

Avoiding Toxic Plastic

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BE PREPARED

YOUR CHEMICAL CHECKLIST

Three common endocrine disruptors are found in a shocking number of everyday household products. Learning to identify them and their hiding places will allow you to decrease unnecessary exposures.

- Bisphenol A (BPA)
- Phthalates
- Polyvinyl Chloride (PVC)

YOU SHOULDN'T HAVE TO BE A ROCKET SCIENTIST TO CHOOSE SAFE EATING GEAR AND TOYS FOR YOUR FAMILY. IF IT COMES IN CONTACT WITH YOUR MOUTH, WE'VE GOT YOU COVERED.

Parents aren't strangers to making complicated decisions about what to feed their families, but we've recently been given another hurdle to jump: harmful chemicals leaching into our food. New research continues to link these ubiquitous chemicals to endocrine disrupting damage such as infertility, miscarriages, early puberty, cancer, obesity and childhood diabetes.

We're talking about plastic bibs, bottles, utensils and everything in between. And as soon as we start taking an honest look at what's going on in our kids' mouths, we're forced to consider pacifiers, teething toys and toys too, leaving busy parents overwhelmed and sometimes paralyzed. But don't worry - just take a deep breath and let's talk about the basics of avoiding toxic plastic.

BISPHENOL A (BPA)

TIPS FOR AVOIDING BPA

- Choose PET or PETE (#1), HDPE (#2), LDPE (#4) and PP (#5), as they are usually BPA-free. Plastics from recycling category #1 should not be reused even though they're BPA-free, because they can leach other chemicals (like antimony) when exposed to heat and detergents
- Avoid aluminum bottles, canned foods and pre-made baby formula; they require a protective liner that is typically a BPA-based epoxy. Use stainless steel bottles, fresh or frozen foods and powdered baby formula instead. Eden Foods cans are one of the only BPA-free options in canned food at this time (except for their tomato-based products)
- Avoid polycarbonate baby bottles and containers (#7 or PC recycling codes). Note that not all #7 plastics contain BPA; many newer plastics like PES and Tritan are thrown in to the #7 Other category, but are BPA-free
- Manufacturers are not required to label their products with materials used or recycling codes. If you find an unmarked product, be sure to contact the manufacturer to confirm. There are several trusted companies and blogs who have done the work for you, so checking with them first will save you some time and frustration ([The Soft Landing](#), [SafeMama](#) and [ZRecs Guide](#))
- Choosing food containers made from glass, silicone, stainless steel and wood ensures you'll avoid BPA altogether

Bisphenol A was first considered for use as an estrogen replacement in the 1930s. Today it is one of the most pervasive chemicals with more than 6 billion pounds produced per year. BPA is able to easily leach into our food because it's an unstable polymer, meaning that its chemical bond can be easily broken by heat and acidic conditions. Once the bonds break, BPA leaches out of plastic or the lining in aluminum cans.

Many Americans have come to agree that BPA is worrisome enough to avoid. The move to a BPA-free lifestyle no longer requires a leap of faith when current research continually points to new evidence of harm to the health of our children. In fact, the [Environmental Working Group](#) just released a 2 year study confirming the presence of BPA and 231 other chemical pollutants in the umbilical cords 90% of newborn babies tested. Surely you've seen other headlines about [bisphenol-A \(BPA\)](#) leaching into our food and drinks too. [Consumer Reports](#) looked at BPA levels in 19 different canned foods and they found that most - including some labeled as "organic" or even [BPA-free](#) - contained measurable levels of BPA. The study confirmed what we've long suspected: that children and pregnant women eating multiple servings of canned foods per day could be exposed to a dose of BPA near levels that have caused harm in several animal studies. Shortly after this report came Nicholas Kristof's moving call to action in [The New York Times](#).

Studies continue to link BPA to a growing list of hormone-disrupting damage, including increased risk of prostate and breast cancer, genital abnormalities in boys, early puberty in girls, diabetes, obesity and even incidences of [sexual dysfunction](#).

Thankfully, the Senate is finally considering the "*Ban Poisonous Additives Act of 2009 (S.593 - the BPA Act of 2009)*." This legislation introduced by Senator Feinstein would ban BPA from food and beverage containers.

You can take action today by supporting the [Safer Chemicals Coalition](#), [EWG's Kid Safe Chemical Act](#), [email your federal senators](#) or [email your state legislators](#).

PHTHALATES

TIPS FOR AVOIDING PHTHALATES

- Avoid PVC plastics that use phthalates as a plasticizer (softener): vinyl bibs, teething toys and shower curtains. They may be labeled with the #3 recycling code
- If you have vinyl flooring in your home, damp mopping it on a regular basis removes phthalates accumulated in the dust on the floor. Direct sunlight, moisture and heat on vinyl tiles can cause it to release phthalates more quickly. And of course, choose non-vinyl options when replacing flooring
- Toys with the worst phthalates should already be off the shelves, but check to see if toys you already own were made with the chemical before the ban took effect
- Choose personal care products that are specifically labeled as phthalate-free. Keep in mind that many harmful chemicals are often hidden under a general “fragrance” label. Seek out upstanding cosmetics companies who have pledged not to use phthalates
- [Pollution in People](#) provides an excellent breakdown on which phthalates are where and how to avoid them
- [Healthy Child Healthy World](#) offers a tremendous amount of helpful info on the most common environmental toxins, including [phthalates](#).

Phthalates are yet another set of hormone-mimicking chemicals that are used in many household products including: shampoo, makeup, perfumes, air fresheners, bibs, teething toys, inflatable toys, vinyl flooring, IV tubing, insect repellent and much more. We recently learned that even medication capsules are encased in a phthalate-based polymer and can deliver high doses of phthalates as well.

Phthalates are shockingly pervasive. According to *USA Today* phthalates were found in all 163 babies tested in a 2008 study. Most babies tested positive for exposure to seven different types of phthalates! Babies are at high risk because they develop so quickly. They eat, breathe and metabolize more than adults, so even minute exposures can have an extreme effect.

Phthalates have been implicated in decreased mental development in girls. [Simple Steps](#) (a resource of NRDC) reviewed a study by researchers at Mount Sinai Children’s Medical Health Center. They found that newborn girls whose mothers have high levels of phthalates contained in plastics show markedly lower levels of attention and alertness than newborn boys of similar mothers.

They have also been linked to the softening of bones in developing young bodies. [Environmental Health News](#) (EHN) explains that a study published in the [Journal of Cellular Biochemistry](#) in which phthalates were found to provoke DNA damage that can lead to bone cell death in mice. The study shows how a low-dose exposure to two types of common phthalates has a profound effect on bone cells. Based on the results, long-term exposure could have devastating effects on developing bones in young bodies and accelerate the deterioration in aging bones. Basically, estrogen deficiency causes many bone diseases such as osteoporosis.

While the law recently passed by Congress bans phthalates in children’s products, it doesn’t prohibit their use in IV tubing, vinyl flooring and many other household products.

Avoiding phthalates in pregnant mothers and babies is most important. The [Washington Toxics Coalition](#) released a groundbreaking study on toxics in pregnant women’s bodies. Every woman tested was found to have levels of BPA, mercury, phthalates, and perfluorinated – or “Teflon” – chemicals in their blood.

POLYVINYL CHLORIDE (PVC)

TIPS FOR AVOIDING PVC

- Watch for “vinyl” in product descriptions, as it is commonly used as a nickname for PVC. But keep in mind that the term “vinyl” may also be used to describe ethylene vinyl Acetate (EVA) and polyethylene Vinyl Acetate (PEVA). Both of these plastics are considered to be safer alternative to PVC and are acceptable choices
- Avoid products marked with PVC, V or the #3 recycling code on the product or its packaging
- Manufacturers are not required to label their products with materials used, so you may need to confirm with each manufacturer
- Be aware that many companies are proud to offer you phthalate-free PVC, and while this is a step in the right direction, we need to avoid PVC completely. Encourage the makers of your favorite companies to use PVC alternatives if possible
- Check the [Center for Health Environment and Justice \(CHEJ\)](#) for an extensive list of companies who do not use PVC in their products
- As a side note: food containers are not typically made with PVC (and thus no phthalates), so don't focus your effort in this area

PVC is everywhere. It's commonly used in bath toys, teethers, baby bibs, inflatable pool toys, children's playground ball pits, dog toys, shower curtains, mattress covers, cling wrap and in most non-slip bath mats. And that's just for starters! There is a growing awareness of polyvinyl chloride's toxic nature, but the quest to avoid it is rather daunting because there isn't as much demand for PVC-free products.

We often hear the question, “But what if I find a toy made from phthalate-free PVC? Isn't it safer?” No. And here's why - PVC requires the [addition of chlorine](#). Chlorine is one major health concern associated with PVC, but it isn't the only problem. [Earth911](#) discusses the full effects PVC, and the facts are stunning:

- Due to its chlorinated makeup, the entire life cycle of vinyl is responsible for the formation of more dioxin than any other single product. Dioxin is a well-known carcinogen and can affect the reproductive, immune, endocrine and neurological systems.
- Chlorine production for PVC results in the release of over 200,000 pounds of mercury to air, water and land each year.
- To make vinyl products flexible, phthalates are used as plasticizers, accounting for nearly 90 percent of total phthalate consumption. This translates into more than five million tons used for vinyl every year.
- [Lead is often added](#) to vinyl construction products as a stabilizer to extend its life. It is estimated that 45,000 tons of lead each year are released into the environment during its disposal by incineration.

About the Author

Alicia Voorhies is a wife, mom and nurse turned entrepreneur. Her journey to find safe alternatives in baby feeding gear led her to establish [The Soft Landing, LLC](#). Now along with her family, she devotes herself to sharing her findings and helping parents navigate the endless sea environmental toxins. To learn more visit her blog at www.thesoftlandingbaby.com