

2019

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Recommended Citation

Harrison, Anna (2019) ""The Pill" Problem Medicine: Unspoken Dangers of Hormonal Birth Control," *The Synapse: Intercollegiate science magazine*: Vol. 20: Iss. 1, Article 10.

Available at: <https://digitalcommons.denison.edu/synapse/vol20/iss1/10>

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"The Pill" Problem

Unspoken Dangers of Hormonal Birth Control

Written by Anna Harrison

Illustrated by Maria Altier

"The pill," or female hormonal birth control, has had tremendous socio-economic benefits. It drove the women's rights movement forward and stimulated conversations about the role of women in society. However, very little attention has been given to the shortcomings of this miracle pill, the dangers of how it is prescribed and its harmful side effects. Nor are patients fully informed about the mechanisms by which the pill functions.

In the United States, 100 million women take oral hormonal birth control. However, in 60 percent of cases, the pill is prescribed for non-contraceptive reasons. While the pill does alleviate symptoms for a variety of health conditions caused by hormones, it does not actually address the cause of these symptoms and treat the underlying condition.

As women's health specialist Dr. Jolene Brighton asks, "Would you take Advil every day for a splinter, or remove it?" Women are often prescribed this pill as a quick and convenient solution to their health concerns. They receive little explanation on what it is, how it works, or how it will fail to treat their underlying condition. This blatant neglect of a woman's health often leads to more serious medical issues, especially when she stops taking the pill.

The pill itself has dangerous side effects. These include headaches, fatigue, thyroid complications, and adrenal dysfunction, digestive issues, hair loss, depression, and even low libido. The list of risks also encompasses increased rates of infertility, stroke, breast, cervical and liver cancer, diabetes, heart attack, and autoimmune diseases. But even once the pill is stopped, women are often left with terrible mood swings, adult acne, fatigue, abnormal periods, and headaches.

Should a pill with such serious side effects really be prescribed as a quick fix for something like migraines, cramps, or acne? No. Especially not when these symptoms arise from other treatable conditions.

Women have complained about such issues since hormonal birth control was introduced in the 1960s. Yet, almost sixty years later, it is still the most commonly used form of contraception. Little research has been done to understand and reduce side effects. Nor have convenient alternatives been readily discussed with patients. To understand how hormonal oral contraceptives cause these issues, we'll have to explain something that few doctors do: how birth control actually works.

The most common form of "the pill" contains two hormones: progestin (lab-synthesized progesterone) and estrogen. These two chemicals have profound impacts on the intricate feedback loops throughout the entire endocrine system.

The two phases of the menstrual cycle naturally include fourteen days of elevated levels of estrogen and fourteen days of elevated progesterone levels. The window of fertility occurs when sperm and egg can meet in the uterus for just five days in the middle

of the cycle. This is because sperm can survive for three to five days in the uterus, although during ovulation the egg survives for only 24 hours after its release into the endometrium, or the lining of the uterus. Rising levels of estrogen and dropping levels of progesterone cause two other hormone levels to increase: luteinizing hormone and follicle stimulating hormone. These hormones cause ovulation.

Delivering high levels of estrogen and progestin via the pill for the entire month, except for a week in which a harmless placebo

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pill is administered, suppresses the pituitary gland from releasing follicle stimulating hormone and luteinizing hormone. Without those increased doses, ovulation doesn't occur. Periods continue with increased regularity because of "placebo pill" that doesn't contain any hormones. Hormone levels drop dramatically and induce the shedding of the endometrium. Essentially, the pill facilitates the suppression and replacement of the entire normal hormonal cycle.

Through mechanisms that remain poorly understood, the pill has been shown to trigger inflammation. One hypothesis is that the continuous delivery of abnormally high levels of hormones disrupts the endocrine-immune interaction and causes inflammation. Another suggested mechanism is that the alternation of intestinal microflora is caused by taking the pill and gastrointestinal diseases.

C-reactive proteins are made by the liver in response to acute inflammation, specifically macrophage and T-cell activation. Elevated CRP is directly linked to increased risk for cardiovascular disease, thyroid disease, and autoimmune disease. The pill, which 98 percent of sexually active women in the United States have taken, directly causes CRP levels to increase, according to studies published in *Mediators of Inflammation*, *Obstetrics and Gynecology*, and *Human Reproduction*. It is no wonder that women are at such a great risk for these diseases.

Ultimately, birth control is a tremendously important feature of health care. But as the sixtieth anniversary of "the pill" approaches, we must take a hard look at the issues that arise from hormonal birth control. It is time to educate young female patients and their doctors about what birth control really does to a female body. It is time to expand hormonal birth control research and availability of its alternative methods, and address the underlying causes of symptoms that the pill is prescribed to mask. •••

