

# Is Your Home Making You Sick?

## Our changing environment:

Thousands of years ago when humans began populating the earth we lived outdoors breathing fresh air that was constantly being cleansed by Mother Nature. Thunder storms, lightning, and ultraviolet energy from the sun continually cleansed the outdoor air. Although our outdoor air is more polluted today than it was thousands of years ago, Mother Nature is still at work keeping the outdoor air as clean as possible.

These natural cleaning agents outdoors are not naturally present indoors and we humans add a vast array of pollutants indoors from building materials, adhesives, cleaning chemicals, disinfectant sprays, deodorizers, insecticides, paints, stains and the list goes on.



To conserve energy, we have also tightened up our homes; locking in these pollutants and making the affects even worse.

The Environmental Protection Agency (EPA) states that our indoor air environment can be 2 – 5 times and as much as 100 times worse than the worst outside air.

You see, our body's immune systems are designed to handle outside air that has been cleansed by these natural processes but they can't keep up with the levels of indoor air pollution that we create. There are three types of airborne contaminants: *particles, biological, and gas phase*. And most of them are not even visible to the naked eye. The American Lung Association tells us that breathing particles that measure below three microns in size can be detrimental to our health and 98% of all particles we breathe are less than one micron in size. That's some small stuff that disposable filters cannot remove from the air.



### Particles: Size Makes All the Difference\*

Most HVAC filters designed to protect the equipment	Eye of a Needle = 500 to 2000 microns	Visible to the naked eye
	Human Hair Diameter = 40 to 300 microns	
	Pollen = 10 to 100 microns	
Particles that cause adverse health effects	Mold Spore = 10 to 30 microns	98% of all airborne particles and the most injurious to our health
	Tobacco Smoke = .3 to 1 micron	
	Viruses & Chemicals = .001 to .01 micron	
	Gas Molecules = .0003 to .01 micron	

\*National Institute of Environmental Health Sciences

We live and breathe with high levels of these three types of contamination which also include a large amount of dust mite feces. Over 2 million dust mites live in the average double bed and millions more in carpets and rugs. Dust mites feed on the millions of skin flakes that we shed daily and release hundreds of millions of fecal pellet allergens into the air we breathe each day.



As a result, asthma and allergies are on the rise along with other ailments caused by polluted indoor air; such as headaches, dizziness, depression, respiratory infections, throat and ear infections, colds and flu. There have been many studies done on indoor air environments due to the concerns over the

effects of rising levels of pollutants. The National Center for Health Statistics (2001) reported an alarming increase of people suffering from severe allergies and asthma due to our poor indoor air quality. Harvard School of Public Health reported in a 2003 study that out of 120 homes tested for toxic gases and compounds 100% of them had levels that exceeded safe standards and that this is a nationwide problem.

