



## FAQs: PVC Dolls

### Safer Baby Dolls

Plastic “baby dolls” have been staple play toys for years; in fact, you and/or your children most likely had a favorite doll...can you recall if it was made of plastic? These plastic dolls are found in most child care facilities, and often there are several in each classroom. They are developmentally appropriate - they foster creativity and encourage natural pretend play. Children typically mirror the behavior of their caregivers while imagining that they are a ‘mommy’ or a ‘daddy’. Unfortunately, many plastic dolls are made of polyvinyl chloride (PVC)—making them a health concern for children who play with them on a daily basis. Read on to learn safer doll alternatives for your home and child care facilities.

### What is polyvinyl chloride (PVC)?

PVC plastic, commonly referred to as “vinyl” (although not all vinyls are PVC), is an odorless and versatile plastic. It is found in many consumer products including raincoats and rain boots, shoe soles, shades and blinds, upholstery and seat covers, shower curtains, furniture, carpet backing, plastic bags, inflatable swimming pools and floating rafts, beach balls, dolls, bath books, toys (rubber duckies!), and infant chew toys (teething rings).

### Why should I be concerned?

During the manufacturing, use, and disposal processes of PVC, humans are exposed to toxic chemicals such as mercury, dioxins, and phthalates. Lead and other heavy metals are added to PVC during formation to help stabilize the plastic. It is well known that lead is a neurotoxicant that can be harmful to cognitive abilities, especially in young children (see EHCC’s Lead Fact Sheet for more information). Heavy metals, such as lead and mercury, cannot be destroyed by incineration; therefore, during the PVC disposal process, these harmful heavy metals are released into the environment.

The health concerns related to PVC are especially worrisome for children due to their increased exposure to PVC in toys and garments. Vinyl chloride, which is the main ingredient in PVC, is a known carcinogen (cancer causing). Other PVC health concerns include birth defects, liver dysfunction, developmental disorders, and endocrine disruption that can lead to low sperm count, undescended testes, and premature puberty.

Often PVC also contains phthalates, which are a class of chemicals used to soften plastic products to make them more flexible. Adverse health effects related to phthalate exposure include: hormone disruption, developmental and reproductive problems, asthma, preterm birth, and the development of some cancers.

### How can children be exposed to PVC in Dolls?

Young children have the natural tendency to mouth soft plastics, which can lead to exposure to PVC through ingestion. Chewing on a plastic toy creates small openings (often microscopic) in the plastic, providing an avenue for leaching of chemicals from the toy into a child’s mouth. Normal wear and tear can also release PVC. New dolls or small tears in older dolls may cause off-gassing of toxic chemicals from PVC. When trying to understand “off-gassing,” it is helpful to think of the new car smell that is very distinct. That smell, which is also present with new plastic baby dolls is the process of off-gassing, which is when the gasses and chemicals that were used to make that doll or car are released into the environment.

The best way to protect children from the harmful effects of vinyl dolls is to eliminate them completely. If getting rid of all vinyl dolls is not an option, the next best option would be to remove them from infant and toddler rooms, because this age group has the largest tendency to mouth toys.

### What should I be on the lookout for?

In order to distinguish between the different types of plastic that are on the market, products will sometimes have a small symbol - usually located on its underside. The number inside of the three triangles dictates what type of plastic was used to make that item.

One way of actively searching to avoid products made with PVC is to look for the Recycling Code #3. If you see a "3" inside of the triangle, beware! This product is made of PVC and exposure may lead to harmful health effects.

### What are some safer alternatives?

The safest option is buying dolls and toys that are completely non-toxic. There are 100% PVC and phthalate free options such as dolls made of natural materials - cotton and wool. Often, these dolls are machine washable, making them easy to clean, while also being safer for your child.

There are dolls available on the market that are 100% PVC and phthalate free. Whenever possible, parents and child care professionals should opt for PVC and phthalate free dolls to minimize harmful exposures to children.

Although there are many positives to using PVC-free and phthalate-free dolls including being better for your children's health and the health of the environment--they will most likely be a more expensive option.

### How often should you wash your cloth dolls?

The National Resource Center for Health and Safety in Child Care and Early Education recommends that any toys mouthed by children should be set aside when the child is done playing with them and then sanitized at the end of the day. Cloth toys should be washed once per week. However, if mouthed or soiled, the cloth toys should be removed from the room and returned to the toy rotation after they have been washed. It is important to follow manu-

facturer's instructions for the cleaning and sanitizing of all toys as well as following the criteria put forth in your state's child care or health department regulations.

### References

1. [https://toxtown.nlm.nih.gov/text\\_version/chemicals.php?id=84](https://toxtown.nlm.nih.gov/text_version/chemicals.php?id=84)
2. [http://www.chej.org/pvcfactsheets/The\\_Poison\\_Plastic.html](http://www.chej.org/pvcfactsheets/The_Poison_Plastic.html)
3. <http://www.greenspec.co.uk/building-design/polyvinyl-chloride-pvc-environment-health/>
4. <http://www.pulpworksinc.com/environmental-impacts-of-pvc.html>
5. <https://www.forbes.com/sites/kateharrison/2015/06/18/1874/#1819bb2571f4>
6. <http://nrckids.org/CFOC>
7. <https://silentspring.org/your-parenting>
8. <https://saferchemicals.org/get-the-facts/chemicals-of-concern/congress-must-ensure-important-information-about-chemical-use-is-not-hidden-from-people-phthalates/>
9. <https://saferchemicals.org/get-the-facts/chemicals-of-concern/vinyl-chloride/>