

Prenatal Assessment of Environmental Risk (PAER)

Patient Results: Natalia Heller

Date of birth: March 18, 1984

Date of Assessment: October 12, 2016

Clinic: Stay Well Clinic

It is essential that clinicians assess their pregnant patients for environmental exposure to harmful chemicals. PAER makes it easier. Learn more at www.paerurl.com

Areas of Concern

Exposure to Organic Solvents or Other Chemicals at Home or Work

Patient Response

- Works in cleaning or maintenance
- Specifically uses or works with “bathroom cleaner and floor cleaner”

Significance

There are tens of thousands of organic solvents used in industries and in homes, and routine exposure — through inhalation, ingestion, or skin contact — has the potential to cause harmful effects. They can include preeclampsia, spontaneous abortion, impaired growth, and birth defects. However, the health effects can range from none to very severe. The potential harm depends on the specific chemical and the amount, concentration, and duration of the patient’s exposure.

Clinical Follow-up

Key points

- Gather as much information as possible about specific chemicals and exposure levels. If specific substances are unfamiliar, look them up afterward in the PAER resources (www.paerurl.com/resources/#organic_solvents) for follow up during the patient’s next appointment.
- Get details on whether the patient is using proper ventilation and, if needed, protective equipment like a respirator. Some common forms of protection may not be sufficient. For example, latex gloves do not prevent the dermal absorption of many organic solvents.

- While the assessment focuses on work-related exposure, ask about any hobbies or other activities at home that could result in exposure to organic solvents.

Questions

- “Tell me more about the chemicals you work with. Do you know the names?”
- “Do you take steps to protect yourself from these chemicals?”
- “Do you have any hobbies that involve paints, varnishes, glues, or other chemicals — like painting, silk-screening, furniture refinishing, or woodworking?”

Sources

See a complete list of sources at www.paerurl.com/sources/organic_solvents

Resources

PAER’s list of resources on organic solvents
(www.paerurl.com/resources/#organic_solvents)

Environmental Tobacco Smoke

Patient Response

Breathes in tobacco smoke more than 10 times a day

Significance

Exposure to secondhand smoke during pregnancy has been shown to have a dose dependent relationship with poor outcomes, like preterm delivery, low birth weight, and fetal mortality. Environmental tobacco smoke contains CO as well as formaldehyde, benzene, vinyl chloride, arsenic, ammonia, and hydrogen cyanide.

Clinical Follow-up

Key points

- Evaluate the patient’s level of risk by getting more details about the degree of exposure, such as approximately how many hours a day is she exposed.
- Discuss practical tips for limiting exposure — like leaving a room where someone is smoking and opening windows to air it out afterward.
- Talk over strategies to make her home smoke-free — or at least reduce exposure. If the patient is interested, refer her to cessation resources she can share with loved ones who smoke.

Questions

- “How much of the day do you think you’re breathing in smoke?”
- “Do people smoke with you in the room?”
- “How hard would it be to make your whole home smoke-free? Would your partner, spouse, or family members agree to it?”

Sources

See a complete list of sources at <http://www.paerurl.com/sources/tobacco>

Resources

- PAER’s list of resources on tobacco smoke (www.paerurl.com/resources/#tobacco)

Personal Care Products

Patient Response

Uses between 6 to 10 personal care products regularly (like makeup, lotions, perfume, cologne, nail polish, hair dye or straightener, or others)

Significance

Personal care products can contain harmful chemicals like formaldehyde, parabens, phthalates, and toluene. Observational studies have shown that exposure during pregnancy to chemicals in cosmetics can increase the risk of stillbirth and low birth weight. While levels in an individual product may be low, the additive effects of combining multiple products and chemicals — combined with daily exposure — increases the risks. The effects of many of chemicals in cosmetics — both alone and in mixtures — are also unknown. Only 10% of the 10,000 chemicals in cosmetics have been evaluated for safety, and the FDA does not review cosmetics before they enter the market.

Clinical Follow-up

Key points

- Focus on getting the patient to reduce the overall number of products she uses, at least during pregnancy. Reassure her that she does not have to give up all products.
- Suggest that the patient limit visits to hair, beauty, and nail salons during

pregnancy because of the high levels of organic solvents in the air.

- Advise the patient to look for products labeled “3-free,” because they do not have the “toxic trio” of formaldehyde, phthalates, or toluene. Suggest that she avoid products with strong smells and to choose products labeled “fragrance-free.”

Questions

- “What are the personal care products that are most important to you — the ones you feel like you can’t give up? Are there some others that you could stop using, at least while you’re pregnant?”
- “Do you like products with strong scents or smells?”
- “How often do you go to beauty, hair, or nail salons?”

Sources

See a complete list of sources at

http://www.paerurl.com/sources/personal_care_products

Resources

- PAER’s list of resources on personal care products
(www.paerurl.com/resources/#personal_care_products)

Additional Assessment Results

	Assessment Result	Type of Chemical	Category
✓	Does not live in a home older than 1978, so it is unlikely to have lead paint	Lead	Home
✓	Has had her home tested for radon	Radon	Home
✓	Has a working carbon monoxide detector in her home	Carbon Monoxide	Home
✓	Never uses pesticides in or around her home	Pesticides	Home
✓	Always washes fruits and vegetables before eating or cooking them	Pesticide residues	Food and Water
✓	Water supply comes from city, not a well	Lead	Food and Water
✓	Never microwaves food in plastic containers	Plastics	Cans, Bottles, and Containers
✓	Drinks 0 beverages from plastic bottles each day (e.g. bottled water, soda or pop, iced tea, or juice)	Plastics	Cans, Bottles, and Containers
✓	Eats 0 cans of food each week (e.g. canned vegetables, canned soup, canned tomato sauce)	Plastics, BPA	Cans, Bottles, and Containers
✓	Does not plan to make changes to her home (like painting or remodeling) before her baby arrives	Lead, VOC	Getting Ready for Baby
✓	Does not plan to buy new furniture before her baby arrives	Flame retardants, VOC	Getting Ready for Baby
✓	Does not have concerns about other chemicals or products she wants to discuss	General	Getting Ready for Baby