

Sudoku solution from Page 3

29 Pinewood Forest Ct., Ste. 200 The Woodlands, Texas 77381

> www.BAQ1.com TOLL FREE 866-367-1177

PRST STD US POSTAGE PAID BOISE, ID PERMIT 411

Return Service Requested

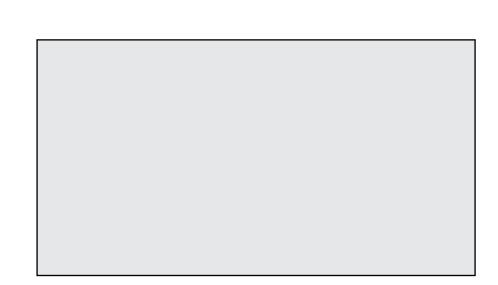
Are Business Trips Bad for Your Health?

What Do You Name a Crawl Space Dog?

Does Your Building Have Legionella?

Visions of the IAO Future

Laughter Yoga's Rise as a Global Health Movement



Laugh With Me!

A LIGHTHEARTED APPROACH TO DECREASING STRESS

We've all heard that laughter is the best medicine, and it turns out that human physiology supports this claim. When we laugh, our body releases a flood of feel-good chemicals and neurotransmitters. Our blood flow increases, and our production of cortisol, a hormone associated with stress, decreases. Oh, and laughing also burns calories!

The feel-good, endorphin-inducing benefits of laughter are exactly what prompted Dr. Madan Kataria to develop laughter yoga in 1995. Laughter yoga incorporates breathing, stretching, clapping, and of course, laughing.

Kataria developed the initial idea after coming across research into the benefits of laughter on overall health and well-being. He began to put the research into practice by telling jokes to his patients, and after seeing the positive effects, he took his material to a local park. Parkgoers, who were initially skeptical, joined in on the practice,

and the first laughter yoga club was born.

The laughter meetup had everyone in high spirits — until the group ran out of jokes. Unsure of what to do next, Kataria found another medical book suggesting the group didn't need jokes to laugh. Fake laughter is just as beneficial as the real thing because the body can't tell the difference between the two.

Collaborating with this wife, Madhuri, Kataria combined common yoga warmups and breathing techniques with facilitated laughter to create the form of laughter yoga that is practiced worldwide today.

If you're interested in trying laughter yoga for yourself, then you're in luck. Laughter yoga clubs exist across the United States and the world. Videos on YouTube can teach the basics. but laughter yoga tends to be most beneficial in a group setting.



Just think about the last time you found yourself in a fit of giggles with a group of



friends or during a comedy show. Didn't it feel great? Rather than wait for a silly situation to trigger laughter, use laughter yoga to promote laughter and alleviate stress on any day at any time.



Hidden Underfoot

The Best Name for a Crawl Space Dog

his month, I want to talk about something that has been described to me as the "most terrifying" part of a building: the crawl space. In early February, I got a call from one of my clients asking me to come out to El Paso to do an air quality survey in a building near the border. This job came with a stipulation that I would have to go into the crawl space beneath the building and take some readings.

Commercial buildings aren't built with crawl spaces, so I haven't spent a lot of time in them during my career. But I have breathing protection and a couple of Tyvek suits, so it wouldn't be an issue for me to suit up and dive into the crawl space. The only real problem was that this call came right before my trip to Florida and my following cruise, so I wouldn't be able to get to El Paso until the first week of March. Time was of the essence, so my client opted to find someone who could get out there sooner. I fully understood. In fact, as soon as we hung up, I felt a sense of relief. I suddenly remembered the last time I went down into a crawl space.

Almost 10 years ago, I had a job referred to me by a doctor whose patient was suffering from mold exposure. The doctor asked if I would take a look at their patient's house, a mobile home in the country in Louisiana. Since they were willing to pay my price, I agreed. Initially, I didn't plan on going into the crawl space at all. However, after I finished my investigation, I realized that because it was a mobile home and the duct work goes underneath a mobile home, the problem could be hidden the crawl space.

It wasn't until I was down in the crawl space itself that I realized I had no idea what might be in there with me.

The family asked if I would check the crawl space, and since I had my breathing protection and Tyvek suit with me at the time, I agreed to take a look. I'm not claustrophobic, nor am I afraid of the dark, so getting into a crawl space didn't seem like that big of a deal. It wasn't until I was down in the crawl space itself that I realized I had no idea what might be in there with me. Anything could be waiting for me, and you can't exactly move

Fortunately, this family had a dog who was more than happy to climb down into the crawl space with me. The dog ran back and forth beneath the house the whole time I was in there. Usually, I'd rather not have animals running around while I'm working, but I was glad to make an exception that day. I was confident that if there was anything else in the crawl space, that dog would catch it or scare it off before it ever got to me.

I don't think the building in El Paso would have had a dog around to assist me, so I'm glad they were able to find someone else to take the job. I don't have a crawl space dog of my own to help in these cases, but I wish I did. His name would be Root, because he'd be rooting stuff out with me. Unfortunately, only doing one crawl space every



eight years doesn't justify getting a crawl space dog. He'd never have any work to do!

I do have a cat named Stewart who would have made a great crawl space cat in his youth. He had a real knack for chasing snakes. But Stewart is 15 years old and doesn't see real well. He wouldn't appreciate working with me in some crawl space. Today, his only job is to just hang out around the house.

In conclusion, unless you have a crawl space dog ready to assist me, please don't ask me to go down into any crawl spaces. They're just not my cup of tea.

Vain Wers



Most people love to travel, but few people enjoy business trips. While that can partially be chalked up to the extra rest and relaxation you might have on a nonwork-related trip, unhealthy habits can make business trips even more draining. If business trips leave you feeling like you need a vacation, you might be making the following mistakes.

Skipping Breakfast

On hectic mornings with early meetings, it's tempting to skip breakfast and just grab some coffee. But if you usually eat breakfast at home, skipping your morning meal can cause you to be a lot hungrier later, which can lead to excess snacking or overeating at lunch. When traveling, stick to your regular eating habits.

Eating Restaurant Serving Sizes

If you're eating three restaurant-sized meals a day, you're going to get more calories than if you were cooking at home. Don't be afraid to order half-portions or stick to the appetizer menu. You can also ask about ordering meals à la carte — no one needs all those fries with their burger, anyway. These strategies will help you save money and stick to a healthy calorie count.

Not Packing Workout Gear

Research from the travel risk management company On Call International found that 54% of people say they're less likely to exercise while on a work trip, but you shouldn't let fitness take a back seat. Packing workout clothes can serve as a reminder to get some exercise. Get in a good workout by taking advantage of the hotel gym, walking to nearby destinations, or doing some yoga in the hotel room before bed.

Not Taking Sleep Seriously

Early morning meetings, late-night networking events, and unfamiliar hotel rooms are a recipe for lost sleep. Lack of sleep puts your body on the fast-track to poor health, so you need to make good sleep a priority. Do your best to maintain your sleep schedule and bedtime routine while traveling. Better yet, check the guest reviews before booking your hotel. Heed complaints about thin walls or uncomfortable beds and find accommodations that support a good sleep environment.

You shouldn't have to dread business trips. Build better travel habits to feel healthier and enjoy every kind of trip you take this year.

WHY ARE WE STILL **USING 150-YEAR-OLD TECHNOLOGY TO TEST** FOR LEGIONELLA?

Between 2000 and 2019, the number of reported Legionnaires' disease cases in the United States rose by 800%. This disease is caused by the Legionella bacteria and kills over 10% of people infected. Almost 10,000 cases of legionellosis (an umbrella term for two illnesses caused by Legionella bacteria) were reported in 2018 alone. This deadly waterborne disease is becoming more common, and building owners need to be aware of the danger. The median settlement for an individual Legionnaires' lawsuit is around \$2.7 million.

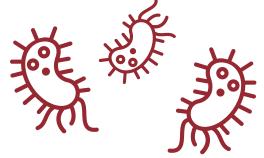
We covered the dangers of Legionella in our February edition and highlighted how the bacteria can occur anywhere that has a water system. Even the "Happiest Place on Earth" isn't safe from Legionella. In 2017, an outbreak of Legionnaires' disease in Anaheim, California, was traced back to cooling towers in Disneyland. The California Division of Occupational Safety and Health cited and fined Disneyland \$33,000 for failing to properly clean the cooling equipment linked to the outbreak.

The best way to combat Legionnaires' disease is to prevent Legionella from growing in your building's water systems. Implement proper cleaning and



maintenance of at-risk water systems, including hot water tanks, heaters, cooling towers, shower heads, sink faucets, hot tubs, and decorative fountains. In addition to proper cleaning, it's crucial that building owners and property managers be proactive about monitoring and testing for Legionella bacteria. Unfortunately, the current method for detecting Legionella contamination is based on 150-year-old technology.

It takes over a week to determine if a building is dealing with Legionella. A sample of the building's water supply needs to be sent to a lab, where the sample is placed on a petri dish and left to sit for a week. At that time, lab technicians check the sample for Legionella. The drawbacks to this method are obvious. If it takes a week to get back test results, buildings that are facing Legionella growth could see more people get sick before they are able to act. To add insult to injury, the existing





Legionella culture testing method is inaccurate and produced a false negative 62.5% of the time.

This approach to Legionella analysis is outdated and dangerous. That's why we recommend our clients look into the Spartan Legionella Detection System from Spartan Bioscience Inc. This is the first on-site Legionella DNA test, using medical-grade DNA testing. Designed with Nobel Prize-winning technology, the Spartan system detects all Legionella pneumophila serogroups in just 45 minutes. Not only is this method so much faster, but it's also more accurate than the laboratory results.

The Spartan system is a big investment, costing over \$8,000. Investing in this equipment isn't something you should do on a whim. That said, if you are concerned about the risks and liability of an outbreak of Legionnaires' disease coming from your building, then this equipment can go a long way to detect Legionella before it's too late. Spartan Bioscience Inc.'s groundbreaking technology empowers building owners to be proactive about Legionella testing without the hassle that comes with outdated methods. Visit SpartanBio.com to learn more.

Visions of the Future

Indoor Science's President Talks Emergency IAQ Issues

Founder and president of Indoor Sciences Ian Cull, PE, CIH, has spent over 25 years in the field of indoor air quality. He is both a speaker and a consultant on numerous topics and challenges related to the field and has become an expert in predicting the future of the industry. This month, we sat down with lan to discuss the emerging issues he sees in IAQ, a topic he recently presented on at the 2020 Indoor Air Quality Association Annual Meeting & Expo.

The Threat of Low-Cost Sensors

"Amazon has been flooded with low-cost sensors that the general public seems to be purchasing in mass," lan warns. "These sensors, which usually run at a few hundred dollars, are of poor quality and don't provide reliable results. As time goes on, we'll see more and more people taking their indoor air quality concerns into their own

"If someone is worried about the IAQ at their office, they may go online, buy a low-cost sensor, and evaluate the air quality of their space. These sensors could provide them with some information, but they could also provide misinformation, too. This proliferation of low-cost sensors is something building owners and property managers need to be aware of."

Side Effects of Net-Zero Energy Targets

Energy reduction is incredibly important today, but lan warns of the health risks that come with being careless in the guest to reach net-zero.

"As buildings try to meet net-zero energy targets, they may reduce the amount of outdoor air ventilations, as this is often the easiest strategy to reduce energy consumption," lan explains. Unfortunately, reducing the amount of outdoor air ventilation greatly diminishes the quality of the air. The reason why buildings are required by code to bring in outdoor air is because outdoor air diminishes IAQ contaminants. These contaminants can come from building materials, cleaners, personal care products, and various processes that go on within the building. Without outdoor air ventilation, the air gets stale and the levels of contaminants increase

"Buildings are putting more emphasis on energy savings to reach a net-zero target rather than focusing

Protecting the Built Environment

on the health of the occupants. There are some technologies available that allow buildings to ventilate at a reduced cost, such as economizers, energy recovery ventilators, and demand-controlled ventilation. However, these have costs associated with them and they get 'value-engineered' out of many buildings. In the future, there will be increased pressure to reduce energy and, unfortunately, many buildings will do this by reducing ventilation, at the cost of their occupants' health."

Proliferation of Endocrine-Disrupting Chemicals

Chemicals that disrupt the endocrine system are on the rise, which is troubling for many reasons.

"More and more, we're finding these chemicals in building products and many consumer products as well," lan pointed out. "These include flame retardants, pesticides, and plasticizers. There is an increased concern surrounding these chemicals. Going forward, I expect

to see increased testing for these chemicals, as well as a movement toward reducing their use in products."

> Thank you to lan Cull for sharing his insight with us. These emerging challenges are issues IAQ experts, building owners, and property managers all need to be aware of

AIR QUALITY