

Indiana IAQ

Issue 7

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About Indiana IAQ:

A new kind of newsletter that addresses the concerns of everyone interested in Indoor Air Quality (IAQ) in Indiana. From the many questions and concerns received this newsletter and the ones to follow are developed from specific concerns. Information is collected and applied this way to the articles published.

Who can write in? Anyone! Contractors, mitigation technicians, restoration and remediation technicians, real estate professionals, banks, doctors, lawyers, insurance professionals, investors, anyone with an interest in IAQ.

To submit an idea for an article, write to:

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An Introduction & Discussion of the CDC's Chemical Exposures in U.S. Populations

Everywhere you turn manufacturers are promising you new products to lower the amount of toxins you are being exposed to during cleaning. Well, often I get asked how true all of these claims of chemical poisoning are. In a response, I'd like to discuss and introduce you to a report.



On December 10, 2009 the Department of Health and Human Services (DHS) and the United States Center for Disease Control and Prevention (CDC) released its "Fourth National Report on Human Exposure to Environmental Chemicals". The purpose of this research and report is to disclose information re-

garding population exposures to environmental chemicals within the United States (U.S.). "The term *environmental chemical* refers to a chemical compound or chemical element present in air, water, food, soil, dust, or other environmental media (e.g., consumer products)."

The "exposure of the U.S. population to environmental chemicals [is determined] by the use of biomonitoring". Biomonitoring is a way of testing human exposure to chemicals by measuring for chemicals in various human specimens like blood or urine. The reason this method is used, the CDC report states, is because "the measurement of an environmental chemical in a per-

son's blood or urine is an indication of exposure", but not necessarily of a chemical, in concentration or type, that is causing disease or illness.

According to this report, some of the "public health uses of the exposure information in the Report are. . .": What kind and concentration of chemicals are "getting into Americans"; To determine how many chemicals with exposure values are getting into Americans above those exposure values; To establish new or upgrade new exposure values, while evaluating current control techniques for upgrading; Understand if any certain group of people are being exposed to more than others; and, much more. (read more on page 3)

Can My Carpets Make Me Sick?

Part 2 by Larry Conley, IICRC certified and owner of SnLco in Muncie, Indiana

Because I cleaned carpet for health for twenty years and still own a cleaning company I was recently ask, "what is the carpet cleaning industry doing to improve indoor air quality?"

The simple and sad answer is, next to nothing. The

associations are trying to educate the members and create standards but I see only a small handful of us following the standards. It is really not the fault of the average carpet cleaner, it is a problem of public education.

People purchase the goods and services they want and they are not hiring us to solve an IAQ problem. Homeowners call the professional carpet cleaner in because the carpet looks bad.

(read more on page 2)

EPA's PCBs in Caulk of Buildings Guidance

In a press release published by the EPA on September 28, 2009, The U.S. Environmental Protection Agency "announced a series of steps that building owners and school administrators should take to reduce exposure to PCBs that may be found in caulk in many buildings constructed or renovated between 1950 and 1978." The press release acknowledged the growing amounts of evidence of levels of PCBs in caulk used in older buildings with discussion as to the health concerns related to this "banned" cancer-causing chemical. The press release seemed to be carefully crafted such that it did not use the words "must" or "shall" in their discussion for actions and related testing but did note that this is a "serious issue" and owners should implement steps that include testing. "EPA also recommends testing peeling, brittle, cracking or deteriorat-



ing caulk for the presence of PCBs and removing the caulk if PCBs are present at significant levels..." In referring to high air test levels, EPA also stated that "building owners should be **"especially vigilant"** in implementing and

monitoring ventilation and hygienic practices to minimize exposures..." (See full press release for more details. The agency has also created a website, www.epa.gov/pcbsincaulk, with updated information on this issue.)

EMSL Analytical, Inc. provides PCB testing at our NELAC Accredited Environmental

Chemistry Laboratory in Westmont, NJ. EMSL's current team of scientists have analyzed thousands of PCB samples submitted from clients nationwide, specifically for Caulking, Paint Chip and Concrete samples. We have the experience and expertise in processing and analyzing these unique sample types to provide Quality Data in a responsive and cost competitive manner.

Author: EMSL Analytical, Inc. is a nationwide, full service, analytical testing laboratory network providing Asbestos, Mold, Indoor Air Quality, Microbiological, Environmental, Chemical, Forensic, Materials, Industrial Hygiene and Mechanical Testing services. Visit EMSL at www.emsl.com.

Can My Carpets Make Me Sick? Part 2

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Most likely they have already tried to clean it themselves and only made it worse. They are not willing to pay extra for a benefit **they** do not perceive the value in like indoor air quality. When it comes to maintenance, what they want to spend is once again, "next to nothing". The Penny wise Pound foolish spiral begins with the carpet purchase. The carpet manufacturing industry tells us the second most important feature their customers want is the ability to hide dirt. A tan medium weight cut pile carpet can hold one pound of dirt per square foot and still appear to be clean. Unfortunately many people will not clean their carpet until it appears to be soiled. Second is the vacuum purchase. They don't want to spend money on clean sanitary dust bags that filter the air very well if changed after every use. They want a big bag that is only changed a couple times a year and is a Petri dish after four or five days, or a bag-less vacuum that still has some of the first dirt they ever picked up still in the bottom of the cup five years later and blows 10% of all the fine particulates back into the air. A central vacuum that exhausts outside would be a much better choice. They want a carpet

that hides dirt well because they are most likely coming in through the garage tracking, lead, heavy metals. Or walking in from the yard and tracking, pesticides, herbicides, fecal from dogs, birds, etc. from the lawn. They have a cat that uses the litter box, and then tracks the contents of the box all over the carpet. (Ever try to train a cat to wash their hands after burying poop in the sand?) eventually 60% of them decide after five years it may be time to clean the carpet (the salesman told them not to clean it till they absolutely had to.) Recent research indicates 40% of carpet owners never do clean it, ever! So, the 60% call a company like mine who does it correctly and find it cost about \$.50 per. foot to clean carpet, and they go into sticker shock. "Why I can buy two spit and suck buckets for that price and do it myself." They do that I know because every customer I see has at least three of them in the garage, shed, or basement. They seem to continue buying them in hope that eventually they will find one that works. More often than not they call a national chain carpet cleaner who

simply surface cleans the carpet and blast the rest of the dirt into the backing where it takes three or four days to dry. Dust mites and mold love it. In a few days the soil begins it's ascent to the top to make a reoccurring spot. Of course no prevacuuming was done, or was only done quickly for show. But keep in mind the customer was only willing to pay \$99.00 for 5 rooms, because that's what the advertising teaches them to believe it should cost. Well after about two cycles of this they decide the carpet store sold them junk and the spiral begins again.

The truth is carpet is a great floor covering if common sense is used. As Dr. Barry pointed out in his book Cleaning the Built Environment. "Carpet is the largest and most effective air filter in the home but is must be cleaned like any other filter or it becomes a source."

The IICRC has done a lot to improve the quality of cleaning in the last twenty years. As have publications such as Cleanfax. Pressure has been applied to chemical suppliers to provide safe Green and effective cleaners. There are now in every . . . (read more on page 4)

An Introduction & Discussion of the CDC's Chemical Exposures in U.S. Populations

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The report has been released in two formats. The first is a website where anyone interested in its findings may scroll a menu for specific information of interest (www.cdc.gov/exposurereport/). Once there you can click on various topics and issues related to the report, such as accessing a PDF format of the full report, the executive summary and/or the chemicals in the fourth report; you can also access information on the national biomonitoring program, the environmental health laboratory, as well as gain access to various portions of the document specific to your interests.

The second format is the PDF of the actual report itself (www.cdc.gov/exposurereport/pdf/FourthReport.pdf). Here you can view the actual report and its findings.

The 527 page document contains a list of 212 chemicals, including 75 chemicals never before measured in the DHS/CDC studies. Some of the common chemicals known to the general public might include things like 15 various pesticides, mercury, lead, arsenic, and many other Volatile Organic Compounds (VOC).

Studies like these can be interesting for many reasons. I can tell you, as an indoor environmental professional, that scientific evaluations like these help me understand and take part in new research as we learn from the old what works and doesn't work; what information can be used to help our clients; and what contributes toward poor indoor environmental conditions. A lot of you may read this and say, "*I wouldn't understand that anyway.*" and ignore its

information; while remaining very concerned about you and your family's health. That is why SOLUTIONS Indoor Environmental Consulting (IEC) is here.

Today, more than ever, there are ways of assessing indoor environments for a multitude of pollutants, and a growing number of ways to reduce or remove those pollutants from the indoor environment. Unfortunately, however, many contractors and some assessors are not properly trained in these pollutants, how building science plays a role in their concentrations indoors, and their effects on building occupants. This can lead to a false sense of security by the occupants, leading to an experience of on-going sick building syndrome or building related illnesses. (*read more on page 4*)

Environmental Impacts on Children's Health

Recently I became aware of a resource, that I thought should be shared, concerning a specialty unit dedicated to the education and care of children whose health has been ill-affected by various environmental impacts. The Pediatric Environmental Health Specialty Unit (PEHS) are units of the United States Environmental Protection Agency (EPA). These PEHS units are located in each EPA region in the United States, Canada and Mexico.

PEHS units were established by the EPA "*to ensure that children and communities have access to, usually at no cost, special medical knowledge and resources for children faced with a health risk due to a natural or human-made environmental hazard.*" The professionals working within these PEHS units provide training for medical professionals, provide information to community groups like schools and other public facilities, and "*provide quality medical consultation for health professionals, parents, caregivers and patients.*"

You can access the PEHS units by going to a central website: www.aoec.org/PEHSU.htm. Once there you can view

all of the specific activities of these units and locate a professional in your area through their network of experts in children's environmental health. Some of the topics that are covered include: where to find these PEHS units; children and flood/hurricanes; health risks for children during and after a wildfire; and, a list of clinic directories.

Keep in mind that these professionals are not building science experts. You will still want to coordinate any health related indoor environmental assessments with both your doctor and Council-certified Indoor Environmental Consultant (CIEC). But, this resource can be invaluable when it comes to understanding where to go for direction in relation to your children's health in relation to environmental elements.

SOLUTIONS Indoor Environmental Consulting (IEC) has a long history of working with patients and doctors in an effort to coordinate treatment efforts of doctors to patients. By understanding what conditions, relative to a doctor's concern and patient's health

experiences, a child is being exposed to in the indoor environment, can go a long way in understanding the triggers causing the ill health effects and eliminating them.

For more information on how a CIEC can help you improve the indoor environmental quality of your structure, contact us here at SOLUTIONS IEC (www.solutionsiec.com), the Indoor Air Quality Association (www.iaqa.org), or a PEHS unit professional near you.

Learning all you can about how you can improve the indoor environment's quality of air and cleanliness can go a long way in improving you and your family's health. Stay tuned into our future newsletters for more resource information as they become available.

Author: Jason Yost, CIEC, CMRS, WRT, is owner and operator of SOLUTIONS IEC, and has been in the cleaning, restoration, remediation, mitigation, and IAQ industry for over seventeen years. Jason is an individual member of the Indoor Air Quality Association and a board member of the American Indoor Air Quality Council. Visit Jason's IAQ PRO.FILE at: <http://www.iaqa.org/>



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Can My Carpets Make Me Sick? Part 2

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. . . community trained professionals who know how to clean for health if the customer is looking for someone to do that and willing to pay for a thorough job. Truck mounted extractors have been the most help in improving IAQ. Where portable cleaners, like do it yourself machines blow the air, contaminated with bacteria, solvents, heavy metals, and humidity back into our breathing space. Truck mounts suck that all out and expel it outside. There is a slowly growing niche market of clients that want to clean for health and are willing to pay for quality workmanship. We are now offering air sampling to our clients on carpet cleaning calls.

The simple answer is Carpet is a great floor covering. But common sense maintenance procedures must be followed.

1. Stop dirt at the door. Remove shoes, design 12 feet of walk off mats and keep them clean.
2. Vacuum slowly and regularly with a central vacuum, or a portable with a new clean bag. Once a week for each person or pet in the house.
3. At least once a year move the furniture and vacuum wall to wall including crevice tooling the corners and edges.

Have all the traffic areas professionally cleaned when they first appear soiled. Under furniture rarely needs cleaned professionally, thoroughly vacuuming is all that is necessary.

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An Introduction & Discussion of the CDC’s Chemical Exposures in U.S. Populations

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The current building and cleaning industries reacts to public perception regarding its sustainability and durability; as a result, there have been increased complaints of occupant illnesses, litigation and insurance claims. This reactionary method of practicing business today leaves many in conditions unfavorable to their health and comfort.

Think of it like this: buildings get designed then constructed; then we experience problems; the building industry responds by adjusting designs and construction techniques; and the process begins again. This has been the way of things for generations.

Only a turn toward a proactive practice will begin to reap real and positive results.

As many industry groups have found, developing their own standards of care are not enough; cooperation of everyone

involved in building design, construction, assessment, restoration, and environmental remediation as well, as the consumers and product manufacturers, have got to get on the same page.

As reports like the DHS/CDC’s “*Fourth National Report on Human Exposure to Environmental Chemicals*” are released, we need to get together, discuss them and work on them as a whole in order to design, construct and/or remodel a building to a safe and comfortable space. (That is the point; isn’t it?) Too often we, consumers (aren’t we all?), let the (self-professed) professionals assisting us off the hook when it comes to what they should know and do for us because we do not take the time to educate ourselves first.

A department of the CDC is working to help you do just that with their *Na-*

tional Conversation on Public Health and Chemical Exposures program.

Check it out by going here:

www.atsdr.cdc.gov/nationalconversation/.

If you are struggling with a symptom that you believe is a result of your building’s current health, contact us here at SOLUTIONS IEC and see how a Council-certified Indoor Environmental Consultant (CIEC) can help you understand the condition of your indoor environment. We can help develop a process of design, remediation, construction and maintenance that can eliminated unwanted pollutants, creating a healthier, friendlier place to live.

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