A Third-hand Smoke Screen of Fear

By Jack Dini — June 8, 2018

Nowadays, some folks are raising alarm about "third-hand" smoke—residual chemicals, essentially particulate matter, left on indoor surfaces by tobacco smoke. The claim is that residues from smoking can be absorbed through the skin, ingested and inhaled months and even years after the smoke has dissipated. The alarmists say that just because you're in a non-smoking environment, it doesn't mean you aren't exposed to harmful tobacco products. (1)

No one is in favor of smoking and the real worry is that by constantly ratcheting up the hype, people will assume studies on smoking itself are also exaggerated. And that is the real problem with third-hand smoke, which isn't smoke at all. As Sandy Szwarc said, “The healthiest thing for all of us might be a helpful dose of common sense and respect for other people's choices. Otherwise, we may next hear about the dangers of fourth hand smoke, a term coined by John Boston of the Santa Clara Valley Signal: someone sitting next to someone who is thinking about someone else smoking. And someone will believe it and report it as news.” (2)

Szwarc's comments were made in 2009, and sure enough we are still hearing about third hand smoke. Perhaps in another few years, her comments about fourth hand smoke will come to fruition as well.

Statistics claims can show anything causes or prevents disease. Even Netflix [1]. If you are unsure if something will give you cancer or prevent it, just use Google. You are sure to get the answer you want either way.
When statistics don’t make issues muddy, we have animal models. Most recently, a third-hand smoke report claimed an increase in lung cancer in mice and another an increased risk of liver damage and diabetes, again in mice. (1) You know what else causes cancer in mice? Money. Sterile dimes put under the skin of mice caused tumors. (3) That’s to be expected, but that is how badly designed some animal models are. They do something crazy to mice and make it sound like it will be a worry in humans.

But as the American Council on Science and Health noted long ago, mice are not little people. As Steven Austad notes, “Any medical research specialist can give you chapter and verse on how rats and mice differ from humans, be it heart, kidney, brain or muscle function. Rodents have vastly different dietary requirements than humans. They are poisoned by some chemicals that are harmless to humans and vice versa.” Also, specific groups are particularly susceptible to spontaneous cancer development. (4)
So as always, it is difficult to extrapolate mouse findings to humans. But it sells pageviews and therefore ads to scare people. If the study is shown later to be wrong a newspaper can then sell more ads saying scientists don't know what they are doing. But even with smoking, a one-off or casual exposure is not going to have a measurable impact on people. (5) And third-hand smoke is not even a third-order worry.

If you really want something in the air to be concerned about, put spray from sneezes and coughs on your list. Humans make ideal hosts and support flourishing bacteria populations which are distributed liberally wherever we go. As Lyall Watson noted, “With each 100 spoken words, particularly, those with explosive consonants like ‘t’ or ‘p’, we put 250 tiny droplets into the air. Forty percent of these contain one or more bacteria, usually of Streptococcus or Staphylococcus types. A single cough is worth 2,000 words, wheeling out 5,000 potentially dangerous droplets. But a sneeze is the Rolls Royce of bacterial vehicles. With acceleration from a standing start to 400 meters per second, almost the speed of sound, most of them infected. This biological tornado burdens the air with as many bacteria as would normally be dispersed talking non-stop for fifty-five hours, or reading War and Peace out loud.” (6)

References

1. William Wan, “Third hand smoke is widespread and may be dangerous, mounting evidence shows, Washington Post, May 9, 2018
5. Bo Hang et al., “Short term early exposure to third hand cigarette smoke increases lung cancer incidence in mice,” Clinical Science, February 28, 2018

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