



Paint

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 paint may increase the risk for birth defects above that background risk. This information should not take the place of medical care and advice from your health care provider.

What is paint?

In general, paint is made up of pigment particles (color) in a liquid base called the medium. There are two broad categories of paint: oil paints (oil/alkyd based medium) or latex paints (water based medium). Oil paints are thinned or cleaned with paint thinners. Latex paints are thinned or cleaned with water. Most household paints are latex. Oil paints are sometimes used for trim work (such as around doors) in homes. There are many other mixtures of paints used for industry, the arts, and hobbies. Years ago, lead and mercury were used in paint.

How would I be exposed to the chemicals in paint?

Exposure to paint can happen by: 1) Inhalation (breathing in dust and vapors/fumes). Painters with a lot of exposure may experience symptoms such as nausea, headaches, or loss of appetite. 2) Absorption (direct skin contact). Painters with a lot of exposure may experience allergic reactions on their skin or eye irritation. 3) Ingestion (swallowing paint chips and dust).

Does the level of exposure (high versus low) to paint matter?

Like other exposures, the amount (level) and duration (time) is important in thinking about risk. However, unlike medicines, the exact level of paint exposure is usually not known. In general, an ongoing exposure through a work setting would likely give a higher total exposure than a one-time household exposure. Smell is not a good measure of the level of exposure.

Will exposure to paint cause problems for my pregnancy?

Studies looking at paint exposure during pregnancy have not had consistent results. Studies are hard to do because they are not able to measure the exact amount of paint to which each woman is exposed.

There have been reports of babies being born with problems when their mothers abused toluene-containing paint or glue “to get high” during their pregnancies. Toluene is a type of solvent used to thin paint. These babies were sometimes born prematurely and had low birth weight, a small head size, and facial features similar to what is seen in children exposed to alcohol during pregnancy (fetal alcohol syndrome). These children also experienced developmental delays. In these cases, the pregnant women were exposed to very high amounts of toluene – higher exposure than a hobby or professional painter would likely have.

I work as a painter. Should I be worried?

There is no clear concern, but lowering chemical exposure makes sense for both adult and pregnancy health. It is difficult to draw firm conclusions with pregnancy studies on painters because the level and type of exposure is usually not known. Often the studies are based on self-report, and women who had pregnancy problems may be more likely to join than women who had no pregnancy problems. This could lead to inaccurate results.

Of the components of paint, organic solvents have been the most studied during pregnancy, but the term “organic solvents” is used for too many different chemicals for the results of these studies to be meaningful. These studies usually combine the outcomes of pregnancies of painters, printers, chemists, factory workers, and laboratory technicians, all with different chemical exposures. Some of these studies suggest weak evidence for a small increased

chance of miscarriage and birth defects; other studies show no greater risk.

Even among professional painters exposure levels will vary greatly based on paints and cleaners used, ventilation, protective gear used, handling and storage, and amount of time working. Each product has specific safety precautions on the label. An occupational health specialist or industrial hygienist may be able to offer specific ways to reduce your chemical exposure at work. We have a general fact sheet for workers with some safety tips for working around chemicals at: <https://mothertobaby.org/fact-sheets/reproductive-hazards-workplace/pdf/>.

Is it okay to paint a room in my house during my pregnancy?

There is not enough research to answer this question. Household painting will probably result in a low level of exposure and is likely to be low risk. A single study found no association with household paint fumes and premature birth or low birth weight in women reporting some exposure to paint in their homes. Consider having someone else do the painting for you. If you do plan to paint, take precautions:

- Read the product label and follow all handling instructions for painting, cleaning, and storing.
- Be sure to work in a well-ventilated area with open windows and doors. Use fans in windows to help move air. After painting, ventilate the room for another 2 to 3 days, and limit your time in this area.
- Wear protective clothing such as gloves and long sleeves to cover your skin.
- Do not eat or drink while painting.
- Consider wearing a respirator mask that filters vapors from paints and thinners (available at hardware stores).
- The Environmental Protection Agency (EPA) has a booklet with healthy tips for indoor painting at: <https://www.epa.gov/s3fs-public/painting.pdf>.

I live in an old home and am concerned about lead paint.

The U.S. federal government banned lead-based paint from housing in 1978. However, lead based paint may still be present in older homes. Small chips of paint can be tested for the presence of lead. Pregnant women should not remove old paint. Do not scrape, sand, or burn old paint because this puts higher concentrations of heavy metals (like lead), solvents, and other chemicals into the air.

If you need to remove lead paint from your home, have someone who is certified in lead removal remove it. Stay away from the area until the project is done and the area is properly cleaned. For more information on lead, please see the MotherToBaby fact sheet Lead and Pregnancy at <https://mothertobaby.org/fact-sheets/lead-pregnancy/pdf/>.

What if I was exposed to paint and I breastfeed my baby?

Little is known about exposure to paint during breastfeeding, but it is unlikely that low-level paint exposure would be a problem. Talk with your health care provider about all your breastfeeding questions.

What if the father of the baby is exposed to paint?

Studies of male exposure to paint in the workplace have not had consistent results. Studies often look at job title alone, which is not a good way to measure exposure levels. It has been suggested, but cannot be proven, that men with occupational paint exposures have more fertility problems (harder time getting partner pregnant) or a small increased chance for cancer in their children. However, there are also studies that have not shown a chance for these problems. For general 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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