



The Healthy Hair Salon Project

Reducing Your Exposures

Factsheet #2

<https://www.ohccupstate.org/hair%20salon.htm>

Information covered in Factsheet #1 provided many reasons for reducing chemical exposures in the hair salon environment. In addition to finding healthier products to use, other approaches are recommended to improve the salon environment. This factsheet will outline several methods to further reduce your exposure to harmful chemicals.

Project Findings: During the salon inspection / data gathering phase of the Healthy Hair Salon Project several problems were found that contributed to salon chemical exposures. Several of the ventilation systems were found not maintained and missing air ducts to ventilate the salon space. Filters in all the salons were of low quality, some missing. All of the salons ventilation systems were installed without fresh air intakes which contributed to a buildup of fine dust, volatile chemicals, and a stale air condition all due to a lack of fresh outside air.

Methods To Reduce Your Exposures

In order to adequately control (reduce) chemical exposures the following two step process can be used to ensure the best choices are made to reduce your exposures.

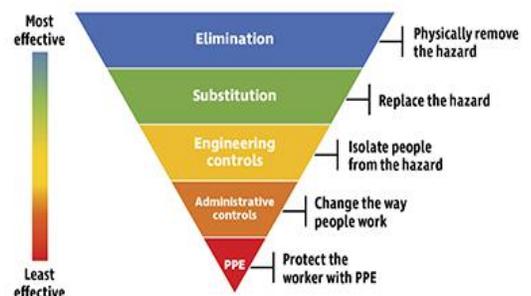
Step 1 is a simple three part model outlined below. The **Source** is the chemical (or the product) of concern; the **Worker** has the exposure to the chemical; and the **Pathway** is generally how the chemical reaches or exposes the worker.



This three part model can be used to understand how a chemical exposure takes place and possible solutions. For example, a salon worker may be exposed to fumes from a hot flat iron hair treatment causing breathing problems. Using step 1 we can list possible solutions to prevent this exposure under each part of the model. After coming up with possible ways to reduce an exposure from step 1, Step 2 helps to decide which the best approaches to take. The figure below is called the Hierarchy Of Controls and is a fundamental principle in industrial hygiene. Step 2 uses the Hierarchy of Controls to decide which possible control listed in step 1 to use. More than one control could be used which might be more effective than just one control.

The hierarchy of controls shows that not all options are equally effective. For example, a dust mask may be helpful for some chemicals but not others. This is why PPE is on the bottom of the triangle and elimination is at the top since it would remove the hazard.

NIOSH HIERARCHY OF CONTROLS

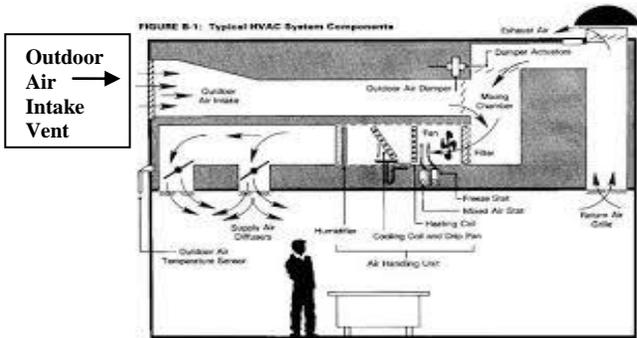


Taking the list made in Step 1 and comparing it to the Hierarchy of Controls in Step 2 will give better choices for success. Using the hot flat iron hair treatment example from above, the result of the two step process could result in realizing using a mask (PPE) is least effective, where as not using a heat protective spray with the hot iron (Elimination) will be more effective. This decision process offers many possible options to reduce exposures.

Factsheet #1 (Pollution Prevention) focused on removing harmful chemicals in use and replace with safer ones. On the Hierarchy of Controls this is Elimination and Substitution which are considered highly effective. However, due to the lack of adequate information on all the chemicals used in salon products, the following recommendations are made until salon chemicals safety can be addressed.

Ventilation: Using the salon's ventilation system to help dilute and filter out harmful chemicals can be very effective (Engineering Control). The ventilation system typically has a furnace / AC unit with a blower to provide comfortable air to the salon. However, circulating the salon air will not be enough and it must have outdoor air included in the system which helps to dilute any chemicals in the salon air.

The figure on the right shows the basic parts of a proper ventilation system. Please note the fresh outdoor air intake in this figure.



Air Filtration: Ventilation systems should have air filters installed and replaced periodically. Higher grade filters will filter out the smaller dust particles that can enter the breathing system. Filters classified as MERV 8 and higher are recommended. Note: these filters do not filter out chemical odors. Free standing HEPA filter units are sometimes used to help remove dust in the air but have limited effect due to their size. Beware of air purifiers that claim to use ozone to clean the air as ozone is a lung hazard.

Fresh Outdoor Air: The key to diluting out salon chemicals and odors is fresh air. As mentioned above, it should be always added to a building ventilation system. Placing a fan in open doors and windows to move air in or out of the salon might be useful if the HVAC system fresh air ventilation is not in place or possible.

Maintenance: The ventilation system should be inspected and maintained at least yearly to ensure it is operating as intended.

Project Findings: Several salon ventilations systems were found with disconnected air ducts and filters missing or overloaded with dust. All of the salons in the project did not have any fresh outdoor air added to the salon space. This is troubling since building codes require all indoor spaces to have fresh outdoor air added to the system.

Personal Protective Equipment(PPE):

Face Masks can be used to protect workers but as noted in the Hierarchy of Controls section above, they are not considered the best option. For example, a face mask may help to filter some dust from the salon air but not all. Chemical odors for example cannot be filtered by a simple face mask. Sometimes wearing a face mask can create a false sense of security for the wearer and directs attention from the problem such as using a harmful chemical which should be substituted for a safer one.

Gloves are an option when direct skin contact with chemicals cannot be avoided. Using a disposable nitrile glove prevents skin contact to many chemicals in the salon. Also, washing hands after glove use is recommended.

Right to Know Training(RTK): Workers who are informed about the chemicals they use in the salon make better choices. RTK training is required by OSHA so workers are informed about the hazards of the chemicals they are using and most importantly, information on how to protect themselves. Safety Data Sheets (SDS) for

Project Findings: Nail treatment services found in one salon created a very high exposure to solvents used in the products to make artificial nails. This chemical exposure caused immediate eye tearing, headache, and breathing tightness. Also, no exhaust ventilation for the grinding / polishing work cause visible dust on surfaces and in the air. NYS has recently passed regulations for nail salon work which requires special exhaust ventilation to be used to capture fumes and dust from nail treatment work.

each product used in the salon are required to be kept in the salon and readily available to any worker. The COVID pandemic has created much attention on exposure controls at work places across the world including hair salons. Concepts discussed in this factsheet have similar approaches as those used to prevent COVID exposure such as ventilation and PPE. Additional controls include distancing, limited occupancy, hygiene & disinfection procedures, and staying home if sick. A recent COVID cluster was reported in Kingston, ON, Canada from workers and clients in a hair salon. The investigation into this cluster found lack of disinfection, ventilation, and a worker not staying home when sick.

NYS COVID Reopening Requirements found here:

<https://www.governor.ny.gov/sites/governor.ny.gov/files/atoms/files/HairSalonsAndBarbershopSummaryGuidance.pdf>

Additional information on reducing hair salon chemical exposure can be found at the following websites:

Women's Voices for the Earth found here: <https://www.womensvoices.org/avoid-toxic-chemicals/salon-products/recommendations-for-reducing-toxic-chemical-exposures-in-salons/>

NYS Dept of Health , Health Alert for Beauty Salon Owners and Workers found here:

<https://www.health.ny.gov/environmental/chemicals/formaldehyde/docs/worker.pdf>

Nail Salon Rules and Information in NYS found here <https://www.dos.ny.gov/licensing/appearance/nailsalons.html>



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