

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