



ECHO

Environmental influences
on Child Health Outcomes

A program supported by the NIH

Study Summary

A review of studies that look at whether exposure to common non-persistent chemicals in consumer products delays the time it takes to become pregnant.

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Who sponsored this study?

This research was supported by the Environmental influences on Child Health Outcomes (ECHO) program, Office of The Director, National Institutes of Health. This work was also supported by NIH grants P30 ES009089, R01ES013543, R01ES014393, R01ES08977, and T32ES023772.

Why was this study needed?

Many products that people use contain non-persistent chemicals that can disrupt hormones. Non-persistent chemicals are chemicals that are broken down fairly quickly in the environment and in the human body. Therefore, non-persistent chemicals are often used in everyday household products. Some studies show these chemicals may affect people's chance to get pregnant or may cause problems in pregnancy. These chemicals may also affect how long it takes for a couple to become pregnant, but not many studies have tried to answer this question. The goals of this study were to:

- Review and summarize what is known about possible links between non-persistent chemicals and the time it takes to get pregnant.
- To identify what information is missing in existing studies about this topic.
- To present our results in a way that might change health policies and future research about chemicals in products that people use.

Who was involved?

This review looked at existing studies of healthy men and women who were in the age range to get pregnant. The studies were done in several different countries and ranged in size from 137 to 10,512 participants.

What happened during the study?

We used several sets of data to do a large search of research papers published from 2007 to 2017. We searched for articles about both common non-persistent chemicals and time to get pregnant. Our search found 3,456 articles. Two authors reviewed each of the articles we found to make sure they included information we needed. We found that 15 papers from 12 different studies, and then we pulled information from those for our review.

What were the study results?

There were some signs that when either men, women, or both were exposed to certain chemicals, it took a longer for the couple to get pregnant. But more research needs to be done to truly understand those effects. There were also signs that certain chemicals did not have any effects. **Results reported here are for a single review of specific studies during a 10-year period. Other or future studies may provide new information or different results. You should not make changes to your health without first consulting your healthcare professional.*

Impact

The papers we reviewed did not show a strong link between non-persistent chemicals and how long it takes to get pregnant. But, because there are not many studies like this, we concluded that more research is needed. While we wait for more research, it does not hurt to try to avoid certain chemicals in case they could affect the chances of becoming pregnant. We suggest common-sense lifestyle changes for men and women who would like to have a child. These include trying to avoid contact with certain non-persistent chemicals. Some ways to do this would be to use fewer plastic food containers and look at ingredient lists on personal care and cleaning products in order to avoid phthalates, parabens, TCS, benzophenones, and glycol ethers.

What happens next?

We are doing another review that will study whether there is a connection between chemicals that stay in the body for a long time and the time it takes to become pregnant.

Where can I learn more?

<https://www.ncbi.nlm.nih.gov/pubmed/30307509>

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