



Highlights of [GAO-08-980](#), a report to the Chairman, Committee on Health, Education, Labor and Pensions, U.S. Senate

## Why GAO Did This Study

Recent research suggests that indoor mold poses a widespread and, for some people, serious health threat. Federal agencies engage in a number of activities to address this issue, including conducting or sponsoring research. For example, in 2004 the National Academies' Institute of Medicine issued a report requested by the Department of Health and Human Services (HHS) summarizing the scientific literature on mold, dampness, and human health. In addition, the Federal Interagency Committee on Indoor Air Quality supports the Environmental Protection Agency's (EPA) indoor air research program. With respect to the health effects of exposure to indoor mold, GAO was asked to report on (1) the conclusions of recent reviews of the scientific literature, (2) the extent to which federal research addresses data gaps, and (3) the guidance agencies are providing to the general public. GAO reviewed scientific literature on indoor mold's health effects, surveyed three agencies that conduct or sponsor indoor mold research, and analyzed guidance issued by five agencies.

## What GAO Recommends

GAO recommends that EPA use the interagency committee on indoor air to (1) help guide federal research priorities on indoor mold and (2) help agencies better ensure that their guidance to the public does not conflict, among other things. In commenting on a draft of our report, EPA agreed with our recommendations.

To view the full product, including the scope and methodology, click on [GAO-08-980](#). To view the survey results, click on [GAO-08-984SP](#). For more information, contact John B. Stephenson at (202) 512-3841 or [stephensonj@gao.gov](mailto:stephensonj@gao.gov).

## INDOOR MOLD

### Better Coordination of Research on Health Effects and More Consistent Guidance Would Improve Federal Efforts

#### What GAO Found

In general, the Institute of Medicine's 2004 report, and reviews of the scientific literature published from 2005 to 2007 that GAO examined, concluded that certain adverse health effects are more clearly associated with exposure to indoor mold than others. For example, the Institute of Medicine concluded that some respiratory effects, such as exacerbation of pre-existing asthma, are associated with exposure to indoor mold but that the available evidence was not sufficient to determine whether mold and a variety of other health effects, such as the development of asthma, cancer, and acute pulmonary hemorrhage in infants, are associated. While the reviews GAO examined generally agreed with these conclusions, a few judged the evidence for some health effects as somewhat stronger. For example, the American Academy of Pediatrics concluded in 2006 that a plausible link exists between acute pulmonary hemorrhage in infants and exposure to toxins that some molds produce. In addition, the 2004 Institute of Medicine report identified the need for additional research to address a number of data gaps related to the health effects of indoor mold.

The 65 ongoing federal research activities on the health effects of exposure to indoor mold conducted or sponsored by EPA, HHS, and the Department of Housing and Urban Development (HUD) address to varying extents 15 gaps in scientific data reported by the Institute of Medicine. For example, many of the research activities address data gaps related to asthma and measurement methods, while other data gaps, such as those related to toxins produced by some molds, are being minimally addressed. Further, less than half of the ongoing mold-related research activities are coordinated either within or across agencies. This limited coordination is important in light of, among other things, the wide range of data gaps identified by the Institute of Medicine and limited federal resources. The Federal Interagency Committee on Indoor Air Quality could provide a structured mechanism for coordinating research activities on mold and other indoor air issues by, for example, serving as a forum for reviewing and prioritizing agencies' ongoing and planned research. However, it currently does not do so.

Despite limitations of scientific evidence regarding a number of potential health effects of exposure to indoor mold, enough is known that federal agencies have issued guidance to the general public about health risks associated with exposure to indoor mold and how to minimize mold growth and mitigate exposure. For example, guidance issued by the Consumer Product Safety Commission, EPA, the Federal Emergency Management Agency, HHS, and HUD cites a variety of health effects of exposure to indoor mold but in some cases omits less common but serious effects. Moreover, while guidance on minimizing indoor mold growth is generally consistent, guidance on mitigating exposure to indoor mold is sometimes inconsistent about cleanup agents, protective clothing and equipment, and sensitive populations. As a result, the public may not be sufficiently advised of indoor mold's potential health risks.