

Topiramate is a liver enzyme inducing medication.(1) There is limited information available on interactions between topiramate and hormonal contraception. Two studies have investigated the effect of topiramate on a combined oral contraceptive containing 35mcg of ethinyl estradiol and 1 mg norethisterone. The first investigated the effect of the addition of topiramate at doses of 200mg, 400mg and 800 mg per day. There was a dose related reduction in half-life of norethisterone and in the bioavailability of ethinyl estradiol.(2). A second study investigated the effect of lower doses of topiramate and showed an overall non-significant reduction in bioavailability for either ethinyl estradiol or norethisterone at doses below 200 mg per day, however the study numbers were small (3). As topiramate has an association with fetal abnormalities (4) and its use is classified as D in pregnancy, caution is recommended and an interaction between topiramate and hormonal contraceptives an interaction cannot be excluded at any dose.

Conclusion

Topiramate at any dose should be treated as a liver enzyme inducer in relation to guidance on contraception use.

References

1. Levy R. Explanation and prediction of drug interactions with topiramate using CYP450 inhibition spectrum. *Epilepsia*. 1995;36(4):47.
2. Rosenfeld WE, Doose DR, Walker SA, Nayak RK. Effect of topiramate on the pharmacokinetics of an oral contraceptive containing norethindrone and ethinyl estradiol in patients with epilepsy. *Epilepsia*. 1997;38(3):317-23.
3. Doose DR, Wang SS, Padmanabhan M, Schwabe S, Jacobs D, Bialer M. Effect of topiramate or carbamazepine on the pharmacokinetics of an oral contraceptive containing norethindrone and ethinyl estradiol in healthy obese and nonobese female subjects. *Epilepsia*. 2003;44(4):540-9.
4. Vajda F, Graham J, Hitchcock A, Lander C, O'Brien T, Eadie M. Antiepileptic drugs and foetal malformation: analysis of 20 years of data in a pregnancy register. *Seizure*. 2019;65:6-11.



familyplanningallianceaustralia.org.au

The Medical Advisory Committee of Family Planning Alliance Australia is comprised of senior medical educators, senior medical officers and medical directors of the member family planning organisations. The Clinical Reference Group of the Medical Advisory Committee exists as a means to review current clinical practice and provide evidence based recommendations for use by sexual and reproductive health practitioners where clinical guidance is lacking.

© Family Planning Alliance Australia. March 2022

Family Planning Alliance Australia has taken every care to ensure that the information contained in this publication is accurate and up-to-date at the time of being published. As information and knowledge is constantly changing, readers are strongly advised to confirm that the information complies with present research, legislation and policy guidelines. FPAA accepts no responsibility for difficulties that may arise as a result of an individual acting on this information and any recommendations it contains.

State / Territory sexual health and family planning organisations



Western Australia
SHQ (Sexual Health Quarters)
shq.org.au



Northern Territory
Family Planning Welfare
Association of NT
fpwnt.com.au



South Australia
SHINE SA
shinesa.org.au



Queensland
True
true.org.au



ACT
Sexual Health and Family
Planning ACT
shfpact.org.au



New South Wales
Family Planning NSW
fpnsw.org.au



Victoria
Sexual Health Victoria
shvic.org.au



Tasmania
Family Planning Tasmania
fpt.asn.au