

Are air masks the solution against smoke? Not always

By Maddalena Jackson - mjackson@sacbee.com

Published 12:00 am PDT Thursday, July 3, 2008

Story appeared in METRO section, Page B3



Not all masks are created equal. One that's rated N95 blocks 95 percent of particulate matter, good for use against smoke. But masks without ratings are useless at filtering tiny smoke particulates, experts say. José Luis Villegas / jvillegas@sacbee.com

[Click on photo to enlarge](#)

If June's fires are a preview of the remainder of the season, Sacramento Valley residents and those in the foothills and mountains will again be faced with a variety of unpleasant options for avoiding the smoke.

One of those options is wearing a mask – and living with the trade-offs.

The right mask can filter almost all particles and provide your lungs with clean air. But because sucking air through the fine mesh of the mask takes energy, breathing becomes a little harder, and masks can become warm and claustrophobic.

Elliott Homes
A Tradition of Quality since 1914



Homes with
VIEWS
STYLE
LASTING
VALUE
The **ELLIOTT**
Advantage

"I've done it for 16 years – I have to protect myself," said Patty Bender, 55, who began wearing masks in times of bad air after she was diagnosed with lung disease. A registered nurse with 30 years of experience, Bender has worn the masks, with doctor approval, to prevent further damage.

Not all masks are created equal – and there is a standard by which masks may be judged.

Bender wears an N95 mask, which means that under testing by the National Institute for Occupational Safety and Health (NIOSH), the mask blocks 95 percent of particulate matter.

Masks with no ratings displayed may be OK for filtering sawdust, but they are useless in filtering smoke particulates.

"Every manufacturer that comes in and wants (a mask approved) submits to us a number of respirators," said Heinz Ahlers, branch chief with the National Personal Protective Technology Laboratory. "We take those respirators and test them for penetration and for breathing resistance."

If they block a certain portion of particulates during testing, they are awarded a letter and a number that signify the type and percentage of particles blocked, Ahlers said.

The number signifies the percentage of particles blocked. A "95" mask removes 95 percent of particulate matter.

A common measure of air quality is the amount particles smaller than 2 1/2 microns in diameter present in the air. Some of the most dangerous particles are much smaller than that – a particle 2 1/2 microns wide is dwarfed by the end of a human hair.

Smoke produces particles so small that they act as a mist. Masks that have earned the NIOSH N95 certification block 95 percent of these particles, regardless of size.

But masks aren't for everyone. Health experts, including the American Lung Association and government health officials, warn that people with compromised respiratory systems should be very cautious about using masks.

"Certainly, anyone who has any respiratory illness or heart illness should consult their physician before considering a mask," said Bonnie Holmes-Gen, senior policy director with the American Lung Association of California.

Many county health officials don't recommend the N95 mask.

"You need to be in fairly good shape to use it," said Dr. Glennah Trochet, Sacramento County's health officer. "N95 respirators, when properly fitted, are fairly hard to breathe through."

Trochet also was concerned about the risks to those with preexisting heart and lung problems.

"Really, if the air quality got so bad that people needed masks, we'd probably be talking about evacuating people."

Trochet said she didn't see current conditions as a disaster, but some people, like Bender, want to take steps now despite the risk and inconvenience.

"It feels like part of my skin," Bender said. "I got used to it. ... I had such severe lung disease, I had to."

Last Friday, Enloe Medical Center in Butte County shared its supply of N95 masks with the public.

"We actually had a little over 2,000 of the masks, and we started giving them away at 10 a.m.," said Christina Chavira, a spokeswoman for the hospital. "At about 10:15, they were pretty much all gone."

Chavira said "a range of people, all ages" showed up to get masks, including at least one person wishing to upgrade from a painter's mask, which wasn't working.

Dust masks and painters masks generally do not protect against particulates. Only masks that say "NIOSH" and have a letter and number rating printed on them will protect the lungs from smoke.

Bender, who credits the masks with her health after her diagnosis, said she she feels so strongly about public access to proper masks that she has tried leaving messages with local, state and federal officials – with no responses.

"I believe this has fallen through the cracks because there have been so many issues with the fires," she said.

But the official opinion about masks is not as enthusiastic as hers. The Yolo-Solano Air Quality Management District warns against using "paper masks," saying that they reduce air flow to the lungs and do not protect the lungs from particles. The Placer County Air Pollution Control District says the same.

State health officials said the decision to recommend masks – or not – should be left to each county's health officer.

About the writer:

- Call The Bee's Maddalena Jackson, (916) 321-1041.

Recommend this story at Yahoo! Buzz:



The Sacramento Bee Unique content, exceptional value. [SUBSCRIBE NOW!](#)



[News](#) | [Sports](#) | [Business](#) | [Politics](#) | [Opinion](#) | [Entertainment](#) | [Lifestyle](#) | [Travel](#) | [Blogs](#) | [Cars](#) | [Homes](#) | [Jobs](#) | [Classifieds/Shopping](#)

[Privacy Policy](#) | [Terms of Use](#) | [Site Map](#) | [Advertise](#) | [Guide to The Bee](#) | [Bee Jobs](#) | [FAQs](#) | [RSS](#)
[Contact Us](#) | [e-edition](#) | [Subscribe](#) | [Manage Your Subscription](#) | [E-newsletters](#) | [Sacbeemail](#) | [Archives](#)
[sacbee.com](#) | [Sacramento.com](#) | [Capitol Alert](#) | [SacMomsClub.com](#) | [SacPaws.com](#) | [SacWineRegion.com](#)

Copyright © The Sacramento Bee
2100 Q St. P.O. Box 15779 Sacramento, CA 95816 (916) 321-1000