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Perfect Nails, Poisoned Workers

Some ingredients used in nail products have been tied to cancer, miscarriages, lung diseases and other ailments. The industry has long fought regulations.

By SARAH MASLIN NIR MAY 8, 2015

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Each time a customer pulled open the glass door at the nail shop in Ridgewood, Queens, where Nancy Otavalo worked, a cheerful chorus would ring out from where she sat with her fellow manicurists against the wall: “Pick a color!”

Ms. Otavalo, a 39-year-old Ecuadorean immigrant, was usually stationed at the first table. She trimmed and buffed and chatted about her quick-witted toddler, or her strapping 9-year-old boy. But she never spoke of another dreamed-for child, the one lost last year in a miscarriage that began while she was giving a customer a shoulder massage.

At the second table was Monica A. Rocano, 30, who sometimes brought a daughter to visit. But clients had never met her 3-year-old son, Matthew Ramon. People thought Matthew was shy, but in fact he has barely learned how to speak and can walk only with great difficulty.

A chair down from Ms. Rocano was another, quieter manicurist. In her idle moments, she surfed the Internet on her phone, seeking something that might explain the miscarriage she had last year. Or the four others that came before.

Similar stories of illness and tragedy abound at nail salons across the country, of children born slow or “special,” of miscarriages and cancers, of coughs that will not go

away and painful skin afflictions. The stories have become so common that older manicurists warn women of child-bearing age away from the business, with its potent brew of polishes, solvents, hardeners and glues that nail workers handle daily.

A growing body of medical research shows a link between the chemicals that make nail and beauty products useful — the ingredients that make them chip-resistant and pliable, quick to dry and brightly colored, for example — and serious health problems.

Whatever the threat the typical customer enjoying her weekly French tips might face, it is a different order of magnitude, advocates say, for manicurists who handle the chemicals and breathe their fumes for hours on end, day after day.

The prevalence of respiratory and skin ailments among nail salon workers is widely acknowledged. More uncertain, however, is their risk for direr medical issues. Some of the chemicals in nail products are known to cause cancer; others have been linked to abnormal fetal development, miscarriages and other harm to reproductive health.

A number of studies have also found that cosmetologists — a group that includes manicurists, as well as hairdressers and makeup artists — have elevated rates of death from Hodgkin's disease, of low birth-weight babies and of multiple myeloma, a form of cancer.

But firm conclusions are elusive, partly because the research is so limited. Very few studies have focused on nail salon workers specifically. Little is known about the true extent to which they are exposed to hazardous chemicals, what the accumulated effect is over time and whether a connection can actually be drawn to their health.

The federal law that regulates cosmetics safety, which is more than 75 years old, does not require companies to share safety information with the Food and Drug Administration. The law bans ingredients harmful to users, but it contains no provisions for the agency to evaluate the effects of the chemicals before they are put on shelves. Industry lobbyists have fought tougher monitoring requirements.

Industry officials say their products contain minuscule amounts of the chemicals identified as potentially hazardous and pose no threat.

“What I hear are insinuations based on ‘linked to,’” said Doug Schoon, co-chairman of the Professional Beauty Association's Nail Manufacturers Council on Safety. “When we talk about nail polish, there's no evidence of harm.”

Health advocates and officials disagree, pointing to the accumulated evidence.

“We know that a lot of the chemicals are very dangerous,” said David Michaels, the

assistant labor secretary who heads the federal Occupational Safety and Health Administration, which oversees workplace safety. “We don’t need to see the effect in nail salon workers to know that they are dangerous to the workers.”

So many health complaints were cropping up among the mostly Vietnamese manicurists in Oakland, Calif., that workers at Asian Health Services, a community organization there, decided on their own to investigate about a decade ago.

“It was like, ‘Oh wow, what’s happening in this community?’” said Julia Liou, who is now the health center’s director of program planning and development and a co-founder of the California Healthy Nail Salon Collaborative. “We are seeing this epidemic of people who are sick.”

The organization helped form a coalition in California that pushed for restrictions on chemicals used in nail salons, but the cosmetics industry succeeded in blocking a ban.

In recent years, in the face of growing health concerns, some polish companies have said that they have removed certain controversial chemicals from their products. But random testing of some of these products by government agencies showed the chemicals were still present.

Some states and municipalities recommend workers wear gloves and other protection, but salon owners usually discourage them from donning such unsightly gear. And even though officials overseeing workplace safety concede that federal standards on levels of chemicals that these workers can be exposed to need revision, nothing has been done.

So manicurists continue to paint fingertips, swipe off polish and file down false nails, while absorbing chemicals that are potentially hazardous to their health.

“There are so many stories but no one that dares to tell them; no one dares to tell them because they have no one to tell,” Ms. Otavalo said in an interview on a day off from the Ridgewood salon, babysitting for her colleague’s developmentally disabled son, Matthew. (Ms. Otavalo left her job at the salon a few months ago.) “There are thousands of women who are working in this, but no one asking: ‘What’s happening to you? How do you feel?’ We just work and work.”

‘They Cannot Breathe’

The walls of Dr. Charles Hwu’s second-story office in Flushing, Queens, are decorated with Chinese calligraphy, gifts from patients he has cared for from cradle to adulthood. Over his decades as an internist in this predominantly Asian enclave, Dr.

Hwu has repeatedly encountered a particular set of conditions affecting otherwise healthy women.

“They come in usually with breathing problems, some symptoms similar to an allergy, and also asthma symptoms — they cannot breathe,” he said during a break between patients this winter. “Judging from the symptoms with these women, it seems that they are either smokers, secondhand smokers or asthma patients, but they are none of the above. They work for nail salons.”

In interviews with over 125 nail salon workers, airway ailments like those in Dr. Hwu’s office were ubiquitous. Many have learned to simply laugh them off — the nose that constantly bleeds, the throat that has ached every day since the manicurist started working.

In the nail salon she owned in Mill Basin, Brooklyn, Eugenia Colon spent years molding sometimes 30 sets of talonlike nails a day in a haze of acrylic powder, ignoring a persistent cough that grew more pronounced over time. She was found to have sarcoidosis, an inflammatory disease, in her lungs. In scans, they appeared as if covered with granules of sand, streaked by tiny scars.

The doctor who diagnosed her condition asked Ms. Colon what she did for a living. When she told him, he was frank: As she beautified other women, she inhaled clouds of acrylic and other dust, tiny particles that gouged the soft tissue of her lungs.

“We made money off it, but was it worth it?” Ms. Colon, 52, now an aesthetician in a Manhattan spa. “It came with a price.”

Of the 20 common nail product ingredients listed as causing health problems in the appendix of a safety brochure put out by the Environmental Protection Agency, 17 are hazardous to the respiratory tract, according to the agency. Overexposure to each of them induces symptoms such as burning throat or lungs, labored breathing or shortness of breath.

A 2006 study published in the Journal of Occupational and Environmental Medicine that included more than 500 Colorado manicurists found about 20 percent of them had a cough most days and nights. The same examination showed those who worked with artificial nails were about three times as likely to get asthma on the job as someone not in the industry.

Skin disorders are also omnipresent among nail salon workers. Many of the chemicals in nail salon products are classified by government agencies as skin sensitizers, capable of provoking painful reactions.

Some veteran manicurists say they can recognize one another on the street: They have the same coffee-colored stains on their cheeks. Certain cosmetic color additives — particularly a type of brilliant red — have been shown by researchers to cause such skin discoloration.

When Ki Ok Chung, a manicurist who worked in salons for almost two decades, had her fingerprints taken in the early 2000s for her United States citizenship, she made an upsetting discovery: Her prints were almost nonexistent. They had to be taken seven times. She says constant work with files, solvents and emollients is responsible.

“I realized my fingerprints had been disappearing,” she said.

Today, she cannot touch hot or cold dishes without searing pain.

Even as the weather warmed into spring last year, Zoila Calle, a manicurist, then 22, who worked in Harlem, wore wool gloves indoors and out. Underneath were black pustules so painful she could not grasp a polish bottle or text on her phone. It was the second time her hands had erupted in the warts, a common occurrence for nail salon workers. While customers often fret about salon hygiene, it is manicurists who appear truly at risk, suffering through endless fungal infections and other skin diseases from the blur of hands and feet they touch every day.

“It’s a beautiful industry, it makes people feel better,” Ms. Colon, who owned the salon in Mill Basin, said in an interview, a faint wheeze just audible behind her ready laugh. “But if a lot of people knew the truth behind it, it wouldn’t happen. They wouldn’t go.”

Miscarriages and Warnings

In a way, Ms. Rocano, one of the manicurists in the Ridgewood salon, felt herself lucky. Her colleagues seated on either side of her had each lost a pregnancy last year, hoped-for babies whom they separately described exactly the same way: “Like losing a dream.”

She, however, has her toddler, Matthew.

A dark-haired bundle with amber skin when he was born, Matthew was an infant laden with his mother’s hopes. Holding him in her arms, she was reminded of the daughter she had left behind in Ecuador and still has not seen in more than six years. This time, she felt, she could do right by her child.

Yet as he grew, something seemed off. His legs were weak; they buckled when he tried to stand. By age 3 he still could not say his name. In visits to her pediatrician, she learned that Matthew was delayed on almost every measure, both physically and

cognitively.

At one point, his doctor asked her what she did for a living. When she told him, he asked how long she had worked in the nail salon while pregnant. Six months, she responded.

The doctor told her, “When babies are forming in your womb, they absorb everything, and if they are exposed to anything, it can cause them harm,” she recalled.

On a day five years ago, a doctor gave a similar warning to the manicurist who works at the table to Ms. Rocano’s right, as she sat in the obstetrics unit at Wyckoff Heights Medical Center in Brooklyn. There she learned she had miscarried a third time.

“I went to the hospital, and I told him, ‘I’m a manicurist,’” said the woman, who declined to give her name because she wanted her medical history to remain private. Her doctor urged her to change jobs. “The chemicals are not healthy for your lungs, your liver, and sometimes they begin cancer,” she recalled. “I was laughing. I said, ‘Who is going to pay my bills?’” She has since miscarried twice more.

In scientific circles, the three chemicals in nail products that are associated with the most serious health issues are dibutyl phthalate, toluene and formaldehyde. They are known as the “toxic trio” among worker advocates.

Dibutyl phthalate, called DBP for short, makes nail polish and other products pliable. In Australia, it is listed as a reproductive toxicant and must be labeled with the phrases “may cause harm to the unborn child” and “possible risk of impaired fertility.” Starting in June, the chemical will be prohibited from cosmetics in that country. It is one of over 1,300 chemicals banned from use in cosmetics in the European Union. But in the United States, where fewer than a dozen chemicals are prohibited in such products, there are no restrictions on DBP.

Toluene, a type of solvent, helps polish glide on smoothly. But the E.P.A. says in a fact sheet that it can impair cognitive and kidney function. In addition, repeated exposure during pregnancy can “adversely affect the developing fetus,” according to the agency.

Formaldehyde, best known for its use in embalming, is a hardening agent in nail products. In 2011, the National Toxicology Program, part of the United States Department of Health and Human Services, labeled it a human carcinogen. By 2016, it will be banned from cosmetics in the European Union.

Cosmetics industry officials say linking the chemicals to manicurists’ health

complaints amounts to faulty science.

Dibutyl phthalate, toluene and formaldehyde “have been found to be safe under current conditions of use in the United States,” said Lisa Powers, a spokeswoman for the Personal Care Products Council, the main trade association and lobbying group for the cosmetics industry.

“The safe and historical use of these ingredients is not questioned by F.D.A.,” she continued.

In reality, the responsibility for evaluating the safety of the chemicals as they are used in cosmetics is left with the companies themselves.

Even while insisting they are safe, some polish companies have voluntarily begun to remove certain chemicals from formulations. By 2006, several prominent brands had announced their products would no longer contain any of the three. The new products were labeled “3-free” or “5-free,” referring to the number of chemicals that are ostensibly no longer in them.

But a 2010 study by the F.D.A. and another in 2012 by the California Environmental Protection Agency’s Department of Toxic Substance Control found in random tests that some products, even ones labeled “3-free” or “5-free,” in fact contained those very chemicals.

It was from routine community outreach trips to local nail salons in Oakland that Ms. Liou and her colleagues from Asian Health Services, as well as Thu Quach, a research scientist, became alarmed: Almost all of the manicurists interviewed had health complaints; some were terribly ill.

Dr. Quach, with the Cancer Prevention Institute of California, set out to conduct a health survey of nail salon workers in Alameda County, which includes Oakland.

The stories poured in.

Le Thi Lam, a Vietnamese immigrant who came to the United States in 1988 after fleeing the Communist government in her country, was among the first. She had started out in a Sacramento nail salon, becoming proficient in acrylic nails, sculpting them all day long from a slurry of solvent and plastic polymers.

In 1991, she learned she had a thyroid condition. She had also developed asthma. She quit, too sickened to work and concerned about the chemicals she was handling. But she soon returned, unable to find another job with her limited English. Ten years later, she had breast cancer.

“I know that manicurists like me are also going through the same things and

having major health problems,” she said, seated in a conference room at Asian Health Services last summer, a blouse hiding a red scar from her breastbone to her armpit. “But they still hang on to their jobs to earn their living.”

Dr. Quach kept going with her research, undertaking several other studies. One found manicurists had an increased risk for gestational diabetes and for having undersize babies. Another, looking at cancer, found no correlation. Both studies were hampered by data limitations. Mostly, they point to the need for further study.

“What we know is what’s reported by the women again and again: that there is something here,” Dr. Quach said. “Those chemicals they are dealing with are chemicals that we know people react to, and we are hearing the stories from these workers that they are reacting to them. It’s all there.”

‘Fox Guarding the Henhouse’

The regulation of chemicals in nail products is dictated by the Federal Food, Drug and Cosmetic Act of 1938. The part of the law that deals with cosmetics totals just 591 words.

The Food and Drug Administration explains the limitations it faces under the law on its website: “Cosmetic products and ingredients do not need F.D.A. premarket approval, with the exception of color additives.” It continues, “Neither the law nor F.D.A. regulations require specific tests to demonstrate the safety of individual products or ingredients.” In addition, “The law also does not require cosmetic companies to share their safety information with F.D.A.”

In 1976, the cosmetics industry itself established the Cosmetic Ingredient Review, a panel that is supposed to “review and assess the safety of ingredients used in cosmetics in an open, unbiased and expert manner,” according to its website. But the panel is financed entirely by the Personal Care Products Council, the industry lobbying group. The panel’s offices are also in the same building in Washington as the products council.

Even so, Ms. Powers said the panel was independent. She is the official spokeswoman for the industry lobby, but all questions to the review panel were handled by her.

Since its founding, the panel has reviewed only a small fraction of the substances in use in cosmetics today. Among them were dibutyl phthalate and toluene; the panel determined that they are safe the way they are used in nail products — on nails, not skin.

“It’s a classic case of the fox guarding the henhouse,” says Janet Nudelman, the director of program and policy at the **Breast Cancer Fund**, which has argued for more stringent regulation. “You’ve got an industry-funded review panel that’s assessing the safety for the very industry that’s funding the review panel.”

There have been efforts in recent years to overhaul the 1938 law and more strictly regulate cosmetic chemicals, but none made headway in the face of industry resistance. Since 2013, the products council, just one of several industry trade groups, has poured nearly \$2 million on its own into lobbying Congress.

After talks between the cosmetics industry and the F.D.A. broke down last year, Michael R. Taylor, the agency’s deputy commissioner for foods and veterinary medicine, rebuked the industry in an unusual open letter for pushing a measure that would have declared a wide range of potentially dangerous chemicals safe “without a credible scientific basis” and others safe that are known to pose “real and substantial risks to consumers.”

Ms. Powers said the letter mischaracterized the industry’s stance. “The law was created or passed in 1938,” she said. “Nobody is saying that we shouldn’t look at that now and say: ‘Is it a contemporary approach? Does it need to bring us into the 21st century?’ We all agree to that. But that doesn’t make for a sexy headline.”

The council, in fact, said it supported a bipartisan bill introduced in April by Senators Dianne Feinstein, Democrat of California, and Susan Collins, Republican of Maine, that would broaden F.D.A. oversight of cosmetics, including giving the agency recall ability. But some health advocates said the bill would continue to permit the industry to largely regulate itself; it would also pre-empt states’ abilities to create stronger rules.

The Occupational Safety and Health Administration is the federal agency that sets chemical exposure limits in workplaces. The studies that have examined the chemical exposure levels for manicurists have found them to be well below these standards. Health advocates say the safety administration’s standards are badly out of date and flawed.

Even Dr. Michaels, the head of the safety administration, said his agency’s standards needed revision. Currently, he said, workers “can be exposed to levels that are legal according to OSHA but are still dangerous.”

The agency makes illustrated pamphlets warning manicurists about the chemical hazards they face and urges them to wear gloves and ventilate their shops. These steps

and others become mandatory when exposure limits are exceeded. But in practical terms, with the standards set so high, salons are free to do nothing. Dr. Michaels said the agency was hamstrung by its own cumbersome rule-making process.

“Every worker has the right to come home safely at the end of every day,” Dr. Michaels said. “They shouldn’t be coming home and getting sick.”

The debate over the chemicals has also unfolded at the state level. In 2005, lawmakers in California proposed banning DBP from cosmetic products sold or manufactured in the state. Industry lobbyists flooded the State Capitol (some bearing gift baskets of lipstick and nail polish), spending over a half-million dollars fighting the ban, according to state records. Some of the country’s best-known cosmetics companies — Estée Lauder, Mary Kay and OPI, among others — weighed in against it. The bill ultimately failed. A much more limited measure passed — over the industry’s objections — that required cosmetics companies to disclose certain hazardous chemicals to the California Department of Public Health.

Blocked by an industry with deep pockets, the California advocates say they had to scale back their goals. They introduced a grass-roots program that officially recognizes “healthy nail salons,” those that carry “greener” products and that ventilate. The New York City Council held a hearing this month on a measure that would establish a similar voluntary program.

Today, out of several thousand salons in California, however, there are just 55 salons in the program.

One of them is Lulu Nail Spa, a tiny salon with a dusky rose wall and white-leather pedicure chairs in Burlingame, Calif. The shop earned the designation in May by switching certain products, using gloves and opening the doors to sweep out fumes. The owner, Hai Thi Le, a Vietnamese immigrant, said she hoped the new decal she placed on her window would draw green-minded customers.

But she did not make the changes just for business. As a young woman working in her brother’s nail shop, Ms. Le said she breathed in so much acrylic powder that when she kissed her husband after work, he complained her breath smelled of solvent and plastic dust.

Standing in the Breeze

On her days off from the salon in Ridgewood, Queens, Nancy Otavalo ran for a time an ad hoc day care center at her home a few blocks away with her sister, another manicurist. The sisters would pick up salon workers’ children after school for a fee,

entertaining them in the basement apartment the sisters shared with their families.

Matthew, her colleague's son who can barely speak, got special treatment, spending time curled on the gleaming black leather couch — bought with tips — that is the centerpiece of her home.

After Ms. Otavalo miscarried last year, she lay for hours on the same black leather couch, in silence, the lights darkened, unable to summon the willpower to get up.

A week after a procedure to remove the fetus at Woodhull Medical Center in Brooklyn, she rose, put on the lavish makeup her sister says makes her feel confident and went back to work at her manicure table.

Clients who stopped by for their weekly manicures knew nothing about what happened; everything appeared the same.

Except every so often, after Ms. Otavalo had painted the last stroke of top coat on a customer's hand, she scraped back her chair and walked to the front of the shop. She pulled open the salon's glass door to stand in the breeze for a while.

Reporting was contributed by Jiha Ham, Yuhan Liu, Julie Turkewitz, Isvett Verde, Yeong-Ung Yang and Heyang Zhang, and research by Susan C. Beachy.

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