

## **Potential health risks from bacteria and fungi in automobile air-conditioning systems - includes related article on cleaning an air-conditioning system**

Linda Bonvie

You wash it, wax it, vacuum up the crumbs and wipe off the muddy shoe prints. But no matter how clean you keep your car, there may still be bacteria and fungi lingering in its air-conditioning system, putting you and your family at risk for potential health problems.

But at least "sick car syndrome" isn't one of those sneaky hidden dangers--its warning sign is quite clear. If you turn on the air conditioner and a bouquet reminiscent of manure or spoiled cabbage comes wafting out, you've got it.

For the past three years, Robert Simmons, Ph.D., of Georgia State University's Environmental Research Center in Atlanta, has been studying the problem, which afflicts some 4 million U.S. vehicles in every class from economy to luxury. The offending organisms are similar to the mold and fungus that could grow anywhere (e.g., your shower or home air-conditioning system), but since cars are out on the road, many additional contaminants are introduced. "You can't prevent a problem if you don't understand how it develops in the first place," says Simmons. "The root cause has not been defined yet, but if we can understand how it gets started, then we can pass prevention ideas on to the designers and engineers."

Industry experts cite new vehicle design as the cause. "To increase AC system efficiency, they've made systems with more surface area," explains Paul Deguisseppi, manager of service training at the East Greenville, Penn.-based Mobile Air Conditioning Society Worldwide. "And the more surface area you have, the more space there is for moisture, and for this junk to grow on."

While Simmons hasn't yet found any fungi that pose actual infectious disease situations, he is convinced that certain people are at risk for potential health problems. "If you're allergic to these fungi, you can have an allergy attack; if you have a mold sensitivity or asthma, they can bring on an asthma attack." Simmons learned firsthand the effects of driving a sick car when he got a headache every time he drove a "spoiled cabbage" test car to and from work.

Some experts in the automotive industry, like Ward Atkinson, chairman of the Interior Climate Control Standards Committee based in Pittsburgh, downplay the problem. But Simmons insists it's not wise to write the situation off as just an "odor that causes discomfort," as Atkinson does. "Anytime you're dealing with microbiology, it's rarely cut-and-dried," Simmons says. And according to Allan Magaziner, D.O., a specialist in nutrition, allergy and preventive medicine in Cherry Hill, N.J., and the author of *The Complete Idiot's Guide to Living Longer and Healthier* (Alpha Books, 1999), exposure to the types of fungi Simmons collected from car air-conditioning vents could cause such reactions as headaches, weakness, fatigue and cold or flulike symptoms--at the least. "Everyone has a certain amount of tolerance to everything we come in contact with. But at some point our ability to withstand it breaks down, so if you're exposed to fungi and bacteria at home and in the car, your body might become so overwhelmed that you become ill," he says.

Spraying disinfectant into the air vents won't kill these growths. "The chances of anything making it into the system and still being effective are somewhere between slim and none," says Simmons. The best solution, he says, is to clean out the evaporator. But since that's such a time-consuming and expensive job, he explains there's another option: "Correctly applied by a mechanic, an antimicrobial spray will fix the problem about 75 percent of the time."

RELATED ARTICLE: [How to Detox Your Car's AC](#)

Fixing an automobile with "sick car syndrome" can be challenging and expensive. Here are some tips from the pros to keep your AC running mold-free.

\* Air-conditioning should be run on the "outside air" setting, as opposed to the recirculated setting as often as possible. This allows the system to pull in new air and get rid of old moisture (which reduces the chances of contamination).

\* The "max" setting is going to give you recirculated air and should only be used on brutally hot days--and only until you get comfortable.

\* Never leave the AC set on "max" while the engine is off. This keeps the vents closed and doesn't allow outside air to get in. The heat created by a closed system combined with the moisture produces a virtual greenhouse for bacteria and fungi.

\* When you use the AC, there should be water draining from under the car. No water runoff means that the drain hole is blocked and the evaporator is not drying out, creating a perfect breeding ground for bacteria and fungi.

COPYRIGHT 1999 Sabot Publishing

COPYRIGHT 2000 Gale Group