

REPRODUCTIVE HEALTH AND THE WORKPLACE

Formaldehyde

Working with formaldehyde could increase your chances of having fertility problems or miscarriage. Here, you can learn more about formaldehyde and related chemicals and what you can do to reduce your exposure for a healthier pregnancy.

What is formaldehyde?

Formaldehyde (and closely related formalin and glutaraldehyde) is an organic chemical usually used in a water solution as a preservative and disinfectant.

Why should I be concerned about exposure to formaldehyde?

- Formaldehyde is known to cause cancer
- Working with formaldehyde may increase your chances of having fertility problems or a miscarriage
- Most work exposures to formaldehyde are unlikely to be high enough to enter breast milk. But formaldehyde may enter breast milk at exposure levels that are found in some workplaces, such as anatomy and mortuary science laboratories.

Who is exposed to formaldehyde?

Exposure to formaldehyde is most commonly found in these workplaces:

- Healthcare workers
- Pathology/cytology laboratory workers
- Anatomy and mortuary science laboratory workers
- Funeral home employees
- Cosmetologists, beauticians, and nail salon technicians

What is not known?

- We don't know what causes most fertility problems, miscarriages, and other reproductive problems. If you work with formaldehyde and have a miscarriage or a fertility problem, we can't tell if it was caused by exposure to these chemicals or if it was caused by something else.
- We don't know what levels of exposure to formaldehyde or related chemicals are safe. Try to reduce or eliminate your exposure as much as possible.
- We don't know how high formaldehyde levels have to be to enter breast milk. It's very unlikely that formaldehyde will enter breast milk for most work exposures.

What can I do to reduce or eliminate exposure?

- First, protect yourself by talking to your employer or workplace's safety officer to find out the formaldehyde exposure levels in your workplace, and make sure that exposure limits are being followed.
 - The Occupational Safety and Health Administration (OSHA) has set the permissible exposure limit (PEL) at 0.75 parts per million (ppm) as a time-weighted average (TWA), with a short-term exposure limit of 2 ppm. The NIOSH recommended exposure limit (REL) is 0.016 ppm (TWA), or 0.1 ppm (15-min ceiling).
 - Formaldehyde levels have not been reported for every kind of workplace that uses this chemical, but some workplaces might exceed these limits. For example, NIOSH measurements of formaldehyde at one mortuary college were an average of 1.4 ppm. The lowest measurement was 0.5 ppm, and the highest was 6.1 ppm during preparation.
 - There is evidence that formaldehyde levels higher than 2 ppm can enter the milk of animals, but we do not know how likely this is for humans.
- These exposure limits were written for healthy non-pregnant workers, and might not protect an unborn baby. Consider talking to your employer about avoiding duties with formaldehyde exposure on a temporary basis during pregnancy.
- If you cannot avoid formaldehyde exposure during pregnancy/breastfeeding:
 - Wear appropriate gloves when handling formaldehyde. Formaldehyde and other solvents can be absorbed through the skin. Formaldehyde can break through some of the most common types of gloves in 15 minutes or less. Gloves made from butyl rubber, neoprene rubber, or nitrile rubber are generally recommended. Latex rubber, natural rubber, polyethylene, or polyvinyl alcohol gloves are not recommended because they do not offer adequate protection against formaldehyde. Learn about [selecting appropriate gloves](#).
 - If exposure cannot be avoided during pregnancy, respirators can be worn to reduce the amount of certain chemicals that workers breathe in. Charcoal masks or surgical masks will not protect you from these chemicals. To be effective, respirators must be used correctly. Learn more about [respirators and pregnancy](#). Talk to your doctor and your employer if you think you might need to use a respirator.

- Wear safety glasses and chemical aprons.
- Wash any formaldehyde off your skin and change your clothes after work.
- Open windows and doors, and use external ventilation systems to reduce the concentration of vapors in the room.
- Clean drips and spills quickly using formaldehyde neutralization pads or sheets.
- If you are working with tissues, cadavers, or animal specimens preserved using formalin, rinse the specimen in water to remove excess formalin before beginning dissection. Keep the formalin solution under a chemical fume hood or in another room while in the lab.
- Some activities will have higher exposures than others. For example, dissections of the chest and abdomen appear to have higher levels of formaldehyde exposure.
- Remove formaldehyde-contaminated waste from the work area and place it in sealed, labeled containers.

Learn more about formaldehyde

New Jersey Fact Sheet on [formaldehyde](http://nj.gov/health/eoh/rtkweb/documents/fs/0946.pdf) (<http://nj.gov/health/eoh/rtkweb/documents/fs/0946.pdf>)

Learn more about [personal protective equipment \(PPE\) in pregnancy](#).

Learn more about preventing [take-home exposure](#)

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