

# Safety concerns in anesthesiology practice

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### ABSTRACT

The functional scope of anesthesiologists has expanded as a result of recent discoveries and improvements in the anesthesiology, surgical, and medical disciplines, increasing his professional responsibilities and obligations. Anesthesiologists work in environments with a variety of risks that could be harmful to their general health. The literature has discussed many dangers and safety worries, but the scope of difficulties

in anesthesiology practise is much broader than those reported and anticipated. These difficult circumstances are frequently inevitable, and the attending anesthesiologist must handle them individually. These risks raise the likelihood of morbidity and mortality by affecting not only general health but also in a number of different ways that are quite dangerous.

**Key Words:** *Anesthesiologists; Regional anaesthesia; Blood-borne infections; Neuraxial anesthesia*

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### INTRODUCTION

The roles, obligations, and expectations placed on anesthesiologists have grown significantly over the past few years in tandem with the continuous improvements in anaesthetic and surgical procedures, as well as with the introduction of contemporary equipment and newer medications. However, the ever-growing professional and social demands placed on anesthesiologists both at work and in their personal lives have a significant negative impact on their health [1]. Not just in operating rooms and intensive care units, but also in various remote sites, pre-interventional consultations, pain clinics, MRI suites, and radiation facilities, anesthesiologists are expected to deliver safe and efficient anaesthetic services. The team that manages trauma and natural disasters must include anesthesiologists as well. The health risks that anesthesiologists face in these settings are numerous, and even a minor needlestick from an unidentified source can cause extreme anxiety and terror in many anesthesiologists [2, 3]. The focus of this essay is on these health risks, which can have a serious negative impact on the attending anesthesiologist's professional and personal health.

### BIOLOGICAL HAZARDS

Anesthesiologists encounter a variety of pathogens, such as viruses and bacteria, in their daily work. The prevalence of these risks varies from hospital to hospital and from nation to nation, and it leads to a clinically asymptomatic carrier state for overt deadly infection [4]. In underdeveloped countries like India, where numerous blood- and airborne-borne diseases are common not just in endemic form but also frequently reach epidemic proportions, the danger is fairly significant. A concern that is comparable to the current epidemics of swine flu and dengue fever is the predominance of airborne infections like tuberculosis.

While blood-borne infections are typically acquired during the securing of intravenous lines, central venous catheters, and exposures to a variety of body fluids from the patient, airborne infections are frequently acquired at congested locations either by direct droplet infection or may be inhaling infected droplet nuclei. The blood-borne illnesses are most frequently acquired during invasive operations like installing intravenous lines, placing central venous catheters, and being exposed to various patient bodily fluids. It is possible for an anesthesiologist to acquire these infections through needle sticks, injuries sustained during central venous catheter suturing, injuries sustained during local infiltration and regional anaesthesia, accidental falls involving sharp objects on the legs and feet, exposure to infected CSF, oro-pharyngeal secretions, infected wounds, and administration of anesthesia infected burns and wounds [5]. Hand hygiene is the most straightforward precaution one can take in the operating room to prevent the spread of infection from patient to anesthesiologist and vice versa. The infection control committee's institutional policies, which should be strictly followed, should provide the basis for the operation theater's operation. According to the recommendations of the universal protocols and guidelines, all anesthesia equipment and operating room equipment should be regularly sterilized. There should be strict measures to dispose of the one-time usable equipment as it can be a potential source of infection from patient to patient and to anesthesiologist and this includes the bacterial filter also. The Anesthetic Association of Great Britain and Ireland (AAGBI) recommends the changing of anesthetic circuits on a daily basis in line with universal protocols. The anesthetic procedures, particularly the invasive procedures should ensure complete sterilization and adoption of barrier precautions, especially during the performance of such procedures in high-risk patients [6-8].

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When drug ampoules are snapped, abrasions, lacerations and cut injuries from glass are frequent. The posture of the anesthesiologist is one of the most frequently forgotten details during the delivery of general and neuraxial anesthesia. Even though the precise incidence is unknown, such incorrect placement during the securing of the airway and the administration of neuraxial anesthesia is bad for the back muscles and may cause disc issues in some high-risk patients. Due to prolonged face mask use during brief periods of time, the risk of initial metacarpo-pharyngeal joint injury has all but been avoided thanks to the invention of Laryngeal Mask Airways (LMA). for use during daycare procedures [9-10].

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