

Indoor asthma inducers

Human Health Risk	M - H
Ecological Risk	
Socioeconomic Risk	M - H

Asthma is a complex condition affecting the small airways of the lungs. An initial exposure to allergens, viruses, pollution, or certain chemicals may induce the inflammation that leads to asthma symptoms in some individuals. Indoor asthma inducers include dust mites, animal/pet dander, mold, rodent protein, cockroach feces, and tobacco smoke. Asthma episodes may include lung inflammation, difficulty breathing, or in some cases, death. Episodes can be caused by inhalation of these same inducers, or other asthma triggers that may occur in either the indoor or outdoor environment, once an individual develops asthma.

What's at risk?

The risk is statewide, with certain occupational groups at higher risk, such as veterinarians or livestock workers. Children and adults in low-income communities are at increased risk, for reasons that are not entirely clear. African Americans are three to four times more likely than Caucasians to be hospitalized for asthma, and four to six times more likely to die from asthma. Individuals with atopic disease, an inherited tendency to get asthma, are more likely to develop asthma when exposed to these inducers. Estimates indicate that one third to one half of the United States population may be atopic.

What are the human health impacts in New Jersey?

Hospitalization and outpatient visits do not include all episodes, since many relatively mild episodes are self-treated with medication, but about 316,000 episodes of adult asthma and 123,000 episodes of asthma in children are estimated to occur in New Jersey in a given year (based on 2000 estimates). It is not known what fraction of these cases are the result of indoor asthma inducers.

What are the socioeconomic impacts in New Jersey?

Asthma has been determined to have significant health, societal, and economic consequences. The annual cost of asthma to New Jersey is \$450 million. If one third of these costs are reasonably attributed to indoor allergens, this translates to a high socioeconomic risk. Persons with severe asthma account for 20% of the cases, and 80% of the costs associated with the disease. These chronic asthma sufferers may only be partially relieved by medication, and suffer from reduced quality of life.

What's being done?

Currently there are few controls placed on indoor air quality, with the exception of restrictions on smoking in some public areas.