



Plants that Purify

The arrival of cool weather brings closed windows and doors and a dearth of fresh air. While the average office and executive waiting area are usually decorated with a few plants, the right plants in the right places can do more than just convert carbon dioxide into oxygen. They can remove toxic chemicals and pollutants and help executives who spend long hours in the office minimize headaches, eye irritation and other toxic building symptoms.

As part of a rigorous two year study of 19 popular houseplants, NASA and ALCA scientists found that specific plants are able to absorb common pollutants found in office buildings - specifically Formaldehyde, Benzene, and Trichloroethylene. Formaldehyde is found in many building materials such as particle board and foam insulations and many cleaning products. Benzene is a common solvent found in paints and oils, while Trichloroethylene is used in paints, adhesives, inks, and varnishes.

In addition to scientific studies here in the US, an interesting anecdote is that of Delhi native Kamal Meattle. The air quality of his home and city were so toxic that it caused him severe allergic reactions – as well as a lung capacity decline to 70 percent of normal. After some research he identified three plants – which are also on the NASA study list (Areca Palm, Mother-in-law's Tongue, and Money Plant) - and posited that even in an enclosed space, these plants can provide a human with all the fresh air needed indoors to be healthy. His research uncovered tests done over 15 years at the Paharpur Business Center, a 50,000 sq. foot building filled with over 1,200 plants to sustain the 300 people working there. The Indian Government rated the building the healthiest in Delhi, and further studies show that after just 10 hours in the building people are physically healthier. Read more at: <http://greenspaces.in/blog/ted09/>

What makes houseplants so beneficial? Houseplants, unlike other plants, are adapted to tropical areas with dense canopies requiring survival in low light. In addition to an ultra-adept light capturing capability these plants are extremely efficient in processing gasses needed for photosynthesis. This process gives them greater capacity to absorb other gases, including potentially harmful ones.

Although plants won't do much to alleviate tobacco smoke or dust, one houseplant per 100 square feet of living area can make a difference. Choose and keep your plants lush and vigorous to filter more air daily.



NASA recommends that to treat the air contaminant Benzene, use English ivy, gerbera daisies, pot mums, peace lily, bamboo palm, and Mother-in-law's tongue. The bamboo palm, Mother-in-law's tongue, dracaena warneckeii, peace lily, dracaena marginata, golden pathos, money plant, and green spider plant worked well for filtering Formaldehyde and other VOCs (Volatile Organic Compounds).

If you are suffering from asthma or other issues caused by a toxic environment, see your doctor at Executive MD for additional ways to breathe easier.

John Mamana, M.D.
Executive MD
John@ExecutiveMD.com
703-260-6455