



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?

Coloring, curling (permanents), bleaching, and straightening (relaxers) are some types of hair treatments. For this fact sheet, hair coloring includes temporary dyes, semi-permanent dyes, and permanent dyes. Common chemicals used in hair dyes are hydrogen peroxide, ammonia, and alcohols. For hair curling or permanent wave, the most common chemicals used are ammonium thioglycolate and ammonia. Hair bleaching chemicals have hydrogen peroxide. Hair straighteners (relaxers) use a variety of chemicals, among them 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 thoroughly test these products in humans for safety before they go onto the market. You can learn more about cosmetic regulations by visiting this website: <https://www.fda.gov/Cosmetics/ProductsIngredients/Products/ucm127988.htm>.

It is safe to use hair treatment agents made outside of the United States?

Hair treatments that are not made in the United States (US) might have dangerous substances or contaminants such as heavy metals, including lead, cadmium, nickel, arsenic or mercury. In the U.S. the amount of metals allowed in cosmetics is regulated. In other countries, these agents may not be regulated and may be found at high levels in the cosmetic product. Therefore, it may be best to avoid beauty products made in other countries.

Do I absorb hair coloring/dye through my skin?

Under normal conditions, the amount of dye that is absorbed by the healthy skin of the scalp is small.

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 solutions) and how often you use it. The low levels of hair dye usually absorbed through the skin after application, are removed from your body in the urine. If used as recommended by the manufacturer, 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 studies on the effect of hair dye, hair perms, or hair relaxers during human pregnancy. Studies in laboratory animals exposed to dyes 100 times higher than normally used in humans, do not suggest a risk to human pregnancy. Any of these products applied to the scalp could be absorbed in small amounts and be minimally found in the blood. Therefore, little would be able to get to the developing baby under normal use.

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

No increase of low birth weight and preterm delivery was observed in a study in pregnant women that used hair straighteners. The study did not evaluate other outcomes such as birth defects, however, it is likely that only a small amount of hair straightening products would be absorbed into the body. This means that the developing baby would only be exposed to small amounts.

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

No. There is no recommendation that all cosmetologist should stop working because of pregnancy. Cosmetologists stand on their feet for long periods of time and have exposure to chemicals in the workplace. Recent studies looking at miscarriage, preterm birth, small for gestational age, birth defects, and developmental milestones have not found an increased risk chance for any of these outcomes in the children of for hairdressers.

A recent meta-analysis of 19 articles reviewing the reproductive outcomes of hairdressers and cosmetologists reported a weak increase in risk of reproductive disorders. These include: time to pregnancy (ability to get pregnant), small babies for gestational age, low birth weight and embryonic and fetal losses. Besides the composition of the hair product, different factors are involved in this occupational setting, e.g., variety of chemicals used, work conditions, environment, ventilation, working hours and standing for longer period of time.

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 the manufacturer's Safety Data Sheets (SDS) 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 are no studies on hair treatments and 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/>.

Please click here for references.

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