

CLEAN AIR FOR ALL

THE SMOKE-FREE PUBLIC HOUSING PROJECT

December 11, 2019

The More You Know: Air Flow in Apartment Buildings

It's no secret that air flows through apartment buildings. In fact, up to 65% of the air in an apartment building is shared ([source](#)). That's like a grapefruit-sized hole in the wall between two units! This is why maintaining a smoke-free environment is so important - it protects everyone in the building from toxic secondhand smoke.

Click the images below to see animations demonstrating different ways secondhand smoke flows through a building. Learn more from the [Center for Energy and Environment](#).

Click to Animate



Winter Stack Effect

During the winter stack effect, cold air comes in at the bottom of a building and goes out at the top of the building as the air inside warms and rises.



Summer Stack Effect

The stack effect can happen in reverse during the summer months. The stack effect happens at a higher rate in taller buildings.



Wind Effect

As wind blows against one side of the building, air tends to flow in that side and be pushed out the other side.



Exhaust Effect

Exhaust fans pull air out of the bathroom and typically vent the air up through the roof. As air is pulled from the bathroom, air from elsewhere in the building is drawn into the bathroom to replace the air that is being vented.

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Clean Air for All: The Smoke-Free Public Housing Project is a collaboration of [Live Smoke Free](#) (LSF) a program of the Association for Nonsmokers - Minnesota and the [National Association of Housing and Redevelopment Officials](#) (NAHRO). This project is made possible with funding from the Robert Wood Johnson Foundation.