

Management of epilepsy in pregnancy: a report from the International League Against Epilepsy Task Force on Women and Pregnancy

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**Prevalence (%) of major congenital malformations (malformed/exposed) for different monotherapies.
Data from three prospective registers.**

Drug	International Registry of Antiepileptic Drugs and Pregnancy (EURAP)		North American AED Pregnancy Registry		UK Epilepsy and Pregnancy Register	
	Prevalence	(95%CI)	Prevalence	(95%CI)	Prevalence	(95%CI)
Carbamazepine	5.5 % (107/1,957)	(4.5 – 6.6)	3.0% (31/1,033)	(2.1 – 4.2)	2.6% (43/1,657)	(1.9 – 3.5)
Lamotrigine	2.9% (74/2,514)	(2.3 – 3.7)	1.9% (31/1,562)	(1.4 – 2.8)	2.3% (49/2,098)	(1.8 – 3.1)
Levetiracetam	2.8% (17/599)	(1.7 – 4.5)	2.4% (11/450)	(1.4 – 4.3)	0.7% (2/304)	(0.2 – 2.4)
Oxcarbazepine	3.0% (10/333)	(1.4 – 5.4)	2.2% (4/182)	(0.9 – 5.5)		
Phenobarbital	6.5% (19/294)	(4.2 – 9.9)	5.5% (11/199)	(3.1 – 9.6)		
Phenytoin	6.4% (8/125)	(2.8 – 12.2)	2.9% (12/416)	(1.7 – 5.0)	3.7% (3/82)	(1.2 – 10.2)
Topiramate	3.9% (6/152)	(1.5 – 8.4)	4.2% (15/359)	(2.5 – 6.8)	4.3% (3/70)	(1.5 – 11.9)
Valproate	10.3 % (142/1,381)	(8.8 – 12.0)	9.3% (30/323)	(6.6 – 12.9)	6.7% (82/1,220)	(5.4 – 8.3)

Summary of individual anti-epileptic drug projected decreases in serum concentrations (if no dose changes are made).

AED	Decrease in serum concentration	Decrease in serum free (unbound) concentration	Recommendations to perform therapeutic drug monitoring, if available
Phenobarbital	Up to 55%	Up to 50%	Yes
Phenytoin	60 - 70%	20 - 40%	Yes, free concentrations
Carbamazepine	0 - 12%	None	Optional
Valproate	Up to 23%	None	Optional, free concentrations if done
Oxcarbazepine monohydroxy-derivative (MHD)	36 - 62%	N/A	Yes
Lamotrigine	0.77 of population: 69% decrease 0.23 of population: 17% decrease	N/A	Yes
Gabapentin	Insufficient data	N/A	Yes
Topiramate	Up to 30%	N/A	Yes
Levetiracetam	40 – 60%, with maximal decrease reached in first trimester	N/A	Yes
Zonisamide	Up to 35% but little data	N/A	Yes

N/A = not applicable.