

# New report: Don't blame the pill for estrogen in drinking water

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Contrary to popular belief, birth control pills account for less than 1 percent of the estrogens found in the nation's drinking water supplies, scientists have concluded in an analysis of studies published on the topic. Their report suggests that most of the sex hormone -- source of concern as an endocrine disruptor with possible adverse effects on people and wildlife -- enters drinking water supplies from other sources. The report appears in ACS' biweekly journal *Environmental Science & Technology*.

Amber Wise, Kacie O'Brien and Tracey Woodruff note ongoing concern about possible links between chronic exposure to estrogens in the water supply and fertility problems and other adverse human health effects. Almost 12 million women of reproductive age in the United States take the pill, and their urine contains the hormone.

Hence, the belief that oral contraceptives are the major source of [estrogen](#) in lakes, rivers, and streams. Knowing that sewage treatment plants remove virtually all of the main estrogen -- 17 alpha-ethinylestradiol (EE2) -- in oral contraceptives, the scientists decided to pin down the main sources of estrogens in water supplies.

Their analysis found that EE2 has a lower predicted concentration in U.S. [drinking water](#) than natural estrogens from soy and dairy products and animal waste used untreated as a farm fertilizer. And that all humans, (men, women and children, and especially pregnant women) excrete hormones in their urine, not just women taking the pill. Some research cited in the report suggests that animal manure accounts for 90

percent of estrogens in the environment. Other research estimates that if just 1 percent of the estrogens in livestock waste reached waterways, it would comprise 15 percent of the estrogens in the world's water supply.

**More information:** "Are Oral Contraceptives a Significant Contributor to the Estrogenicity of Drinking Water", *Environmental Science & Technology*.

Provided by American Chemical Society

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