Brown Study Finds Link Between Depression and Household Mold

August 29, 2007  Contact:

A groundbreaking public health study, led by Brown University epidemiologist Edmond Shenassa, has found a connection between damp, moldy homes and depression. Results are published in the *American Journal of Public Health*.

**PROVIDENCE, R.I.** [Brown University] — A groundbreaking public health study has found a connection between damp, moldy homes and depression. The study, led by Brown University epidemiologist Edmond Shenassa, is the largest investigation of an association between mold and mood and is the first such investigation conducted outside the United Kingdom.

Shenassa said the findings, published in the *American Journal of Public Health*, came as a complete surprise. In fact, after a few U.K. studies published in the last decade had suggested a link, Shenassa and his skeptical team set out to debunk the notion that any link existed.
"We thought that once we statistically accounted for factors that could clearly contribute to depression – things like employment status and crowding – we would see any link vanish," said Shenassa, the lead author of the study and an associate professor in the Department of Community Health at Brown. "But the opposite was true. We found a solid association between depression and living in a damp, moldy home."

Shenassa noted the study, an analysis of data from nearly 6,000 European adults, does not prove that moldy homes cause depression. The study wasn’t designed to draw that direct conclusion. However, Shenassa’s team did find a connection, one likely driven by two factors. One factor is a perceived lack of control over the housing environment. The other is mold–related health problems such as wheezing, fatigue and a cold or throat illness.

"Physical health, and perceptions of control, are linked with an elevated risk for depression," Shenassa said, "and that makes sense. If you are sick from mold, and feel you can’t get rid of it, it may affect your mental health."

The study was a statistical analysis of data from the Large Analysis and Review of European Housing and Health Status (LARES), a survey on housing, health and place of residence conducted in 2002 and 2003 by the World Health Organization (WHO). To conduct the survey, WHO interviewers visited thousands of homes in eight European cities and asked residents a series of questions, including if they had depressive symptoms such as decreased appetite, low self-esteem, and sleep disturbances. WHO interviewers also made visual checks of each household, looking for spots on walls and ceilings that indicate mold.

Shenassa’s team analyzed LARES data from 5,882 adults in 2,982 households.

"What the study makes clear is the importance of housing as indicator of health, including mental health," Shenassa said. "Healthy homes can promote healthy lives."

Shenassa and his team are conducting follow–up research to see if mold does, indeed, directly cause depression. Shenassa said that given the results of the current study, he wouldn’t be surprised if there is a cause–and–effect association. Molds are
toxins, and some research has indicated that these toxins can affect the nervous system or the immune system or impede the function of the frontal cortex, the part of the brain that plays a part in impulse control, memory, problem solving, sexual behavior, socialization and spontaneity.

The research team includes Allison Liebhaber, a former Brown undergraduate; Constantine Daskalakis of Thomas Jefferson University; Matthias Braubach of WHO; and Mary Jean Brown of the Harvard School of Public Health.

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