



## **Health Effects of Mold Exposure and Relevant Studies**

### ***Concerns in relation to mold exposure include:***

- 1.allergy/asthma
- 2.infection
- 3.toxicity
- 4.irritation

The association between mold exposure and respiratory problems has been widely documented. Allergic reactions to mold are common, be they immediate or delayed. Mold can also cause asthma attacks in people with asthma who are allergic to mold. In addition, mold exposure may well irritate the eyes, skin, nose, throat, and lungs of both mold-allergic and non-allergic people. However, it seems that mostly the immunocompromised are at an increased risk for mold infections. <http://www.epa.gov/mold/moldbasics.html>

### **Short-term effects:**

- ❖ Nasal and sinus congestion
- ❖ Eye irritation, (eyes-burning; watery, reddened, blurry vision)
- ❖ Dry, hacking cough
- ❖ Nose and Throat irritation (postnasal drip and sore throat)
- ❖ Light sensitivity
- ❖ Skin irritation, such as a rash
- ❖ Shortness of breath
- ❖ Headache

### **Long-term effects:**

- ❖ Respiratory problems, such as wheezing and difficulty breathing
- ❖ Aches and pains
- ❖ Possible fever
- ❖ Constant headaches
- ❖ Chronic fatigue
- ❖ Rarely, central nervous system problems (loss of balance, memory loss, difficulty speaking and mood changes)

<http://www.health.state.ny.us/nysdoh/indoor/docs/mold.pdf>

[http://www.idph.state.ia.us/eh/common/pdf/board\\_of\\_health\\_assistance/mold.pdf](http://www.idph.state.ia.us/eh/common/pdf/board_of_health_assistance/mold.pdf)

### **People most at risk from the health effects of mold:**

- ❖ Infants and children
- ❖ Elderly people
- ❖ Individuals with respiratory conditions or sensitivities such as allergies and asthma
- ❖ Persons with chronic lung diseases like emphysema
- ❖ Persons having weakened immune systems (such as people with HIV infection, chemotherapy patients, organ transplant recipients)

<http://www.health.state.mn.us/divs/eh/indoorair/mold/index.html>

## **Relevant Studies of Health Effects from Mold Exposure:**

- ❖ Zock et al (2002): Housing characteristics, reported mold exposure, and asthma in the European Community Respiratory Health Survey

The aim of this huge multi-center study was to explore the relationship between adult asthma and housing characteristics in relation to dampness and mold exposure. Data about the present home, recent water damage, and mold exposure was collected by means of a questionnaire administered by interviewers at 38 study centers. It is important to note that reported mold exposure was highest in older houses with recent water damage. Furthermore, Asthma symptoms were associated with reported mold exposure in the last year.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=12170270&query\\_hl=73&itool=pubmed\\_docs](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=12170270&query_hl=73&itool=pubmed_docs)  
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- ❖ .Dales et al (1991) : Adverse Health Effects Among Adults Exposed to Home Dampness and Molds

14,799 adults were part of a large study looking into exposure to home dampness and mold as a risk factor for respiratory disease. Home dampness, mold, and respiratory symptoms were assessed by means of a questionnaire. The study concluded that there exists an association between home dampness and mold and the presence of lower respiratory symptoms such as cough and wheeze.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=2001058&dopt=Citation](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=2001058&dopt=Citation)

- ❖ The Cuyahoga County Urban Mold and Moisture Intervention

The Cuyahoga County Urban Mold and Moisture Program sought out to explore the association between mold, moisture, asthma triggers, and the respiratory health of children living in inner city neighborhoods in Cleveland. 104 homes underwent remediation in the process, and the results were gratifying. Asthmatic children living in those homes had a significant decrease in symptoms following the intervention, in contrast to the control children whose homes did not undergo remediation. Following the intervention, the asthmatic kids had a lower rate of exacerbations when compared to the control asthmatic children. Even other non-asthmatic children living in the 'intervention homes' experienced a decrease in upper and lower respiratory symptoms post-remediation.

[http://www.ehw.org/Healthy\\_House/Cuyahoga\\_Mold\\_and\\_Moisture\\_Interventions.pdf](http://www.ehw.org/Healthy_House/Cuyahoga_Mold_and_Moisture_Interventions.pdf)

- ❖ Patovirta et al (2004): Effects of mould remediation on school teachers' health.

Before and after three mold-damage school buildings underwent remediation, teachers were asked to complete symptom questionnaires concerning their health. As a conclusion, the teachers experienced a significant decrease in fatigue and headaches after mold remediation.

[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=15545037&query\\_hl=70&itool=pubmed\\_docsum](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15545037&query_hl=70&itool=pubmed_docsum)

- ❖ Gent et al (2002): Levels of Household Mold Associated with Respiratory Symptoms in the First Year of Life in a Cohort at Risk for Asthma

In order to assess the risk of increased incidence of respiratory symptoms as a result of mold exposure in 880 infants at high risk for developing asthma, days of wheeze or persistent cough and housing characteristics were collected during the infant's first year of life. Exposure to mold was

assessed by air samples, and the results indicated that infants exposed to high levels of *Penicillium*, a common indoor fungus, are at a significantly increased risk for wheeze and persistent cough.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=12460818&query\\_hl=79&itool=pubmed\\_docsum](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=12460818&query_hl=79&itool=pubmed_docsum)

❖ Lin et al (2003): Hypersensitivity to molds in New York City in adults who have asthma  
This New York City-based study aimed to identify mold as a potential trigger for asthma in this city by examining the relationship between mold hypersensitivity and asthma in patients evaluated for allergic disease in the NYC area. Asthmatic patients showed a significant increase in the incidence of mold hypersensitivity. Keeping in mind that mold is highly prevalent in some areas of NYC which has a high incidence of asthma, it is possible that mold hypersensitivity is involved in the allergic response in patients with asthma in the New York area.  
[http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=12635573&query\\_hl=81&itool=pubmed\\_docsum](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=12635573&query_hl=81&itool=pubmed_docsum)