Paint

This sheet talks about exposure to paint in a pregnancy and while breastfeeding. This information should not take the place of medical care and advice from your healthcare 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 soap and 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 breathing in dust or fumes (inhalation), direct skin contact (absorption) or swallowing paint chips or dust (ingestion). Painters with a lot of exposure by inhalation may experience symptoms such as nausea, headaches, or loss of appetite. Painters with a lot of exposure through absorption may experience allergic reactions on their skin or eye irritation. Ingestion of paint can lead to stomach irritation, nausea, vomiting, and if it is lead-based paint, ingesting it can be toxic.

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 medication, 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.

Does an exposure to paint increase the chance for miscarriage?
Miscarriage can occur in any pregnancy. Among painters, one study showed an increased chance for miscarriage, but other studies have not shown this.

I would like to paint a room during my pregnancy, can this increase the chance of birth defects or other pregnancy problems?
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. Studies looking at paint exposure during pregnancy have had mixed results and are hard to do because they are not able to measure the exact amount of paint exposure for each woman. Household painting probably results in a low level of exposure and is likely to be low risk. A single study found no association with household paint fumes and preterm birth (birth before 37 weeks) or low birth weight in women reporting some exposure to paint in their homes.

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 preterm and had low birth weight, a small head size, and facial features similar to children exposed to alcohol during pregnancy (fetal alcohol syndrome). These children also had 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).
What precautions should I take if I paint a room in my house?

Consider having someone else do the painting for you. If you do plan to paint, reduce your exposure by:

- Reading the product label and following all handling instructions for painting, cleaning, and storing.
- Working in a well-ventilated (fresh air) 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.
- Wearing protective clothing such as gloves and long sleeves to cover your skin. If painting is part of your job, talk to your safety officer about wearing a respirator mask that filters vapors from paints and thinners.
- Not eating or drinking while painting.
- After painting, be sure to wash your hands well.
- The Environmental Protection Agency (EPA) has a booklet with healthy tips for indoor painting at: https://www.cpsc.gov/s3fs-public/painting.pdf.

I work as a painter. Can my work increase the chance of birth defects or other pregnancy problems?

Organic solvents are ingredients in paint that have been the most studied during pregnancy. However, the term “organic solvents” is used to describe many different chemicals, so it’s hard to know which exact chemical(s) may increase the chance of problems in a pregnancy. These studies usually combine the outcomes of pregnancies of painters, printers, chemists, factory workers, and laboratory technicians, all with different, extra chemical exposures. Some of these studies suggest a possible small chance of miscarriage and/or birth defects, while other studies show no higher chance for these problems.

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. While there is no clear concern for painters, lowering chemical and fume exposure makes sense for both adult and pregnancy health. 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. More information and some safety tips for working around chemicals can be found at: https://mothertobaby.org/fact-sheets/reproductive-hazards-workplace/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. Paint chips can be tested for 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 it done by someone who is certified in lead removal. Stay away from the area until the project is done and the area is properly cleaned. For more information on lead, please see the fact sheet on lead at https://mothertobaby.org/fact-sheets/lead-pregnancy/pdf/.

Can I breastfeed if I was exposed to paint?

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

If a man has been exposed to paint, does it increase the chance of infertility or birth defects?

Studies of male exposure to paint in the workplace have had mixed 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. 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/.

Selected References:

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