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The Facts on Mold's Health Effects

HOT TOPICS IN ALLERGY - HEALTH EFFECTS OF MOLD, WHAT'S REAL AND WHAT'S NOT

You are listening to ReachMD, The Channel for Medical Professionals. Welcome to Hot Topics in Allergy, presented by The American College of Allergy, Asthma, and Immunology. Your host is Dr. Ketan Sheth, Medical Director of The Lafayette Allergy and Asthma Clinic in Lafayette, Indiana.

The mold is causing my problems. We have all heard this phrase. Joining us to discuss health effects of mold, what's real and what's not is Dr. Jay Portnoy. Dr. Portnoy is the Chief Section of Allergy, Asthma, and Immunology at Children's Mercy Hospitals and Clinics in Kansas City, Missouri and Professor of Pediatrics at The University of Missouri, Kansas City School of Medicine. He also currently serves as president of The American College of Allergy, Asthma, and Immunology.

Dr. KETAN SHETH:

Welcome Dr. Portnoy.

Dr. JAY PORTNOY:

Its great to be here with you.

Dr. KETAN SHETH:

Well lets start off, tell us a little bit about molds.

Dr. JAY PORTNOY:

Where to begin, you know, molds share the planet with us, they are one of the kingdoms of life. There 4 kingdoms of life, there are plants, there are animals, there are single-celled organisms, and then there are molds. So molds are really different than all other organisms. They grow any place where there is a source of moisture and a source of carbohydrates, that is things that have like wood or carbon in them. So if you get that combination, then the molds will be there. Now the difference between molds and other things like plants, is plants photosynthesize, they take sunlight and along with carbon dioxide turn it into sugar and breathe out oxygen. Animals inhale oxygen and they consume the sugars that the plants make and produce carbon dioxide. So it's a perfect symbiosis. The waste products of the animals become the plants food and vice versa. Molds are totally separate. They ingest food, sugars, and so on from the

environment then they produce carbon dioxide as well as other gases that cause that musty moldy smell that we are used to smelling and the thing about molds is that you will find them anywhere. There is no place you can go where there is not mold exposure and for that reason, people shouldn't be surprised if they find some mold growing in their houses, that it grows any place where there is the source of moisture and sugar, carbohydrate. So the molds will grow both indoors and outdoors and if they are growing indoors, that's when people get really upset. You know there has been a lot of concern about molds lately. I think that part of the problem is that people don't know much about them. You know many of the molds will grow and people not knowing much about them will think that maybe that's going to cause them to have some health problems or to make them sick, but in fact, most of the time, molds don't cause a problem at all and you don't really need to worry about them.

Dr. KETAN SHETH:

Well is there any such thing as a mold-free house?

Dr. JAY PORTNOY:

Not at all. All houses have at least some degree of mold. That's why it is important to understand what things cause a house to have more mold than you would want to have. If you have a house that is excessively moldy, there are basically 3 things that can happen to your house. One, it can have aesthetic problems, it can just look bad, smell bad, who wants to live in a house that's real moldy. Number 2, it can cause damage to the house, we have all seen the dry rot and wet rotten and the structural damage that molds can cause, but the thing that I think most people are worried about is health effects. Can molds actually make you sick or not and I think that's really what we wanted to talk about today because there is increasing information about the health effects that molds may have on people.

Dr. KETAN SHETH:

What are the various health effects that molds can cause for people?

Dr. JAY PORTNOY:

Well molds can cause harm in one of four mechanisms, you can either be allergic to the molds, you can be infected by the molds, a mold can be an irritant and it can also produce toxins that can make you really sick. The allergy part is something that that we allergists spend a lot of time looking at. It's a specific thing, you are allergic to a particular mold or a particular group of molds and not everybody would be allergic to those molds. Some people are more sensitive than others and so that a very specific thing an allergist can help to determine, whether you are allergic to it or not. So that's one mechanism. If you are exposed to a mold when you have an allergy, then you are likely to have symptoms like sneezing and wheezing and irritated eyes and irritation of the mucous membranes. That's an allergic reaction to the molds. Infection by the molds is a much less common thing. After all molds are very different than we are so our immune systems for the most part are able to take care of it. Some people will get mold infections on their skin like ringworm and things of that nature. Athlete's foot is a type of mold infection, but to get a real serious infection inside due to mold, you really have to have an immune problem. People who are undergoing chemotherapy, have HIV, AIDS, or some other problem with their immune systems are the ones who are more likely to have problems with mold infection. So we don't usually think of that as a big problem. The third mechanism is irritant reactions. As I mentioned before, molds produce organic gases that they put into the air which can smell really bad and if anybody with asthma has ever experienced a bad smell, it can certainly trigger that, even perfume can trigger an asthma episode. Molds can also produce other irritating things called glucans and ergosterols. These things get into the dust of the house and can be very irritating and in fact they can cause inflammation. Pretty much everyone who inhales substantial amounts of these materials can be susceptible to that. they can get sick from it and how susceptible you are, how sensitive you are to the mold really depends on the individual. Some people are more sensitive than others, but that's why you really don't want to have a grossly mold house because you will have a lot of these materials and then pretty much everyone will have some problems. The last mechanism which is a mycotoxin or

the toxic mechanism, is probably the most controversial one. There are some molds that will produce substances that are actually harmful to other creatures. For example, penicillium species of mold produce penicillin which is toxic to bacteria. We use that therapeutically as penicillin. It's a mycotoxins bacteria. Other molds will produce toxins that are harmful to animals like ourselves and that's when we get concerned. If you are exposed to huge amounts of mycotoxins usually by eating food that has been contaminated, you can get quite sick from them. The question comes up, can you get so sick from inhaling particles from a house that has mold, it might have small amounts of mycotoxins. We really don't know what the long term effect is of inhaling small amounts and so that becomes a real problem and that's the reason for the controversy.

Dr. KETAN SHETH:

Well one of the things that often comes up is a patient comes in and says I have got this black substance that I think is mold and it is causing my health problems.

Dr. JAY PORTNOY:

Right.

Dr. KETAN SHETH:

How should we approach that?

Dr. JAY PORTNOY:

Well you know first of all, not all molds are black some of them are green and yellow, there are lots of interesting colors of molds, but if you see something that is a mold, it may not be mold, there is other things like soot and stains from water damage and so on. So it's not absolutely certain that there is mold, but if you can make a diagnosis, if you find out that it really is mold for the most part you can do some simple things to get rid of it, but before doing that, I would strongly recommend that home owners get rid of the cause of the mold. Why is there mold growing in your house. Normal houses don't have a lot of mold growing. So you wouldn't see the black stuff. So what we do. We have an environmental health program where we go out and do home inspections looking for mold that might be growing in the homes of people who have respiratory problems that we think might be caused by molds and what our home inspectors do, they do a home assessment, they look for reasons why the mold is there. Is there a source of moisture for example. Moisture can either intrude into the environment from outside through the foundation for example. It can get there from a leak, maybe a leaky pipe or it can be there because there is poor ventilation. There is a lot of humidity in the air. The water can condense on cold surfaces and then cause molds to grow. Whatever the cause is if you don't get rid of the source of the moisture, no matter what you do, the mold is just going to come back. So it's not helpful to get rid of mold unless you get rid of the underlying cause. If you eliminated the cause, then you just want to get rid of the contaminated materials then we usually recommend that you use a dilute bleach solution that can actually kill the mold and also has a mild detergent that releases the mold from where it is located. Its better to do that than to just use soap and water because soap can actually act as a food for mold, so you want to actually kill the mold with dilute bleach and I usually recommend that people buy something commercial at the store rather than mixing their own because bleach can be very irritating if you are exposed to it and you don't dilute it properly. If the material is in carpeting or upholstered furniture, of course get rid of the really damaged material, but you can get rid of spores in a carpet with a HEPA vacuum cleaner or a cyclonic vacuum cleaner, I think Dyson makes those and also central vacuum cleaners. If you use a regular inefficient vacuum cleaner thought, that's pretty much a mold dispersal device and that can make things worse. Then if you have grossly contaminated materials, if the wall is really damaged and there is just mold growing through it. There is not much you can do other than to replace the damaged material. I always recommend that people get a professional service to do that. Chopping into contaminated wallboard and wood can release huge amounts of mold into the air. I have seen people get sick from doing that. So it's important that the proper protective gear be worn and I usually recommend that a professional service do that.

Dr. KETAN SHETH:

If you are just tuning in, you are looking at Hot Topics in Allergy on ReachMD, the Channel For Medical Professionals. I am your host, Dr. Ketan Sheth and joining me today to discuss health effects of mold, what's real and what's not is Dr. Jay Portnoy, Chief Section of Allergy, Asthma, and Immunology at Children's Mercy Hospitals and Clinics in Kansas City, Missouri and Professor of Pediatrics at The University of Missouri, Kansas City School of Medicine.

Now Dr. Portnoy you talked about the 4 different mechanisms, how can practitioners help sort some of that out between whether it is an allergy or an irritant for their patients?

Dr. JAY PORTNOY:

Well the best way to tell between an allergy and an irritant is to do allergy testing. If a person is allergic to the mold that they are exposed to, then allergy testing either a blood test or a skin test will help to tell whether they actually have an allergy or not. If the allergy test is negative and the patient is having problems on exposure, then I would assume that its an irritant reaction and so that's one of the ways that you can tell the difference, but the other thing that I think that we allergists need to do more of is to consider finding out what the environment is actually like. We can help our patients find out more about their homes, how they work, and what their exposures actually are. We do a good history. We ask people about their homes. Is your home an old home, what kind of ventilation does it have and so on, but we don't really go into the home and actually take a look because a lot of times what's actually going on is quite different than what the home owner reports. That's where the use of a home assessment company or group of people would be very helpful and we are in the process of training companies from around the country to do some of the home assessments now. So I think in the very near future, you are going to start seeing a certification for indoor health home assessment and that could be very helpful. I see the allergists working closely with those individuals to refer patients appropriately perhaps even getting health plans to pay for the home assessment and making recommendations. Our job of course will be then to take the information, interpret it for the patient, determine what the health effects have been and then to advise our patients on what actions they should take.

Dr. KETAN SHETH:

Well I would like to thank my guest, Dr. Jay Portnoy Chief Section of Allergy, Asthma, and Immunology at Children's Mercy Hospitals and Clinics in Kansas City, Missouri and Professor of Pediatrics at The University of Missouri, Kansas City School of Medicine and the current President of the American College of Asthma, Allergy, and Immunology to discuss the Health Effects of Mold, What's Real and What's Not. Dr. Portnoy thank you very much for being our guest this week on Hot Topics in Allergy.

Dr. JAY PORTNOY:

Well thanks for inviting me.

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