

**stryker**

Surgical smoke is  
only part of the story.

**Unmask the truth.**

**150  
chemicals**

found in surgical smoke<sup>1</sup> including  
16 EPA priority pollutants<sup>2</sup>

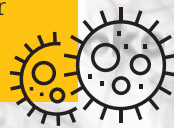
**Particles  
>5µm**

Standard surgical  
mask filtration limit<sup>3</sup>

**77%**

of surgical smoke  
particles are <1.1µm<sup>4</sup>

But surgical smoke can  
contain viruses much smaller  
(e.g., HIV = 0.15µm, HPV =  
0.055µm, HepB = 0.042µm)<sup>3,5</sup>



**27 cigarettes =**

1 day of O.R. exposure where  
electrocautery is used<sup>6</sup>

Double the incidence of  
**respiratory  
problems**  
in O.R. nurses<sup>7</sup>



**Biggest barriers<sup>9</sup>**

Surgeons dictate use/non-use (53%)  
Lack of facility enforcement (33%)

**86% of O.R. staff<sup>8</sup>**

understand the dangers of surgical  
smoke, but feel evacuation efforts  
are hindered by others

**93% of nurses**

feel more comfortable with a  
smoke evacuator in the O.R.<sup>10</sup>



# Growing data. Growing concern.

**You're concerned about being exposed to surgical smoke—and for good reason.** Physicians, researchers, workplace safety groups, clinical societies, quality organizations and governments have all scrutinized the potential hazards of surgical smoke. Many of these groups, as well as study authors, suggest the health risk to O.R. staff is greater than any one study or case report due to their cumulative, long-term exposure. For more resources, visit **SmokeFreeOperatingRoom.com**.

## Viable disease exists in surgical smoke<sup>11-18</sup>

- HIV DNA
- HPV DNA
- HepB
- Melanoma
- Bacteriophage
- Whole intact virions
- Tumor cells

## Transmission may be possible

- Particles >5µm deposit in the oropharyngeal walls<sup>19</sup>
- Aerosols 2-5µm are delivered to the airways<sup>19</sup>
- Aerosols 0.8-3.0µm reach the pulmonary parenchyma<sup>19</sup>
- Oropharyngeal cancers in healthcare practitioners (HPV type 16 & 18)<sup>20</sup>
- Recurrent respiratory/laryngeal papillomatosis in healthcare practitioners (HPV type 6 & 11)<sup>21,22</sup>
- Development of subsequent fibropapillomas identical to the original lesions after injection of viral DNA from laser plume (bovine study)<sup>23</sup>

## Learn more

Our **Neptune SafeAir Smoke Evacuation Portfolio** and our Smoke Free O.R. Program are ways we can partner with you to create a safer, smoke-free O.R. environment. To learn more, or for a "hands-on" demo, please call your Surgical sales representative or 800 253 3210. You can also learn more about our commitment to smoke evacuation and safety advocacy by visiting [neptunewastemanagement.com/SafeAir](http://neptunewastemanagement.com/SafeAir).

## Citations

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