

## Science

***Infants Exposed: Toxic House Dust***

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“The health risks to babies from pollutants in house dust may be 100 times greater than for adults”, according to the Environmental Protection Agency.

With a higher respiration rate than adults, infants ingest more dust from their environment. Household dust may seem relatively harmless, although it is increasingly contaminated with flame retardants, pesticides, lead, bacteria, arsenic, heavy metals, phthalates, allergens, and many superfluous environmental chemicals.

High rates of chronic illnesses, asthma, and cancer have been linked to these pollutants. Children exposed at an early age may suffer loss of intelligence and attention deficit hyperactivity disorder.

While it may seem that there is not enough of these chemicals and allergens to cause human health effects, Roberts and colleagues say, “Median or upper percentile concentrations in house dust of lead and several pesticides and PAHs (*Polycyclic aromatic hydrocarbons*) may exceed health-based standards in North America.”

“The concentration of pollutants in house dust may be 2-32 times higher than that found in the soil near a house,” says Roberts. “Reducing infant exposures, at this critical time in their development, may reduce

lifetime health costs, improve early learning, and increase adult productivity.”

Though tougher laws are needed to reduce factory emissions which contaminate air to begin with, Roberts and colleagues emphasize that people can reduce their exposure by cleaning more frequently and increasing the frequency of hand washing.

Studies have shown that dirt finder HEPA vacuums, allergy control bedding, quality door mats, and HEPA air filters all reduce the cost of healthcare by reducing exposure to chemical contaminants.

“Motivated families that receive home visits from trained outreach workers can monitor and reduce dust exposures by 90% or more in 1 week,” says Roberts.

Whilst people do what they can to reduce personal exposure, constituents also need to abandon their complacency. Rather than being compliant hebetudes, each citizen must act to motivate the government and lawmakers to mandate stricter chemical regulations.

**Reference**

Roberts JW, Wallace LA, Camann DE, Dickey P, Gilbert SG, Lewis RG, Takaro TK. Monitoring and reducing exposure of infants to pollutants in house dust. *Rev Environ Contam Toxicol.* 2009;201:1-39.