

Surgical Plume Management Policy: Frequently Asked Questions

1. What is surgical plume?

Surgical plume is the smoke or vapor generated as a by-product from procedures that rely on the ablation, cauterization, or mechanical manipulation of target tissue by devices such as lasers, electrosurgical generators, broadband light sources, ultrasonic instruments, and plasma generators. It typically consists of potentially hazardous components, in the form of aerosols, gases, vapours, viruses, bacteria, and ultrafine particles that can cause adverse health effects.

2. Is surgical plume generated when using Silver Nitrate sticks?

Surgical plume or smoke is not generated when using Silver Nitrate sticks.

3. Does a Plume Scavenging System (PSS) need to be used when there is an odour present, but no visible smoke?

As per the Plume Management policy, a PSS is required whenever surgical plume is generated. Given the definition of surgical plume in question 1, do not rely on odour or a visual confirmation of smoke to determine when to use a plume scavenging system. See question 10 for information on plume scavenging equipment that will be most appropriate for your practice setting and frequency of plume generating procedures.

4. Does the policy only apply in Operating Theaters?

The Provincial Surgical Plume Policy applies in any setting where surgical plume is created.

5. What do I have to do to follow the policy?

The policy states that all surgical plume, except bone saw debris, must be evacuated whenever it is generated by means of a plume scavenging (evacuation) system. Bone saw debris is controlled by the use of saline.

6. What support is available if there are challenges in implementing the policy?

The AHS Surgical Plume Management policy is provincial in scope and applies to all Alberta Health Services employees, members of the medical and midwifery staffs, Students, Volunteers, and other persons acting on behalf of Alberta Health Services (including contracted service

providers as necessary) working in all settings where a surgical plume is generated. Concerns about policy compliance should be discussed with your supervisor / manager for resolution.

7. Can I use an N95 respirator to protect myself from surgical plume?

N95 respirators are only to be used as an interim measure if the plume scavenging (evacuation) system fails and a backup plume scavenging system and/or an inline filter for use with regular suction is not available, and then only when it is safe and reasonably practicable based on the procedure underway and the patient condition. N95 respirators are not to be used as primary protection from surgical plume.

8. Can I use any N95 respirator that is available on the supply cart?

No, you must only use a NIOSH (US National Institute of Safety and Health) approved N95 respirator that you have been fit tested with by AHS Workplace Health and Safety. A properly fitted respirator will provide the necessary protection and will be comfortable to wear. Information on fit testing is available on [Respiratory Protection](#) page on Insite.

9. Can I use a surgical mask or a laser plume mask instead of an N95 respirator?

No, a surgical mask or a laser plume mask does not provide adequate protection against exposure to airborne particulates. A surgical mask is a loose fitting mask that prevents contaminants from being released into the immediate environment and acts as a barrier against liquid splashes and spray. A laser plume mask is also a loose fitting mask. Neither of these types of masks are an N95 respirator approved by NIOSH for protection against particulates.

10. Where can I get information on products available for evacuating surgical plume?

Contracting, Procurement, and Supply Management (CPSM) has product information available and can assist you to access the correct products that are available for surgical plume management including smoke evacuators, cautery pens with smoke evacuation tubing, and inline filters for evacuating surgical plume using regular suction. For details and assistance in ordering equipment contact your site CPSM representative.

11. What if I have questions about education and training?

Bring your questions or concerns forward to your supervisor / manager to help provide clarity. Training and education will vary by facility due to equipment variations.

12. How can I get more information or support to implement this policy?

Questions about the policy can be sent to policy@ahs.ca .