

# Study Examines Risk of Depression with Use of Hormonal Contraception

Research Spotlights highlight scientific research focused on girls and women with ADHD and informs non-scientists about the research process. This Spotlight breaks down "[Hormonal Contraceptive Use and Risk of Depression Among Young Women with Attention-Deficit/Hyperactivity Disorder](#)" published in June 2023.

► **STUDY GOAL** To compare rates of diagnosed depression in girls and young women with and without ADHD while taking hormonal contraception

## What is already known about the topic?

- Girls and women with ADHD are more likely to give birth as teenagers and experience unplanned pregnancies in comparison to those without ADHD. There are several potential reasons why this occurs.
- This study focuses on one of these potential reasons: difficulty finding a contraceptive that is tolerable. In particular, there is some evidence that hormonal contraceptive use is associated with increases in depression, especially among women with histories of mental health diagnoses.
- However, previous studies have not looked at the potential risk of depression associated with hormonal contraceptive use in women with ADHD.

## How was this study done?

- This was a population-based study of Swedish national registers including 29,767 girls and young women with ADHD and 763,146 without ADHD. All Swedish-born women aged 15 to 24 years-old at any time from 2010 through 2017 were identified.

- Rates of ADHD were determined by a diagnosis of the disorder and/or a prescription of any ADHD medication in patient records.
- Rates of depression were determined by a diagnosis of a depressive disorder and/or a prescription of any antidepressant treatment in patient records.
- Researchers also identified hormonal contraception use from prescriptions issued by a physician or a midwife in patient records, which is the only method for dispensing hormonal contraception in Sweden.
- The analyses considered confounders, which are variables that can account for the relationship between ADHD and oral hormonal contraceptive use. Variables considered in this study were education, parental factors (e.g., parental history of psychiatric disorders), any medical indication for hormonal contraception use, age, and calendar year.

## What were the study's findings?

- **Oral hormonal contraceptive users with ADHD had:**
  - 5 times higher risk of depression than women without ADHD who were not using oral combined contraception
  - 6 times higher risk of depression than women without ADHD who were using oral combined contraception
- **Women with ADHD who used non-oral hormonal contraception, such as an implant or hormonal intrauterine device (IUD), did not differ in rates of depression in comparison to women without ADHD.**

## Why are these findings important?

- These findings suggest that there is a relationship between oral hormonal contraceptive use and depression among girls and women with ADHD, but there was no difference between those with and without ADHD for non-oral hormonal contraception use.
- The authors conclude that the potential risks and benefits of oral hormonal contraceptive use should be considered between girls and women with ADHD and their healthcare providers.

### Study Limitations and Future Research


This study had some limitations that point to the need for additional studies on this topic. For example:

- Women who had a diagnosis of depression or received antidepressant treatment 5 years prior were excluded. It could be that some of the girls and women in the analysis who had prior depression 6 or more years ago were incorrectly identified as not having prior depression.
- Although prescriptions for oral contraceptive use were measured, actual intake of oral contraception by those who received the prescription were not measured. Future studies should consider how adherent girls and women with ADHD are with oral hormonal contraceptives.

Future studies should also consider if ADHD medication use impacts depression in the context of oral hormonal contraceptive use.

### Suggestions for Support and Additional Information

Girls and women with ADHD can:

- Use these findings to initiate conversations with other girls and women with ADHD and with their healthcare providers (e.g., psychiatrist, gynecologist, primary care provider).
- Talk to their healthcare providers about contraceptive options and discuss the best ways to monitor potential changes with and impacts to their mental health.
- Listen to a recent presentation by one of the study authors, Dr. Charlotte Skoglund, on research examining girls and women with ADHD and the role of hormones in ADDitude Magazine's Podcast 488: [ADHD Symptoms in Girls Are Often Misdiagnosed, Misinterpreted.](#) 

### Terms to know

#### Oral hormonal contraceptive

Pills typically taken daily by mouth that usually consist of the hormones progesterin and estrogen (combined contraceptive), or only progesterin, to prevent pregnancy.

#### Non-oral hormonal contraceptive

Any hormonal contraceptive not taken by mouth to prevent pregnancy (e.g., hormonal intrauterine device).