



MotherToBaby

Medications & More During Pregnancy & Breastfeeding
Ask The Experts

Fact Sheet

by the **Organization of Teratology Information Specialists (OTIS)**

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Hair Treatments

In every pregnancy, a woman starts out with a 3-5% chance of having a baby with a birth defect. This is called her background risk. This sheet talks about whether exposure to hair treatments may increase the risk for birth defects over that background risk. This information should not take the place of medical care and advice from your health care provider.

What are the different types of hair treatments?

Hair treatments include hair coloring, hair curling (permanents), hair bleaching, and hair straightening (relaxers) agents. For this fact sheet, hair coloring includes temporary dyes, semi-permanent dyes, and permanent dyes. Common chemicals in hair dyes include hydrogen peroxide, ammonia, and alcohols. Hair curling or permanent wave chemicals include ammonium thioglycolate and ammonia. Hair bleaching chemicals include hydrogen peroxide. Hair straighteners (relaxers) use a variety of chemicals. Hair straighteners use ammonium thioglycolate or in older preparations, sodium hydroxide. Any or all of the chemicals might irritate the skin, nose and throat. A strong smell does not mean that you are having a high level of exposure. You can call MotherToBaby with the ingredient list for your particular products to learn more about your hair treatments.

Hair treatments are regulated as cosmetics by the FDA. There is no requirement to test these products rigorously in humans for safety before they go onto the market. You can learn more about the regulation of cosmetics by visiting this website: <http://www.fda.gov/Cosmetics/ProductsIngredients/Products/ucm127988.htm>.

Do I absorb hair coloring/dye through my skin?

The potential for absorption through the skin depends on several factors. One, the health of the skin. Healthy skin, in general reduces exposure and broken skin allows for more exposure. Two, the percentage of active ingredient. Three, the surface area exposed. And four, the frequency of application. Low levels of hair dye can be absorbed through the skin after application, and the dye is excreted (removed from our bodies) in urine. This small amount is not thought to be enough to cause a problem for the developing baby.

Before I knew I was pregnant, I had my hair dyed. Could this increase my risk for birth defects?

There are no good studies on using hair dye, hair perms, or hair relaxers during human pregnancy. Specific to hair dye, in animal studies with exposure levels 100 times higher than what would normally be used in humans, experts did not identify a risk to human pregnancy. It is thought that only a small amount of any product applied to your scalp would be absorbed into your blood and therefore, little would be able to get to the developing baby. The data in animals, along with the poor absorption through the skin, makes hair treatment in pregnancy unlikely to be of high concern.

I have my hair straightened every two months. Can I continue this into pregnancy?

A study in pregnant women looked at the use of hair straighteners. The use of these products was not found to increase the chance of low birth weight or preterm delivery. The study did not address the chance of other outcomes (such as birth defects). Again, it is likely that only a small amount of hair straightening products are absorbed into your system, so the developing baby would only be exposed to small amounts. Many obstetricians have their own opinion about using hair color and perms during pregnancy. We encourage you to ask your doctor for their opinion.

I work full time as a cosmetologist and recently became pregnant. Should I stop working until the baby is born?

Most studies have not found a higher chance for pregnancy complications among those who work as

cosmetologists. One study found a slightly higher chance for miscarriage for cosmetologists who had specific work activities. Activities that seemed to contribute to the greater chance included working more than 40 hours per week, standing more than 8 hours per day, higher numbers of bleaches and permanents applied per week, and working in salons where nail sculpturing was performed.

In another study, miscarriage rates among hairdressers were reviewed, and newer data was compared to older data. The older data (from 1986-1988) showed an increased risk of miscarriage, an extended time trying to get pregnant, and low birth weight. The newer data (from 1991-1993) did not find increased risks. Newer dye and hair product formulas and better working conditions have likely contributed to the better outcomes.

Two studies suggested a possible risk for birth defects for women who work as hairdressers. However, the number of women and cases of birth defects identified were small. Further evaluation by the researchers did not support an increased risk.

Recent studies looking at miscarriage, preterm birth, small for gestational age, birth defects, and developmental milestones have not found an increased risk for any of these outcomes for hairdressers.

All studies support the importance of proper working conditions. Working in a well-ventilated area, wearing protective gloves, taking frequent breaks, practicing safe storage of hair care products, and avoiding eating or drinking in the workplace are all important factors that can decrease chemical exposures.

MotherToBaby has a general fact sheet on occupational exposures and ways to reduce potential exposures at <https://mothertobaby.org/fact-sheets/reproductive-hazards-workplace/pdf/>. Your worksite should provide MSDS on all chemicals and proper personal protection for all parts of your job. Be certain to use them, even when not pregnant.

Is it safe to have hair treatments while I am breastfeeding?

There is no information on having hair treatments during breastfeeding. It is unlikely that large amounts of any of the chemical would enter the breast milk because so little enters the mom's bloodstream. We would not discourage breastfeeding because of hair tints or other cosmetic hair chemicals. Be sure to talk to your health care provider about all your breastfeeding questions.

What if the father of the baby gets a hair treatment?

We did not locate studies on how hair treatments would affect a man's fertility (ability to get his partner pregnant). In general, exposures that fathers have are unlikely to increase risks to a pregnancy. For more information, please see the MotherToBaby fact sheet Paternal Exposures and Pregnancy at <https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/pdf/>.

References Available By Request

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