



## Paint and Pregnancy

This sheet talks about the risks that exposure to paint and other solvents can have during pregnancy. With each pregnancy, all women have a 3% to 5% chance of having a baby with a birth defect. This information should not take the place of medical care and advice from your health care provider.

### What is paint?

Paint is pigment particles in a liquid that is called the medium. Oil paints use oil or an alkyd resin as their medium. Latex paints do not use oil and can be thinned or cleaned with water. Oil paints must be thinned or cleaned with organic solvents like paint thinner. Other ingredients are added to thin the paint, preserve it, stop rust, kill fungus, and dry the paint. Most modern household paint is latex and some is oil. Many other types of paints are used in industry, the arts and for hobbies.

Most modern paints available do not have high levels of lead or other toxic metals. However, small amounts are still present in some exterior paints. The metals are used to give the paint its color. Some older buildings still have walls painted with lead-based paint. When lead paint is sanded or disturbed it produces dust that contains lead.

Oil based paints include organic solvents. All organic solvents are liquid chemicals that may evaporate easily and can break down fats. Many solvents are made of or give off volatile organic compounds (VOCs) that contribute to indoor and outdoor air pollution. Organic solvents are widely used in industry and in residential products, often to cut grease. Exposure to these agents in the general population is unavoidable. They are used in cleaning products and cosmetics to cut grease and help the product penetrate, in aerosol sprays, in disinfectants, paints, paint strippers and thinners, varnish and many other household products.

### How does exposure occur?

Paint and solvent exposure happens a lot more regularly than most people realize. You may sometimes not even realize that you are being exposed to solvents. Exposure can happen by:

- Ingestion by swallowing paint chips and dust
- Inhalation by breathing in dust and vapors
- Absorption by touching paint and other solvents

### Will exposure to paint or other solvents increase the risk to my pregnancy?

There have been no consistent findings from studies of exposure to organic solvents. These studies are very limited because there is no way to measure the exact amount of exposure. Some studies have shown that solvents may affect a woman's reproductive health by increasing the risk for preeclampsia (pregnancy induced high blood pressure) and menstrual disorders. Solvent exposure may lower fertility in both men and women. Miscarriages, low birth weight, birth defects, developmental disabilities, and higher risk of cancer for children later in life have been linked to some solvents when women were exposed to high levels or were exposed for long periods of time, for instance, in an occupational setting.

A congenital solvent syndrome from purposeful abuse has been suggested in studies that evaluated exposure from purposeful maternal abuse of organic solvents "to get high". The reports have included prematurity, low birth weight, small head size, developmental delay, and facial features consistent with

alcohol exposure. The amount of exposure in chronic abusers is typically a thousand fold times higher than in an average exposure.

At this time, there is not enough conclusive information to counsel women about exposures to organic solvents during pregnancy. If exposures are unavoidable, it is best to do as much as possible to reduce the amount of exposure to the mother, and in turn the pregnancy.

### **What about pregnancy and household paint use?**

Currently, the assumption is that household painting involves very low levels of exposure. The recommendation is to avoid exposure to oil-based paints, leads and mercury. You should minimize exposure to latex paints that contain ethylene glycol ethers and biocides. Ideally, you should get someone else to do the job for you.

Lead based paint was commonly used prior to the 1970s, so pregnant women should avoid removing old paint because of the risk of lead exposure. According to the U.S. Food and Drug Administration, exposure to lead paint increases the likelihood of lead poisoning and mental retardation. Scraping and sanding old paint should be completely avoided. This puts higher concentrations of solvents and chemicals into the air to be inhaled. The recommendation is to have someone else do this part of the remodeling and ideally, remove yourself from the location until the project is complete. For more information about lead exposure during pregnancy, please see the OTIS lead exposure fact sheet, available at <http://otispregnancy.org/pdf/Lead%208-06.pdf>.

### **What if I have been exposed to paint already?**

Currently, there are no studies that document harm to the baby during normal and incidental exposure to paint such as painting a room. The only studies that note a potential for miscarriage and malformations has to do with the higher levels of exposure through recreational use (sniffing and inhaling regularly).

If you have been exposed to paint, rest assured that the likelihood of any problems is low. According to the FDA, today's paints do not contain lead and are probably not dangerous. Let your health care provider know of any paint exposure and together you can discuss the potential risk.

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

At this time, very little is known about exposure to paint and other solvents during breastfeeding. It is unlikely that a significant amount would enter the breast milk after a normal or incidental exposure. Whenever possible, women who are breastfeeding should try to avoid or reduce their exposure for the overall health of both the mother and the baby.

### **How can I reduce my risk of exposure to paint and other solvents?**

Women who are pregnant or planning a pregnancy should avoid or reduce their exposure to paints and the organic solvents in many household products.

### **Tips to reduce exposure:**

- Use products that do not need to be painted, varnished, stained or stripped.
- It is best for pregnant women not to paint or refinish. If you do paint:
  - Follow the label directions
  - Air the area out well by opening windows
  - Wear gloves and a mask with an organic vapor cartridge when possible
  - Avoid using spray paint
  - Use low-VOC latex paints.
  - Remove all paint from skin using vegetable oil or mineral oil (baby oil)
  - Do not eat or drink anything while painting.

- Never use commercial paint thinner or stripper while pregnant
- Avoid areas being painted until the paint is dry and there is no smell.
- Choose latex paints. Use the highest quality paint you can afford. Environmentally friendly paints with low VOCs are now available.
- Other people in the household who use paints and/or organic solvents regularly should change clothes before coming home and wash their work clothes separately.
- Use fewer solvents and avoid spray products (including paints, hairspray, and oven cleaner).
- While pregnant, avoid hobbies that use solvents such as photo developing and oil painting.
- If products containing solvents are used: it is best to open windows if and if possible, wear a face mask with an organic vapor cartridge, gloves and clothing to protect your skin.

### **Resources**

- Harms RW, et al. (eds.) 2004. Mayo Clinic Guide to a Healthy Pregnancy, Mayo Clinic, pp. 23-24.
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- The National Institute for Occupational Safety and Health. 1999. The Effects of Workplace Hazards on Female Reproductive Health. Available from URL: <http://www.cdc.gov/niosh/99-104.html>.
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