Nailing Down the Facts: Nail Treatment Safety in Pregnancy

By Al Romeo, RN, PhD, MotherToBaby Utah

If you are pregnant or breastfeeding, you might wonder if it is safe for you to go to the nail salon. After all, there are chemicals in nail treatments, and (let's face it) nail salons often smell like they could be toxic! But are they?

What's in nail treatments? And could they be harmful if I'm pregnant or nursing?
Common nail products include nail polish and types of acrylic nails including gels, liquids, and powders. There are a few ingredients that are commonly found in those products, including:

- Dibutyl phthalate (DBP)
- Toluene
- Formaldehyde
- Camphor
- Paraffin
- Methacrylic
- Acetone
- Acetonitrile

The names of those ingredients may sound scary, but let's look at each of them.

Dibutyl phthalate (DBP) is used in nail polish to make the polish more flexible and less likely to crack or break. Small amounts have been found in humans. Those small amounts are not expected to cause increased chances of problems for the pregnancy or breastfed baby based on the available research.

Toluene is a solvent that is used to thin nail polish so it goes smooth after being painted on with a brush. Solvents are known to be harmful to the nervous system. Sniffing or huffing spray paint, glue, and gasoline can cause dizziness and fainting in addition to damaging brain cells. But when it comes to nail treatments, the amount of toluene that is absorbed through the skin or inhaled from applying nail polish to finger and toe nails is small and not expected to increase the chance of problems for your pregnancy or breastfed baby.

Formaldehyde is used to harden nail polish. Nail salons might also use formaldehyde to disinfect nail care tools. Some people may be allergic to formaldehyde, even in the small amounts found in nail polish. Women with those allergies should use nail care products without formaldehyde and ask about its use in nail salons. Our bodies make formaldehyde and it can be found in healthy foods, such as apples. Just as too much water or oxygen can be dangerous for our bodies, too much formaldehyde can be a problem. However, the amount in nail polish is small and the amount that would be absorbed through the skin, nails, and from the fumes is also very small. That small amount is not expected to cause problems for your pregnancy or breastfed baby.

Camphor is also used to make nail polish soft or flexible and give it a pleasant odor. Camphor is found in some pain-relieving products that are applied to the skin. The amount of camphor in nail polish is far less than in those pain-relieving creams. Based on the limited information available, the use of camphor on the skin has not increased risks for a pregnancy or breastfed babies.

Paraffin is a mineral oil used in cosmetics and ointments to soften the skin. It isn't part of the nail polish or remover, but your hands or feet might soak in it as part of the manicure or pedicure. As an oil, it mainly stays on the skin and isn't absorbed into the bloodstream. The small amount of paraffin that is expected to get absorbed into the skin is not expected to increase the chance of problems for your pregnancy or breastfed baby.

Methacrylate is a chemical in acrylic nails. Not much of the methacrylate is left after it reacts with other chemicals to

form the acrylic nails. However, the small amount that is left in the acrylic nails could cause irritation, redness, and swelling in the tissues under and below the nails. The small amount of methacrylate that is expected to be absorbed by the skin or lungs from using acrylic nails is not expected to cause an increased chance of problems for your pregnancy or breastfed baby.

Acetone is a solvent used in nail polish removers. Acetone, when ingested, can cause problems in the body. The small amount of acetone that is expected to be absorbed by the skin or lungs when it is used to remove nail polish is small and not expected to cause an increased chance of problems for your pregnancy or breastfed baby. After using nail polish remover, you might want to wash your hands or feet to reduce the amount that is left on the skin that could be absorbed.

Acetonitrile is another solvent used for removing artificial nails. It is less commonly used in cosmetics than acetone. The small amounts that are expected to be absorbed through the skin, nails, or lungs are not expected to increase the chances of problems for your pregnancy or breastfed baby.

But what about the smell?
The smell in nail salons is caused by the chemicals in the various treatments they offer. If there is good air flow and plenty of fresh air, then it is not likely that much of the chemicals will get into the body by breathing the fumes. But if you have headaches, dizziness, or nausea while around nail care products, take a break and get some fresh air outside.

So what's the take-away?
Go ahead, pamper yourself with pretty nails! Using these cosmetic products as part of routine nail treatments should not cause you any concern, as there are no known increased risks for your pregnancy or your breastfed baby.

If you have questions about exposures during pregnancy or breastfeeding, contact an expert at MotherToBaby. You can reach us by phone at 866-626-6847 or by text at 855-999-3525. You can also email or live chat with us by visiting https://MotherToBaby.org.



Alfred Romeo, RN, PhD, is a nurse and health educator. He has been with MotherToBaby for fifteen years, has served as the chair of various committees, and has served in many roles on the Board of the Organization of Teratology Information Specialists (OTIS)/ MotherToBaby. His experiences include working as a nurse in newborn intensive care units, training medical homes to improve services for children with special needs, and training young adults with disabilities in leadership and advocacy.

Questions? Call 866.626.6847 | Text 855.999.3525 | Email or Chat at MotherToBaby.org.

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Emily called MotherToBaby and confided, “My husband and I are thinking about getting pregnant…I am so excited but scared, too. I am wondering what I can do to make it more likely we will have a healthy pregnancy and baby.”

I assured Emily that we ***love*** it when people call ahead of their pregnancy and ask these questions. Preconception health is a topic that does not receive as much attention as it deserves, and it is important for both Emily and her husband. Good preconception health care can impact fertility and make it easier to conceive, and also helps to improve pregnancy outcomes and the health of the baby.

Here is a preconception prep guide– because if you are ready to have a baby, you want to take steps now to keep you and your baby as healthy as possible:

- **Make a pre-conception checkup appointment:** Begin by making an appointment about three months in advance with your obstetrical care provider. At that appointment you can confirm you are in good health. If you have any chronic conditions such as high blood pressure, thyroid disease, depression or diabetes you and your provider can make sure the condition is being managed effectively and confirm that any prescription or over-the-counter medications you are taking can be continued in the pregnancy. If you have a question about medications during pregnancy, MotherToBaby can help by providing you with information to bring to your appointment.

- **Begin taking a prenatal vitamin:** If you are not already taking a vitamin with folic acid this is a great time to start. The Centers for Disease Control and Prevention (CDC) recommend that all women who can become pregnant take a vitamin containing 400 micrograms of folic acid; this helps reduce the chances for certain birth defects such as spina bifida (when the spinal cord does not form properly).

- **Review your vaccine status**: During your preconception checkup, make sure that you are up to date on vaccinations such as the MMR (measles, mumps, rubella), Tdap (tetanus, diphtheria, whooping cough), influenza, and COVID. Planning ahead makes it more likely you will not get ill during pregnancy and helps protect the baby from getting infections from parents after birth.

- **Get your body fit for pregnancy:** Get regular exercise and consider whether you and your partner are at

your preferred weight. If not, make plans to remedy that prior to attempting to get pregnant. You can also learn more about a healthy diet and nutrition. This is something that may improve fertility in both parents and lay the groundwork for a healthy pregnancy.

- **Eliminate harmful exposures:** It goes without saying that this is a great time to make lifestyle changes such as reducing use of alcohol, tobacco, and recreational drugs. Addressing stress and mental health concerns up front can improve fertility, make the whole pregnancy experience better, and prepare you for the excitement and hard work of parenthood.

- **Evaluate your home and work environment:** If you and your partner are exposed to toxic substances like lead in your work or home environment, working to reduce those exposures is very effective when done ahead of the pregnancy.

MotherToBaby has many resources for Emily and her husband – and you! We have fact sheets on medications, herbal agents and supplements, diabetes and other health conditions, illnesses and vaccinations, occupations such as veterinarian and dental, exercise, paternal exposures, and cosmetics (sunscreen, skin creams, nail polish, hair dye). There are also useful blogs and podcasts, and whole web pages on various conditions, and if you have questions, our information specialists are here to help.

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Nailing Down the Facts: Nail Treatment

Safety in Pregnancy

Tanya called in on a Monday morning. “I’m getting married in a few months and we want to start trying to get pregnant right away. What should I be doing now to have the best chance of a healthy baby?”

Preconception health and pregnancy planning present a terrific opportunity to assess a wide range of factors that can give your baby the best start. This blog will outline the things to consider, as I relayed to Tanya:

Your Personal Health

Are you generally healthy? If you already get headaches or have acid reflux, know that pregnancy can make these more frequent. Ask your doctor if the way you treat these common conditions should change once you are pregnant. Ask about your current exercise routine and if you need to alter it during pregnancy. Get checked for sexually transmitted infections because some may not show symptoms. Also discuss your medications – some should be stopped before you start trying to conceive, such as Valproic acid, leflunomide (e.g. Arava®), teriflunomide (Aubagio®), methotrexate, and isotretinoin (e.g. Accutane®) to name just a few. For others, you’ll want to weigh the risks vs. the benefits with your health provider before you conceive. Talk with your doctors now to make a plan.

Caffeine

Do you drink caffeinated coffee, tea, or soda? What about energy drinks, protein powders, or Kombucha? MotherToBaby’s fact sheet on caffeine may put your mind at ease and encourage you to think about all your beverage options.

Body Weight

Is your weight a concern? One of the best things you can do before conception is to get to a healthy weight. Women who are overweight or obese have increased risks for miscarriage, birth defects, gestational diabetes, high blood pressure and preeclampsia, and unplanned cesarean birth. Now is a good time to meet with a nutritionist or go on a sensible diet to get to a healthy weight in anticipation of pregnancy. Once you are pregnant, continue to watch what you eat but don’t try to lose weight. Weight gain is inevitable during pregnancy but guidelines from the American College of Obstetricians and Gynecologists (or ACOG, the leading professional society for OB/GYNs) advise women to gain anywhere from 11-40 pounds, depending on your pre-pregnancy weight. It’s a myth that you need to “eat for two,” so don’t set yourself up for postpartum weight gain by eating more than you should. After delivery of an average 7-8 lb. baby, you may lose 2 lbs. in amniotic fluid, 1.5 lbs. of placenta, 5-7 lbs. in blood volume, and 2 lbs. as the uterus returns to its normal size. That could still leave you with 10 pounds of excess weight, or more if you gained more weight during the pregnancy. Some women never take off those extra pounds, and their weight creeps up with successive pregnancies and age, which can lead to pregnancy complications and chronic health problems later on. See our exercise fact sheet for more information.

Chronic Health Conditions

Do you have chronic health conditions like diabetes, high blood pressure, migraines, asthma, high cholesterol, heart conditions, varicose veins, or anemia? Do you have an autoimmune disease like Crohn's or ulcerative colitis, lupus, rheumatoid arthritis, ankylosing spondylitis, multiple sclerosis, psoriasis or psoriatic arthritis? Meet with your obstetrician for a "preconception" appointment to discuss how a pregnancy might impact your health, and how your health might affect a future pregnancy. Your specialist can provide an important opinion too. A maternal-fetal medicine specialist (MFM) is a doctor who specializes in high-risk pregnancies, and consulting with a MFM once you are pregnant could help you learn how to optimize your and your baby's health.

Mental Health

What about your mental health? If you have a history of anxiety or depression, ADHD or other conditions, ask your psychiatrist and OB about treatment, and don't make changes before you do. Many medications can be continued during pregnancy and while breastfeeding. In fact, mental health is incredibly important – for example, when a woman doesn't treat her mood disorder or inadequately treats it, some studies suggest risks for miscarriage, premature birth, low birth weight, and preeclampsia. Talk therapy is vitally important too. And if you struggle with mental health concerns during the pregnancy, you are at risk for postpartum depression. Let's face it – pregnancy and caring for a new baby is stressful, so now is the time to marshal your helpers – friends, relatives, therapists and doctors – to ensure you have enough support. Your obstetrician should ask about mental health but if not, speak up. Your doctor can be your ally here, helping you get treatment and addressing concerns related to pregnancy and postpartum mental health. And MotherToBaby can give you an overview of the research related to any prescriptions you might choose to take.

Dental Health

Have you seen a dentist lately? Oral health can impact a pregnancy, meaning that if you have swollen or bleeding gums, a toothache or an infection, it can increase risks to the pregnancy. If you need to have a dental x-ray, take antibiotics, or have local anesthesia for a dental procedure, these are generally acceptable during pregnancy, but best to complete before you get pregnant. Contact MotherToBaby for more details.

Your Workplace

Where do you work? MotherToBaby can give you information to minimize exposures in a veterinarian office, dry cleaners, salon, laboratory/hospital, imaging center, pest control service, or other business. Your occupational safety department can recommend personal protective equipment (PPE) and tell you about ventilation that may be in place to ensure workplace safety. Safety data sheets (SDS) give an overview of chemicals used in industry and are available online or at work.

Food Safety

Read up on food safety and learn how to minimize your exposure to foods that have commonly been associated with foodborne illness such as E. coli or listeria. Get in the habit of washing your fresh fruits and vegetables well. Check out other blogs on our website too.

Vitamins and Supplements

Have you started taking a prenatal vitamin? Are you getting enough folic acid? ACOG recommends that women take at least 400 mcg of folic acid before getting pregnant and at least 600-800 mcg/day once they are pregnant. This can help prevent birth defects of the brain and spinal cord. Call MotherToBaby if you want to learn the recommended daily intake for specific vitamins or minerals. In general, taking more than what is recommended is not advisable – we haven't studied how mega-doses of vitamins may impact a pregnancy. Other supplements beyond taking a prenatal vitamin are not advisable either – the Food & Drug Administration (FDA) doesn't supervise their manufacturing plants and past surveys have shown some supplements actually contain contaminants. Furthermore, we've seen instances where the label didn't match the contents of the bottle and could cause ill effects. Pregnant and breastfeeding women should avoid herbal supplements unless specifically recommended by your doctor.

Alcohol, Cannabis, and Tobacco

Do you smoke cigarettes? Do you use cannabis for medicinal or recreational purposes? Do you drink alcohol? Recent research has demonstrated that marijuana use very early in pregnancy causes changes in brain development, which could result in behavioral or learning challenges we see later in the child's life. Cigarettes increase risks for pregnancy loss, among other things. And alcohol is known to cause a variety of birth defects known as fetal alcohol spectrum disorder (FASD). We don't believe that there is a "safe" amount of alcohol which when consumed doesn't cause issues for a developing child. Now is the time to quit smoking, drinking, and using cannabis – your baby will be heathier for it. MotherToBaby can provide resources, or check with your doctor.

Vaccinations

Are you up to date on all your vaccines? Did you get a flu shot this past season? You don't want a vaccine-preventable illness to have an impact on your pregnancy. Flu infection can increase risks for more severe symptoms, longer-lasting illness, pregnancy loss and premature delivery, which can have a lifelong impact on your baby. Flu vaccine helps prevent infection. Another benefit to vaccinating during pregnancy? Studies show the protection extends to your baby, and gives them a little extra immunity from birth until they can receive vaccines. Also good to know: some vaccines can be given and are recommended during pregnancy, like a flu shot or TDAP, but others are best given before you conceive to avoid a small risk of spreading the illness to the fetus (e.g. the measles, mumps, and rubella (MMR) vaccine, as well as the Varicella (chicken pox) vaccine) – so try to get these done at least a month before trying to conceive. Check your medical records to see the last time you received any of these vaccinations. If you don't know if you were previously vaccinated, your doctor can draw blood to check if you have immunity.

Your Pets

Do you have a cat? There is some concern in pregnancy about an infection called toxoplasmosis, which is caused by a parasite that can be found in cat feces. Read our blog for more info on what you can do to prevent this infection if you have a fur baby at home.

Other Illnesses

Do your upcoming travel plans involve travel to a warm tropical place? Check out our Zika fact sheet to learn more before you book nonrefundable tickets. In general, women will want to wait to try to conceive for eight weeks from the time of your return home; the wait time is three months if your male partner travels with you. COVID-19 is also spreading around the globe and our fact sheet can give you the latest information on whether and how it could affect a pregnancy.

Finally, your obstetrician or primary care doctor would be glad to see you for a Preconception consultation. Make an appointment to discuss your personal history and health. It's a great way to get you and your baby off to the best start.

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As the coronavirus that causes COVID-19 continues to spread, pregnant and breastfeeding women are understandably concerned. Many of your recent calls, chats, texts, and emails to MotherToBaby have been about the virus itself and how it might affect a developing baby or breastfed infant (more about that on our COVID-19 fact sheet). But we're also hearing related concerns about how to stay safe and healthy while pregnant or breastfeeding during the pandemic. Here, we answer some of the most common questions we're getting during this uncertain time:

FAQs

Can I use supplements to boost my immunity?

We're receiving even more inquiries than usual about using supplements such as elderberry, zinc, and vitamin C to "boost immunity." Unfortunately, there is no good data to suggest that these supplements have a protective effect against coronavirus. Additionally, the use of supplements in pregnancy and lactation comes with potential concerns.

The first concern is the lack of regulation. Dietary supplements do not require the same oversight by the Food and Drug Administration (FDA) as medications do, which means that supplement manufacturers do not have to prove the safety and effectiveness of their products before they hit the shelves. Supplements may be contaminated with other ingredients (such as prescription medications or lead), and differences may be found between the amount or ingredient listed on the label and what is actually in the product.

The second concern about supplements is that usually they are not well studied for use in pregnancy and lactation. Without good research, we just don't know how something like elderberry might affect a developing baby or breastfed infant. Mega-doses of any vitamin (like the 1000 mg of vitamin C commonly found in some supplements) are of particular concern as they are much higher than what is recommended for pregnant or breastfeeding women in a single day. Generally speaking, if you are eating a healthy diet and taking a prenatal vitamin, you are probably covering all your vitamin and mineral needs. Taking additional supplements might present increased risks to your pregnancy or your breastfed baby, with no clear evidence that they would effectively boost your immunity. You can read more on our Herbal Products Fact Sheet.

Are cleaning products safe for me and my baby?

The Centers for Disease Control and Prevention (CDC) recommend cleaning and disinfecting high-touch surfaces as one way to help prevent exposure to the virus. This means wiping down doorknobs, light switches, desks, faucets, electronics, and more… but does all this exposure to cleaning products increase risks to a pregnancy or a breastfed baby?

Our previous Baby Blog on household cleaners explains that when you use cleaning products as directed, the actual

exposure to your developing baby or breastfed infant is likely to be quite low. Even if you can smell the fumes, brief inhalation while cleaning generally won't allow for much absorption of these kinds of compounds into your blood. Likewise, your skin is a surprisingly good barrier that prevents significant absorption of cleaning products through the skin. Any chemicals that might get into your blood through inhalation or skin contact typically won't reach the developing baby or get into your breastmilk in any meaningful quantity. Working in a ventilated area and wearing gloves when using cleaning products can further reduce your exposure, and help prevent respiratory and skin irritation. And of course, wash your hands after cleaning.

Should I still go to my prenatal appointments?

You've read you should stay home as much as possible since this virus can spread easily from person to person. This is true, but your prenatal appointments are still important! These visits are vital opportunities for your provider to assess the health of your pregnancy and identify any issues that might affect you or your developing baby. Some healthcare providers are offering ***some*** appointments virtually (over the internet) or spreading out the time between appointments a bit longer than normal. But sometimes you will have be seen in person, especially for screenings, labs, and vaccines, such as the flu shot and Tdap vaccine that help protect both mom and baby against serious illness.

If you haven't already, talk to your pregnancy care provider about any changes to your upcoming appointments. For virtual visits, ask what technology (phone, laptop, etc.) you will need to connect with your provider, and write down a list of questions so you don't forget to ask anything. Just like a regular appointment, it can be helpful to have someone "come along" virtually to help make sure all your concerns are addressed. For in-person visits, your provider may ask that you come alone (no partner, no kids). While there, try to stay at least 6 feet away from other patients in the waiting room, wear a cloth face cover, and don't forget to wash your hands! For more prevention tips, check out guidance from the CDC here.

Why have they delayed my fertility procedure?

Many kinds of medical procedures are being put on hold as a way to help prevent the spread of coronavirus and reserve essential medical supplies for critical medical care. For this reason, the American Society for Reproductive Medicine has made the difficult decision to suspend initiation of new treatment cycles (intrauterine insemination or IUI and in vitro fertilization or IVF) for the time being. We completely empathize with anyone who gets this news. When you've been trying to get pregnant and each passing month feels like another missed opportunity, a setback like this is the last thing you want. During this difficult but necessary delay, make sure to continue practicing healthy habits like staying active, avoiding alcohol, and taking a prenatal vitamin with at least 400 mcg of folic acid every day. That way, you'll be ready to go once you get the green light that IUI and IVF treatments are back on.

I still have to go to work every day. What can I do to avoid getting COVID-19?

If you aren't able to work from home, you might be worried that going in to work could increase your chance of contact with the virus. How true this is might depend on your job situation. If you have contact with the public at work and you are pregnant or breastfeeding, you could talk to your employer about being temporarily reassigned to another role that limits your contact with other people. However, not every workplace will be able to accommodate this request. CDC workplace recommendations for everyone include strategies such as not shaking hands, wiping down frequently-

touched surfaces, limiting in-person meetings, maintaining at least 6 feet of distance between you and people with whom you need to interact, not sharing food, and of course, staying home if you are sick. In addition, CDC guidelines recommend wearing a cloth face covering when you may be near other people to help reduce the spread of the virus.

If you are a pregnant healthcare worker, be sure your employer knows you are pregnant before you provide any direct patient care to a person with confirmed or suspected COVID-19. When possible, and depending on staffing needs, management should consider limiting your exposure to these patients. This is especially true if you perform procedures with a higher chance of coming into contact with a patient's respiratory droplets (such as intubation). If you do provide care to a patient with confirmed or suspected COVID-19, be sure to follow the Infection Control guidelines for all healthcare personnel. Our fact sheet on Reproductive Hazards of the Workplace can answer additional questions about staying safe at work during pregnancy and while breastfeeding.

I'm stressed! Can this affect my pregnancy?

With the constant news stream about the pandemic, it can be tough not to feel anxious or depressed during this time. Plus, social distancing means that many women are separated from their support network of friends and family members. Add in trying to work from home with a partner and/or kids, and it's easy to see why many women are feeling stressed out! We discussed mental health and COVID-19 at length in our recent podcast episode, which you can listen to here.

One big takeaway from the podcast? Some studies suggest that ongoing stress and uncontrolled depression or anxiety during pregnancy can increase the chance of outcomes such as preterm birth and low birth weight. So, if you feel like your mental health is suffering because of this pandemic, we encourage you to reach out to your healthcare provider (maybe virtually!) to figure out the best approach for treatment. Some women can benefit from making simple changes in their daily habits (like watching less news and getting more fresh air), while others might need to use a medication to help manage their symptoms. If that's the case, MotherToBaby can share with you what is known about your particular antidepressant or anti-anxiety medication in pregnancy and/or lactation.

Whatever your concerns about COVID-19 or other exposures might be, please know that MotherToBaby is here for you with evidence-based answers. Please reach out to us with your questions. We're all in this together.

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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!



Mark Roth, BA, is a teratogen information specialist and co-director for the Pregnancy Risk Network, MotherToBaby New York. He has been with the program since 2006. He is a former member of the OTIS Board of Directors and serves as Research Coordinator for MotherToBaby New York. Mark has provided teratology lectures at Arcadia University's Genetic Counseling Training Program and educates medical providers and the public about teratology through lectures, participation in state and national conferences, and one on one conversations. He enjoys pronouncing generic names of drugs.

About MotherToBaby

***MotherToBaby** is a service of the Organization of Teratology Information Specialists (OTIS), suggested resources by many agencies including the Centers for Disease Control and Prevention (CDC). If you have questions about exposures during pregnancy and breastfeeding, please call MotherToBaby toll-FREE at 866-626-6847 or try out MotherToBaby's new **text information service** by texting questions to (855)*

999-3525. You can also visit MotherToBaby.org to browse a library of fact sheets about dozens of viruses, medications, vaccines, alcohol, diseases, or other exposures during pregnancy and breastfeeding or connect with all of our resources by downloading the new MotherToBaby free app, available on Android and iOS markets. Also, make sure to subscribe to The MotherToBaby Podcast available on iTunes, Google Play Music, Spotify and podcatchers everywhere.

Questions? Call 866.626.6847 | Text 855.999.3525 | Email or Chat at MotherToBaby.org.

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