Hormonal contraception and use of antidepressants. 
A Danish historical controlled cohort study.

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Context. Female sex hormones exert an influence on women's mood.

Objectives. To quantify the influence of different types of hormonal contraception (HC) on the use of antidepressants (AD).

Methods. Exposure to HC and AD was assessed from the central prescription registry. Pregnancy or cancer was achieved from the National Health Registry, and led to exclusion.

Patients. All Danish non-pregnant women 15-34 years of age during the period 1995-2013 were followed for use of HC, and first ever use of AD was assessed during the period 2000-2013.

Intervention and outcome measures. With never-users as reference, Poisson regression calculated rate ratios (RR) of use of AD among current or recent (last six months) users of specific types of HC. Adjustments were made for age, calendar year, and length of education.

Results. A total of 1.16 million women contributed 7,348,324 women years of observation, of these 3,914,509 women years on current or recent use of HC. Users of combined oral contraceptives with levonorgestrel, norgestimate, desogestrel, gestodene, and drospirenone implied RR of use of AD from 1.3 to 1.7, without consistent differences according to estrogen dose or progestogen types. Users of oral contraceptives with estradiolvalerate and dienogest had 2.6 (2.1-3.2) times more use of AD. Progestogen only pills conferred a RR of 1.8 (95% CI 1.6-1.9), levonorgestrel intrauterine system a RR of 2.5 (2.3-2.8), implant a RR of 2.9 (2.7-3.1). Vaginal ring conferred a RR of 2.0 (1.9-2.1) and transdermal patch a RR of 2.5 (2.2-2.8).

Conclusion. Combined oral contraceptives conferred about 50% more use of AD, and progestogen only contraception, patch, vaginal ring and combined pills with dienogest 2-3 times more use of AD.

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