# National Safety Month: Can Beauty Products in My Bathroom Be Bad for Baby?

***A Special Edition Baby Blog in Partnership with SafetyNEST®***

***By Chris Stallman, Certified Genetic Counselor at MotherToBaby Arizona and host of The MotherToBaby Podcast***

As a teratogen information specialist, one of the questions I frequently get asked is "can this product be harmful to me or my pregnancy?" What a perfect time to address this question during June's National Safety Month, which aims to raise awareness about reducing the leading causes of unintentional injury in the home! What is the answer to that common safety question? Usually yes, a product ***can*** be harmful to you or your pregnancy. But before you throw out everything in your house and live in a bubble for nine months, let me explain…

Anything can be toxic if too much is ingested or absorbed into the body – even water. What matters is the dose – how much of something you are exposed to. For example, in a healthy person, drinking 8-10 glasses of water a day would not be expected to cause water toxicity. However, drinking 8-10 gallons can be dangerous. Again – ***all in the dose.***

There may be beauty products you use before pregnancy that may not be recommended for use during pregnancy. We'll look at a few common products below:

**Retinoids**

When it comes to treating acne outside of pregnancy, there are many options. Vitamin A (retinol) and vitamin A derivatives (such as retinoic acid and isotretinoin) are often referred to as "retinoids", and can be found in some acne treatment products. It's well-known that the drug Accutane® (a pill taken by mouth that contains isotretinoin) can cause birth defects in pregnancy, but it's less clear if topical retinoids (like gels or creams) have the same effects. When applied on the skin, usually much less of the medication makes it into the bloodstream. This means less of the medication would make it across the placenta to the fetus. However, even though the risk with topical use is different than when taking a pill, women who are pregnant, planning to become pregnant, or breast-feeding should discuss this with their healthcare provider.

**Salicylic acid**

This relative of aspirin can be found in some beauty products, including cleansers and toners. Low dose aspirin (less than 81 mg/day), taken by mouth, has been well studied in pregnancy and does not appear to increase the chance of birth defects or other pregnancy complications. When applied on the skin, the amount of salicylic acid that enters the body would be much less than when a woman takes low dose aspirin. The amount that can be absorbed depends on the health of the skin, the levels (dose) of active ingredients, the area exposed (how much skin comes in contact with the product) and how often you use it. It's important to use as directed by the product label or by your healthcare provider. When used as directed, it is unlikely that topical salicylic acid would pose any risk to a developing baby. Too much of this ingredient can cause symptoms such as nausea, vomiting, dizziness, headache, problems with breathing, abnormal heart rhythm or coma, and can be fatal.

**Hair dye**

In general, when used as recommended, the amount of dye that is absorbed by the healthy skin of the scalp is small and is not expected to cause problems in a pregnancy. However hair products made outside of the US might have dangerous substances or contaminants such as heavy metals, including lead, cadmium, nickel, arsenic or mercury. So it may be best to avoid beauty products made in other countries. Gloves should be worn to protect the skin on your hands, although this does not protect the scalp, neck, forehead, ears, and eyelids. If a temporary dye gets into your eyes, minor irritation is expected. For semi-permanent and permanent dyes, effects on the eyes can be more serious, which is why it is recommended that these products are not to be used to dye eyebrows or eyelashes. If eaten (ingested), effects can be minor irritation of the mouth, nausea, vomiting, allergic reactions, and possibly chemical burns. It's best to keep these (and all) products out of the reach of children, and to wash any areas of the skin where dye was present.

So, can beauty products be used in pregnancy? Absolutely, depending on the specific ingredients, how much you use, and how often you use it. When in doubt, ask a professional.

If you suspect you had a toxic exposure to a product, call Poison Control at 1-800-222-1222. If you have questions about everyday exposures during pregnancy or breastfeeding, call MotherToBaby at 1-866-626-6847.



***Chris Stallman*** is a certified genetic counselor based in Tucson, Arizona and proud mother of three. She is the new host of The MotherToBaby Podcast, a show answering moms' questions with evidence-based answers about exposures during pregnancy and breastfeeding. Listen to the episode on beauty products in pregnancy and breastfeeding on iTunes, Google Play Music or Spotify. She currently works for The University of Arizona as a Teratogen Information Specialist at MotherToBaby Arizona, formerly known as the Arizona Pregnancy Riskline. Her counseling experience includes prenatal and cardiac genetics. She has also served as MotherToBaby's Education Committee Co-chair.

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# National Safety Month: Can Beauty Products in My Bathroom Be Bad for Baby?

***By Mark B. Roth*, *MotherToBaby New York***

As a teratogen information specialist, I receive questions about all sorts of chemicals or substances someone can be exposed to. We often get questions about the bazillions of cleaning products out there. Bleach, powdered cleaners and spray cleaners, degreasers, oven cleaners, disinfectants – there are so many different cleaning products and looking at the ingredients list (if there even is one) can be overwhelming. All those unpronounceable words! Sodium hypochlorite, declamine oxide, sodium hydroxide, sulfonate, dipropylene glycol butoxy ether, etc., etc. etc.!!!

If you are reading this, it's probably because you want to decrease the chance of any problems for the baby while you are pregnant or breastfeeding. You might be looking for information about which cleaning products are okay to use or to be around while you are pregnant or nursing. I have been told so often by my callers how difficult it is to find reliable information. And that is true, even for the experts. There are a few challenges we all have to contend with.

One of the biggest challenges is that many chemicals simply have not been studied in pregnant women. Some ingredients found in cleaning products have been studied in pregnant animals, mainly mice and rats. When such substances are given to animals, the amount (or the dose) they are given is much higher than what a human would be exposed to. And, often it is given in a way that isn't even close to how a human would usually be exposed. For example, chemicals are often force fed to the animal, even if it is an ingredient typically used in a skin cream. So, basically even if there is research, it's often not helpful or especially meaningful. How can you know what's okay to use?

There's an important and very old principle in studying whether a substance is harmful to a person, and that is "the dose makes the poison." Basically, this means that the risk with any exposure, including cleaning products, depends on how much gets into your blood. How do chemical or substances reach the blood? They can be injected directly into the bloodstream, swallowed, inhaled (breathed in), or possibly absorbed through the skin. Unless you are drinking your household cleaner, the actual exposure to your developing baby is likely to be quite low! Generally, inhalation won't allow for much absorption of these kinds of compounds into your blood. When they do get into your blood from inhaling them, they typically don't reach the developing baby or get into your breastmilk in any meaningful quantity.

Now, these products can have some pretty offensive odors, even with the addition of artificial fragrance like 'lemon fresh', 'summer rain', and 'spring flowers'. (And there can be such a thing as too much – sometimes when I go into a bathroom where air freshener has been sprayed, I say to myself "I would rather just smell the poop!") But back to our subject… If a product has an irritating smell, you may think it's very irritating for the baby, too. But, your sense of smell is not a good measure of the amount of a chemical that the baby is actually being exposed to. In fact, many women develop a heightened sensitivity to smells during pregnancy. This motivates you to get yourself to a more comfortable environment and reduce exposure. But it also can make you feel uneasy when you can't seem to get away from the smell. Your nose doesn't always know! If you start feeling dizzy, light headed, confused, or have breathing difficulties while around the cleaning product, these symptoms could mean you had a higher level of exposure. Even with these symptoms, there are no confirmed risks to pregnancy or breastfeeding with exposure to many of the compounds in common cleaning products.

I mentioned the possible absorption of substances through the skin (topical or dermal exposure). When it comes to absorption of cleaning products, your skin is a surprisingly good barrier and prevents many substances from getting into your blood. If skin has been soaking for a while, or there's a scrape or open cut, that may allow a little more absorption. Just like with inhalation, these compounds are not likely to reach the developing baby or breastmilk in any meaningful quantity. However, skin irritation can occur and it's not a bad idea to wear gloves when working with some cleaning products, especially if it's going to be for extended periods of time. It's important for you to maintain your comfort.

We all know that accidents happen, and that is true of accidents with household cleaners, too. You can reduce the chance of these accidents by not drinking or eating while working with cleaning products. Be sure to thoroughly rinse any utensils or dishes that come into contact with the cleaners. Using gloves or safety glasses can help protect your skin and eyes in case of accidental spills. And, of course, opening a window or turning on an exhaust fan (if you have one) can help reduce the lingering smell.

I mentioned a list of pretty confusing cleaning ingredients at the beginning of this blog and I am quite certain that most of you would fall asleep by the end of this post if I talked about every single one of them. But there are a few common ingredients that are worth reviewing.

**Bleach** is a common cleaner that most of us have used at one point or another. The active ingredient is sodium hypochlorite, a form of chlorine. Chlorine and chlorinated disinfectants have not been shown to increase the risk of birth defects.

**Benzalkonium chloride** is another disinfectant that is found in many cleaning products. It is also an ingredient in throat lozenges, diaper rash creams, cosmetics, and vaginal spermicides. Although there are no studies specifically looking at the risks of benzalkonium chloride use in human pregnancy, there also are no reports indicating an increased risk. Again, given how common this ingredient is, having no reports is reassuring.

Finally, there are also many cleaners which contain **ammonia**. Typical use of cleaners containing ammonia is also not expected to increase risks to the baby. Because it has a very strong smell, most people can't stand being around high levels of ammonia without getting pretty sick. Like many cleaners, as mentioned above, a strong odor doesn't necessarily mean a risk to the baby even if you have symptoms like a strong burning sensation in your nose or throat, skin irritation, or you get dizzy, But, if you lose consciousness, that could be a concern as it limits the amount of oxygen reaching the baby.  It's good to pay attention to your comfort level.

There are so many different products and ingredients. There's not room enough to discuss them all here. But if you have any questions about a cleaning product or an ingredient in a product, don't hesitate to contact an expert at MotherToBaby!



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*About MotherToBaby*

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