* Bisphenol A (BPA)
* Bisphenol A, or BPA, is a chemical found in many hard plastics that we use every day. Higher doses have been linked to infertility and other health problems. Products that contain BPA include water bottles, **baby bottles**, dental fillings and sealants, dental devices, medical devices, eyeglass lenses, DVDs and CDs, household electronic items, and sports equipment.
* Article in MedicalNewsToday: Medically reviewed by Suzanne Falck, M.D., FACP on May 25, 2017 — Written by Yvette Brazier

BPA is an endocrine disruptor.

It can imitate the body's hormones, and it can interfere with the production, secretion, transport, action, function, and elimination of natural hormones. BPA can behave in a similar way to [estrogen](https://www.medicalnewstoday.com/articles/277177.php) and other hormones in the human body. Infants and young children are said to be especially sensitive to the effects of BPA. Research suggests it can impact human health in various ways.

* Reproductive disorders that can be transgenerational.
* Heart disease.
* Fetal brain development
	+ Environmental exposure to BPA has the potential to affect the developing brain during gestation, according to research. The impact includes changes in structural development, interference with estrogen regulation, DNA modifications. This could have effects on social behavior and anxiety after birth.
* Breast and prostate cancer.
* Asthma

How does BPA leach:

The chemical gets into food and beverages from the containers — especially if the plastic is old or damaged (which can happen, for example, by microwaving it). In fact, the chemical was so widespread that the 2003-2004 National Health and Nutrition Examination Survey (NHANES III) from the Centers for Disease Control and Prevention found detectable levels of BPA in 93 percent of over 2,500 urine samples taken in the U.S

<https://www.livescience.com/63592-bpa-free-plastic-dangers.html>

Live Science.com Sep 15th, 2018 “Scientists warn that BPA-Free plastic may not be safe.

The "BPA-free" labels on plastic bottles serve as a reassurance that the product is safe to drink out of.

But new research adds onto growing evidence that BPA-free alternatives may not be as safe as consumers think. Researchers found that in mice, BPA replacements caused decreased sperm counts and less-viable eggs. These effects were then passed on to next generations, scientists reported yesterday (Sept. 13) in the journal ‘Current Biology’

BPA-alternatives may not be that different

trying to determine what the effects of BPA were on the reproduction of mice, when they noticed something weird, according to an article in National Geographic.

The mice, all in BPA-free plastic cages, were divided into two groups. One group received BPA through a dropper, while the other group did not. The group that didn't receive the BPA was supposed to be a control — but then the control mice started to show genetic changes similar to to the mice receiving BPA.

They found that the control group was being exposed to the BPA alternative, bisphenol S or BPS from damaged cages. These chemicals were altering their chromosomes – our thread like structures that contain genes – and leading to problems with egg and sperm production, according to the study.

So they conducted follow-up tests, purposefully exposing the mice to these alternatives, such as BPF, BPS and BPAF. They found similar results. Both sexes had problems properly recombining DNA — the process of forming new chromosomes by combining bits and pieces of genetic material from both parents – to produce sperm and eggs. These changes could lead to less viable sperm and abnormal eggs, according to the statement.

Good article

<https://myplasticfreelife.com/2011/04/bpa-free-does-not-mean-safe-most-plastics-leach-hormone-disrupting-chemicals/>

Oct 19, 2019

<https://www.fatherly.com/gear/baby-bottles-glass-silicone-stainless-steel/>

<https://www.latimes.com/lifestyle/story/2019-07-18/best-reusable-water-bottles>

<https://www.babygreenthumb.com/p-122-safe-plastic-numbers-guide.aspx>

Baby Green Thumb Conclusion:

**Safest Choices**

In conclusion, plastic products marked with the numbers 2, 4 and 5 are the safer choices. Regardless of what plastic you use, avoid exposing your plastics to high temperatures (microwave, dishwasher) and use mild detergents for cleaning. Since there is no guarantee that plastics will not leach out harmful chemicals, I suggest playing it safe by trying to avoid plastic when possible.