

Tuesday, August 4th, 2009

Crazy from the mold?

by Lisa Nagy, M.D, The Martha's Vineyard Times (original publication date - January 12, 2006)

Do you know someone on the Island whose house smells like mold? Come to think of it, are they a little wacky? In this article, I will start to explain how and why we need to become educated about this and other major environmental issues on the Island.

First, it is funny how pertinent this mold discussion is with the death of dozens of dogs this week around the country from mold toxicity. On CNN, there have been warnings of aflatoxicosis from the contaminated corn in dog and cat foods carrying the name Diamond, Professional, and Country Value label. Immediately, the largest producer of pet food has pulled its product from stores in the US. European buyers have been advised of its danger as well. There is fear that some of it may kill people who use dog food as a source of protein.

If the toxins, called mycotoxins, made by mold can kill, then surely in lower doses and when inhaled instead of ingested, they can make you sick. The amounts of permissible mycotoxins are controlled by the FDA in grains (especially corn), breakfast cereals, baby food, peanuts, dog food, horse pellets. This is because they are so lethal in large amounts. What we haven't discussed adequately in public health or medicine is this risk to human health. We can be exposed to these mycotoxins in our home or at work because of mold growth. It is usually due to water intrusion from a roof leak or leaky pipe under the sink or washer. On the Vineyard, we have additional reasons for abnormally high mold growth.

Usually, the indoor mold count is lower than the outdoor mold count. But on an Island the counts are even higher, and in the wooded areas still higher. Therefore, the indoor air mold counts on the Vineyard are much higher than in, let's say, the city. The humidity level should be less than 45 percent inside. Mold grows spontaneously on surfaces such as tables and windows at 60 percent. So, what happens in the summer when the indoor humidity is 75 percent? It grows everywhere. In our clothes, books, antique unsealed drawers, anywhere wood, paper, and cotton is available to this warm moist air. In order to avoid unchecked mold growth, we have to close up the doors and windows of the house and air condition and dehumidify. If not, mold wins and we lose.

We all know that musty smell that hits us when we walk into someone's home (not ours, of course). Our noses will adapt to that smell within 30 seconds and only reappear when we go outside for a few minutes and reenter. The mold not only produces the characteristic smell, but also produces toxins like benzene and other chemicals, as well as mycotoxins. It can be dangerous to breathe. For example, a real estate agent who opens and shows moldy houses could be putting herself at risk. The entire country is ablaze with news of toxic mold in homes, hotels, and government buildings. Tens of thousands of lawsuits have been filed to date. Why are Islanders not fully aware of the mental and physical health ramifications of living with mold in our buildings?

I can tell you that there is great resistance from doctors, school boards, town officials, business owners, homeowners who wish to sell, and agents who want sales to go through. Denial is the biggest factor holding back the field of environmental medicine. We wish for it all not to be true. Society denies that mold can harm us, that pesticides can damage our children's brains, and that mercury in vaccines could have created a tenfold increase in autism. What is amazing is that there is a lot of fascinating science about each of these areas now. Scientists are publishing data every day that speaks to the effects of these environmental factors on human health. Doctors deny this data, because they haven't been taught environmental medicine in medical school. Lay people, especially on the Island, know more and believe more about this subject than the doctors here. I would like to see that change.

Although currently not practicing, I recently attended the annual meeting of the American Academy of Environmental Medicine (AAEM.com) in Tucson. The topic was Cancer and the Environment. There were fascinating lectures on mold and mycotoxins, among others. Toxic mold exists in 35 percent of American homes, and an estimated 80 percent of Boston schools. Hundreds of doctors attended lectures on what to do with these patients suffering in these environments.

Traditional doctors know, for example, that aflatoxin (in peanuts and the recalled dog food) causes liver cancer. Just because doctors are unaware of all of the latest developments in mycotoxin research, does not mean these effects aren't real. It just means it is out of the scope of their practice. It is not fair for doctors who have no training in this area to pass judgment on whether these patients are really sick or not.

Those who become environmentally ill should not have to waste their energy going from doctor to doctor, being humiliated and called hysterical. Patients often present with a multitude of seemingly unrelated symptoms. The doctor is at a loss to find a sensible single diagnosis that relates their rash, early morning headaches, depression, memory loss, inattention, their fatigue, muscle weakness, sinusitis, irritable bowel, and their increased sensitivity to smells, chemicals, and perfumes. By diagnosing the patient as mentally ill, the physician feels safe in a world that is in fact much more complicated than we all thought. The doctors here have to learn how to recognize the environmentally ill patient - whether it be from mold, diesel fumes, pesticides from the golf course or gluten (wheat) allergy - and refer them to an Environmental Physician (AAEM.com). Later they can learn about environmental medicine, as I did, and learn to help these patients.

It is impossible to briefly summarize mold toxicity. Some of the facts are intriguing. I will list a couple. The most dangerous group of mycotoxins is called Trichothecenes. Many molds (e.g. *Stachybotrus*, *Aspergillus*, *Fusarium*, etc.) make them, and they are one of the deadliest poisons known to man. In fact, this toxin has been used as an agent of bioterrorism in Vietnam and Afghanistan. It was named 'Yellow Rain'. It burned off its victim's skin before it killed him. Rat studies of this toxin show that it acts by damaging mitochondria so that your cells can make no energy. In low doses, this would obviously lead to exhaustion, muscle weakness, exercise intolerance, and decreased mental acuity. Testing shows that patients lose color discrimination as well as balance capability, and memory. SPECT scanning has documented the encephalopathy (severe changes in brain function) of mold exposure in hundreds if not thousands of patients. It shows decreased brain blood flow associated with emotional and cognitive changes (IQ etc.). Some patients develop symptoms consistent with Multiple Sclerosis or Parkinson's disease. Antibodies to myelin (the nerve sheath) and other parts of the nervous system

go up when exposed to molds!

And finally, for the farmers and equestrians, trichothecenes are higher in people who raise cattle and horses. These animals eat hay and grain, which have some level of mold and mycotoxins in them. When eating moldy hay, horses have died by the thousands from mycotoxicosis (called 'staggers') throughout history. They routinely excrete these toxins in their feces, sweat and urine. The more proximity you have to these products, the higher your level will be. A city dweller (in a 'clean' home) may have none. But, for example, horseback riders who wash the sweaty horse pads and blankets from their horses in their own washing machines and driers are putting this toxin into the family's laundry system. Ammonia may help to clean the washer but the dryer is not remediable.

It is my hypothesis that this is the reason that people who ride horses become a little psychologically 'impaired' after many years of low-dose exposure. My advice is to not wash these items at home. Trichothecenes cannot be washed out of clothes, so those with homes containing toxic mold have the substance adsorbed into their upholstered furniture and clothing.

Lisa Lavine Nagy, MD, graduated Magna Cum Laude from The University of Pennsylvania and then from Cornell Medical College in 1986. After a surgical internship she completed Emergency Medicine residency at Metropolitan Hospital in NYC and practiced in Los Angeles until becoming severely ill (Addison's Disease, Mitochondrial Myopathy, Dysautonomia) – as a result of a complex medical condition known as Chemical Sensitivity or Environmental Illness.

Her story of survival and journey of discovery which led her to determine what had made her have such severe symptoms inspired ABC's 'Nightline' to interview her this year and many newspapers and magazines to feature her recovery. In her case it was due to toxic mold and in others it is due to pesticide or chemical exposure. She learned about the field of Environmental Medicine and it's focus on finding the causes of disease including genetic, hormonal, nutritional, allergic, and environmental factors.

She is now president of Preventive and Environmental Health Alliance which is a group focused on educating medical students, doctors, the AMA, Congress and the public, and assists patients to find help nationwide. Listening to physicians and other people who have developed severe Environmental Illness is the first step towards helping the 75 million people in the country with various health issues, including autoimmunity, related to their environments. Her website is www.EnvironmentalMedicineInfo.com