



IAQ RADIO+

Show Number: 774 BLOG

Carl Grimes

Life and Times of a “Healthy Habitats” Pioneer

Good Day and welcome to the IAQ Radio+ podcast episode 774 Blog. This week we welcomed “Healthy Habitats Pioneer” Carl Grimes for a Life and Times interview. Carl wrote the book “Starting Points for a Healthy Habitat” in 1999 before people knew much about IEQ and its effects on people. His journey began when he suffered the combined effects of pediatric occupational chemical exposure and poor IEQ and could not find help. Since then, he has written a book, done thousands of hours of volunteer work with numerous industry associations culminating in his appointment as Managing Director of the Hayward Healthy Home Institute and Hayward Score. He now travels in the elite circles of building science, IEQ, medicine, academia and practice.

Carl Grimes, based in Denver, CO is an HHS, accredited Healthy Home Specialist and CIEC — Certified Indoor Environmental Consultant). He has consulted with people who have questions or issues with the indoor environment since 1987, serving as President of Healthy Habitats LLC in Denver, CO. and as Managing Director of the Hayward Healthy Home Institute in Carmel, CA.

Carl’s work focuses on people who feel better outside of their house or office, helping building occupants understand and improve their indoor environments — particularly for people experiencing health symptoms tied to indoor exposures like mold, volatile organic compounds (VOCs), and fragrances. Because he originally experienced indoor environmental harm in his personal life, he brings a unique perspective to understanding and communicating the complications between clients and practitioners. Carl is a frequent presenter nationally and internationally, past President of IAQA (Indoor Air Quality Association), and past Vice President of Practice of ISIAQ. He has served on and chaired committees writing ANSI accredited standards like the original IICRC-S520, chaired the IAQA Healthy Home Committee, and was a committee member on the ACAAI-AAAAI Joint Task Force that wrote medical practice parameters. He is immediate past chair of the ASHRAE TC1.12 Moisture Management in Buildings, and Guideline 10, Interaction Affecting

the Achievement of Acceptable Indoor Environments, plus the ASHRAE position document Health and Wellness in the Built Environment.

Nuggets mined from today's episode:

Carl's Journey into Healthy Buildings

Carl discussed his journey into the healthy buildings industry, which began with his own health challenges related to environmental exposures on his family farm in central Illinois.

Carl discussed his experiences with health issues in the late 1970s to mid-1980s, when limited resources and technology were available. He created a color-coded paper system to manage his schedule and memory before the advent of digital tools.

He described how his chronic health issues led him to work with Dr. Nick Nonas in Denver, who helped identify environmental factors affecting his health and transitioned him into a consulting role assessing homes for environmental health issues. Carl also shared his journey with medical professionals, including meeting Theron Randolph, who was controversially exploring environmental illness, and discovering the "Yeast Connection" by Doctor William Crook, which helped him manage his condition. He emphasized the importance of balance in the gut microbiome and criticized the overreliance on tests for diagnosing health issues, including mold exposure. There are 16 different health tests for mold which provide differing results. Have the home inspected by a pro before having mold health tests done.

Carl emphasized that his approach evolved from simply reporting findings to making recommendations for improvements; This led him to write the book "Starting Points for a Healthy Habitat" in 1999, turning it into a successful consulting business focused on environmental health. Eventually working with organizations like ASHRAE, IAQA and IICRC.

Business expansion? Carl is experienced with the disability, and can relate to clients. Someone unburdened by the disability likely cannot. Someone with the disability should avoid exposure.

ASHRAE

Due to the influence of the Tobacco Industry in the 1970's, ASHRAE publications did not discuss occupant health.

This changed and ASHRAE published a forward-looking position document "ASHRAE Position Document on Health and Wellness in the Built Environment" <https://www.ashrae.org/file%20library/about/position%20documents/pd-on-human-health-and-wellness-in-the-built-environment-english.pdf>

Advocating for Healthy Indoor Environments

Carl Grimes discussed his current work as Managing Director of the Hayward Healthy Home Institute and Hayward Score, which includes overseeing a questionnaire with over 100,000 responses and a planned dashboard update. He shared his involvement with ASHRAE committees on moisture management and Guideline 10, which focuses on interactions affecting indoor environments, and his role in advocating for a health and well-being position document within ASHRAE.

Advancements in Mold Sampling Techniques

Carl opined that Indoor air quality issues are often misdiagnosed. He discussed the importance of proper sampling techniques in assessing mold and indoor air quality issues, emphasizing that sampling location and method significantly impact results. He shared his involvement in developing industry standards and his work with various professional organizations. Carl highlighted key developments in mold remediation practices, including the shift from culturing to aerosol sampling and the evolution of terminology around mold species. He also noted that the concept of using outdoor comparisons for indoor air quality issues, which was prevalent in industrial hygiene, no longer applies to modern indoor environments. Carl concluded by mentioning his ongoing involvement in presenting and promoting best practices in indoor air quality and mold remediation.

Complex Indoor Environmental Health Challenges

Carl emphasized the importance of starting with people's needs rather than focusing solely on building characteristics, as demonstrated in his work with Dr. Claudia Miller.

He discussed the challenges of diagnosing and addressing indoor environmental issues, noting that while mold is often a focus, only about 22-23% of his clients improve by addressing mold alone. He emphasized that many cases involve complex combinations of factors, including chemical exposures, and highlighted the difficulties in helping clients who are not taken seriously by others. Carl shared his approach of thoroughly investigating each case, considering various potential sources of illness, and working collaboratively with clients to identify and address the root causes.

IICRC S520 Committee Experience

Carl discussed his experience on the IICRC S520 committee and his efforts to translate scientific concepts for both the public and researchers. Carl recalled that Science adviser to S520 Dr. Gene Cole would provide advice that the restorers won't accept. When Carl queried Gene regarding why he wouldn't argue with the restorers Gene said it is better to delay until they are ready.

What about the demographics of MCS (multiple chemical sensitivity) ?

Early statistics suggested it was more common among women aged 35 to 55 with preexisting emotional symptoms. Carl acknowledged this but noted that current data might be different, and he suggested that more research is needed in this area.

Building Health and Psychosomatic Interactions

Carl discussed the historical stigma surrounding diseases like cancer and how psychosomatic causes were once prevalent, but recent evidence shows a combination of physiological and psychological factors. He emphasized the

importance of understanding interactions between people and buildings, rather than focusing solely on psychodynamics or physical characteristics.

Mold is not uniformly distributed

Carl mentioned the challenges of undoing legacy information. Why do we compare indoor sampling to outdoor sampling? The industrial hygiene practice is to compare indoor and outdoor air samples for a contaminate not generally found indoors. And then to avoid an unavoidable error the margin of safety for the indoors is set at 10X.

Comparing indoor and outdoor sampling for mold is different and a questionable practice as mold is found both indoors and outdoors. When sampling with an Anderson sampler and culturing the plates; if mold isn't found it doesn't mean there is no mold. The issue isn't viability its total spores. Carl provided an example of a section of water damaged drywall on which various colors of fungi had colonized. When sending samples of the various colors of mold to a lab for analysis, the lab identified different genera. Mold is not distributed consistently indoors, highlighting the challenges in accurately sampling and measuring mold distribution, even among international experts in 2002. Gene Cole and Richard Shaughnessy discuss mold in the context of different buildings and found homes the worst due to variety of occupants. Brad Prezant, did a study placing two air samplers close to each other and taking simultaneous sample and found that that the lab results were significantly different. Carl concludes that while labs are good, it depends where and how we sample.

Trust in and reliance upon tests

People want to decide everything based upon tests. When people are looking for something and it doesn't show up in lab analysis, people think the lab is wrong.

Internet

Old thinking is that the cause is psychosomatic until proven otherwise. Without support and acknowledgement people feel something is wrong and get scared. The way society has treated me I feel afraid. The internet is full of misinformation. It's common that people who rely upon the internet will scare themselves and

become fixated. Beware of the bias on internet groups. Those people who've gotten better often leave the group and move on with their lives while those who haven't got better remain in the group. The group becomes dominated by the worst of the worst cases.

Carl Grimes Comments:

- Ultimate clearance criteria- when occupants can enter without symptoms or complaints.
- "Start with the people not the building."
- Does the subject's report track with the physical science?
- "Start and end with the people." Kevin Kennedy quote
- What do the people need, construct the building to meet occupant needs.
- Dirt is Good Book, Jack Gilbert <https://www.amazon.com/Dirt-Good-Advantage-Childs-Developing/dp/1250132606>
- Consider both the Physiological/Psychological
- PM2.5 association with Alzheimer's and linked to cardiovascular.
- Buildings affect people and people affect buildings.
- 200 years ago, the UK acknowledged that dust is a problem. "Evils of Dust".
- Presenting the science of the cause.

ROUNDUP

- Most samplings reflect a snapshot in time. Carl expressed excitement about real-time measurement capabilities, which provide more accurate exposure assessments by collecting continuous data across a space.
- He also shared insights on low-cost monitoring devices, noting their limitations and the need for multiple devices to ensure accuracy.

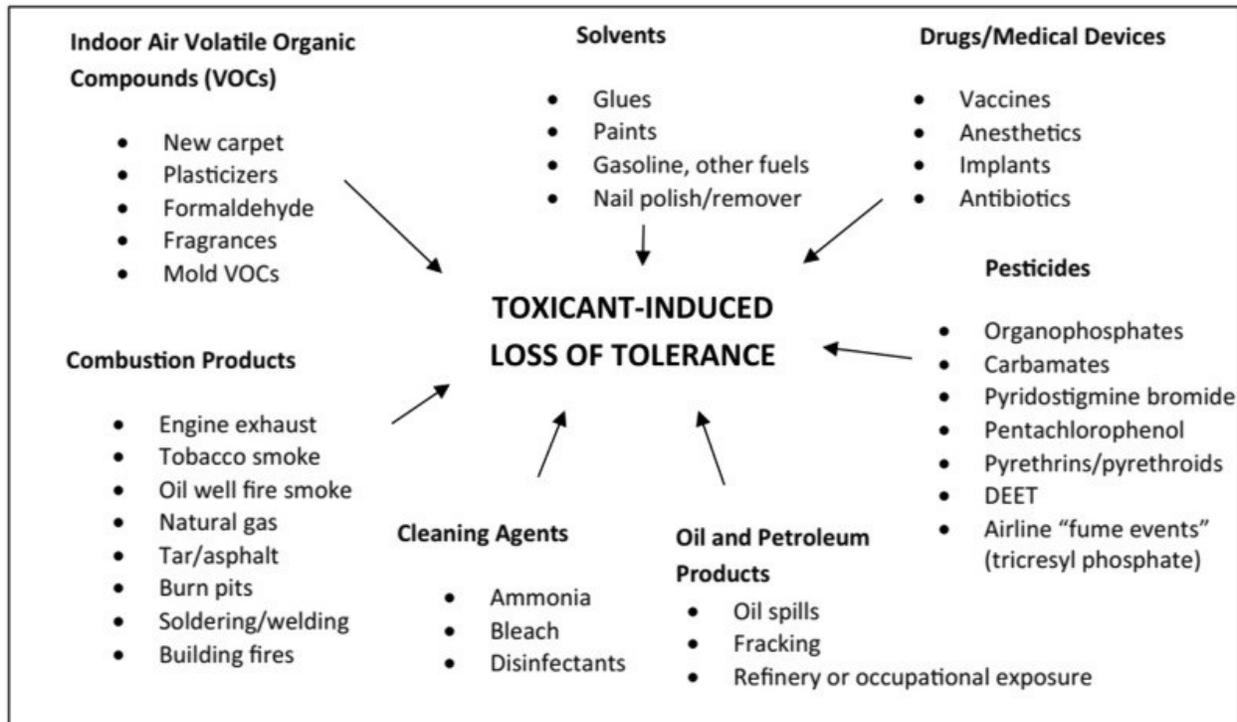
Z-Man signing off

TRIVIA:

Name the word defined by the following definition- an aversion to or prejudice against chemicals or chemistry

Answer

Chemophobia



Dr. Claudia Miller's Symptoms Star

<https://pmc.ncbi.nlm.nih.gov/articles/PMC11569860/>