What chemicals are in the products I use?

MANICURES AND PEDICURES: Nail polish removers may contain solvents, including acetone. Base coats, color coats, and top coats may contain solvents (toluene, acetone, and ethyl/butyl acetate) and resins that allow the coats to harden. These resins may contain formaldehyde or dibutyl phthalate.

ARTIFICIAL NAILS: There are many types of artificial nail systems. All of the systems are made with some type of acrylic resin.

ACRYLIC AND GEL NAILS: Nail primers may contain methacrylic acid. The liquid and powder used to create acrylic nails may contain methyl- or ethyl methacrylate. The thick liquid used to create gel nails may contain gel acrylic. Acrylic nails are air-dried; gel nails dry under an ultraviolet light.

TIPS, WRAPS, AND “LINEN STRIPS”: The nail adhesive used to glue pre-formed plastic nails or layers of fiberglass, silk, or linen onto your client’s nails may contain cyanoacrylate. The nail coatings may contain gel acrylic or cyanoacrylate.

These chemicals may get into your body if they get onto your skin or if you breathe the vapors. When filing nails, you may breathe in dust that contains these chemicals. If you eat or drink while working, chemicals on your hands may be swallowed.

Not all nail salon products contain the chemicals listed above. Always check your products’ Safety Data Sheets (SDSs) for specific information on the chemicals used in your salon.

HOW CAN I PROTECT MYSELF AND MY PREGNANCY IF I KEEP MY JOB AT THE NAIL SALON?

As a nail salon employee, you work with products that contain harmful chemicals. These chemicals can get into your body if you breathe them, if they pass through your skin, or if you eat them. This fact sheet offers suggestions on how to reduce your exposure to chemicals. These ideas can help you protect your health, your pregnancy, and your job.

WILL THE CHEMICALS I USE IN THE NAIL SALON HARM MY PREGNANCY?

Very few studies have been done on what happens in pregnancy when workers use nail care products. Because all salons are different, the amount of contact you have with chemicals will vary. The amount you breathe in or get on your skin will depend on:

- the amount of the chemical in the products you use
- how often you use the products and how many hours you work
- the type of ventilation or air system in your workplace

The reproductive risk of working with nail care products also depends on the trimester of your pregnancy. The chemicals used in nail salon work are not likely to cause a problem to your pregnancy at the low air levels that have been measured in most nail salons. However, if you do feel ill, dizzy or "drunk" while working in your salon, you should reduce your exposure to the chemicals you use — this is a warning sign that solvent levels in the air might be high. Also, if you have asthma, you may find you use more asthma medicines when working with some of these chemicals. This increase in medication use may be a concern if you are pregnant. You should discuss all medication use or the stopping of medications with your doctor.
IF EXPOSURES ARE Controlled, you SHOULD be able TO CONTINUE WORKING.
So that we can be as protective of you and your pregnancy while allowing you to work while pregnant, we recommend that the use of these chemicals be reduced to levels that are as low as possible. See below for tips on how to reduce levels.

HOW CAN MY NAIL SALON REDUCE MY EXPOSURE TO CHEMICALS?
Nail salons frequently have a chemical smell. Some chemicals cause harm before you can smell them. Other chemicals can be smelled well before they represent a hazard. For this reason, a salon’s chemical odor cannot be used to determine if the salon is safe for your pregnancy. The best approaches to controlling exposures in nail salons are below.

1. Your salon should have fresh air.
   - If there are windows in the salon, they could be kept open.
   - Your salon could install an air handling system that brings fresh air into the building.
   
   Remember: Small table fans do not help because they do not direct the dust and vapors out of the work area. In general, air purifiers don’t work either.

2. Your salon could use manicure tables that have a built-in ventilation system.
   Some manicure tables are made with ventilation systems built into them. The system pulls dusts and vapors away from you and your client. Ideally this air should be exhausted out of the building. If filters are used, be sure to change them.

3. You should cover your trash and your products’ containers.
   Materials soaked in chemicals should be discarded in covered containers.

4. You may be able to protect yourself from dust exposure by wearing a fitted disposable “dust mask” such as a mask called a “N95”.
   These masks are available at safety supply or hardware stores. Dust masks may offer you some protection when you file or grind nails, but they won’t protect you from chemical vapors. Charcoal dust masks can be used to remove solvent odors.

5. You should protect your skin from dust by wearing gloves. No glove provides a perfect barrier, so you should wash your hands several times a day with mild soap.
   Always wash your hands before eating or drinking.

6. Your salon should not use products that contain liquid methyl methacrylate (MMA).
   The Food and Drug Administration (FDA) recommends that liquid methyl methacrylate not be used in fingernail products. Your salon may be using MMA if your clients’ artificial nails are very hard to remove.
   In addition to avoiding the use of MMA, your salon could use polish removers without acetone and nail polishes without toluene, formaldehyde, or phthalates.

7. You should not eat, drink, or smoke in the work area.

8. Your salon should train you on the safe use of chemicals at work.

This information is intended for general reference purposes only and is not intended to address specific medical conditions. It is not the intention of this fact sheet to provide specific medical advice, but rather to provide users with information to better understand workplace exposures. This information is not intended to be used as a substitute for professional medical advice or a medical exam.


Author: John D. Meyer, MD, MPH

This sheet may be reproduced by clinicians’ offices only for the purposes of individual patient guidance.

If you think you may be suffering from overexposure to chemicals, or any work-related illness or injury, contact an occupational health clinic in your area to request an evaluation. The Mount Sinai Selikoff Centers for Occupational Health have locations throughout New York City and the Mid-Hudson Valley, and are members of the New York State Occupational Health Clinic Network. For a list of all clinics throughout New York, visit the New York State Department of Health’s website at www.health.ny.gov/environmental/workplace/clinic

For further information, visit Occupational Safety and Health Administration, www.osha.gov/SLTC/nailsalons/index.html
The Mount Sinai Selikoff Centers for Occupational Health are dedicated to providing cutting-edge clinical services with a focus on prevention to keep workers healthy and their workplaces safe.

Our physicians are leaders in the field of occupational medicine, providing care to injured and ill workers and retirees in the New York City and Mid-Hudson Valley regions.

Our highly skilled and multilingual team of physicians, nurse practitioners, industrial hygienists, ergonomists, and benefits specialists provide comprehensive patient-centered services. We also help employers evaluate the work environment and establish programs to advance the general health and well-being of their entire workforce.

Our medical experts and outreach team members visit organizations, unions, and employers to bring quality training and education programs to the communities serviced by our clinical centers.

For an appointment or more information:
www.mountsinai.org/selikoff
888.702.0630

The Region 2 Pediatric Environmental Health Specialty Unit at the Icahn School of Medicine at Mount Sinai provides clinical consultation, outreach, and education to health care professionals, communities and families across Region 2 (New Jersey, New York, Puerto Rico, and the U.S. Virgin Islands) on issues related to children’s environmental health. Our unit consists of a multi-disciplinary team of environmental health professionals all working toward the singular goal of reducing and preventing disease of environmental origin in children.

To expand clinical services and educational programs in children’s environmental health beyond the New York City area, the Mount Sinai PEHSU has worked with the New York State Assembly, the New York State Senate, and the New York State Department of Health to build a statewide network of Centers of Excellence in Children’s Environmental Health (CECEHs). The Centers of Excellence in Children’s Environmental Health are a coordinated network of diagnostic and referral centers that provide expert care in pediatric environmental medicine for children across New York State who are exposed to toxic hazards or suffer from diseases of suspected environmental origin to referring physicians. Centers of Excellence currently exist in New York City (Icahn School of Medicine at Mount Sinai), Long Island (Stony Brook University School of Medicine), Westchester County (New York Medical College), the Capitol Area (Albany Medical College), Rochester (University of Rochester School of Medicine and Dentistry), Upstate Medical University Hospital at Syracuse, and SUNY Buffalo.

For any environmental concerns, please call PEHSU toll-free at 866.265.6201