

## PRACTICE STANDARD

# Laser Safety

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**Related topic(s):** [Complementary and Alternative Therapies](#); [Non-Hospital Medical and Surgical Facilities Accreditation Program Laser Safety Accreditation Standards](#)

A **practice standard** reflects the minimum standard of professional behaviour and ethical conduct on a specific topic or issue expected by the College of its registrants (all physicians and surgeons who practise medicine in British Columbia). Standards also reflect relevant legal requirements and are enforceable under the [Health Professions Act](#), RSBC 1996, c.183 (*HPA*) and College [Bylaws](#) under the *HPA*.

## Preamble

This document is a practice standard of the Board of the College of Physicians and Surgeons of British Columbia.

For the purposes of this practice standard, a medical laser refers to a high-risk laser, such as a class 3B or 4 laser or any other laser for which the purchase is restricted to a licensed medical professional.

## College's position

Registrants who use a laser device for patient care and/or treatment must have completed relevant medical education and training in advance. Registrants must either apply the laser device themselves, or following assessment of the patient, they may order another person to apply the laser.

Laser procedures done with a medical laser can only be ordered to be performed by a nurse holding practising registration with the BC College of Nurses and Midwives (BCCNM). Registrants must ensure that a nurse registered with BCCNM who performs laser procedures does so in accordance with their regulated scope of practice and possess the competencies required to carry out this activity. At the time of the procedure done with a medical laser, the ordering registrant or another registrant who has assumed responsibility must be on site and immediately available for consultation.

Laser procedures done with non-medical lasers can be ordered to be performed by a licensed or unlicensed person (e.g. a medical office assistant or technician). However, registrants who employ unlicensed persons to perform laser procedures must ensure that the unlicensed person has documented relevant training and possesses the requisite knowledge, skill, and competence to safely perform the laser procedure.

Registrants must define the degree of medical supervision required and must perform annual competency assessments of everyone performing laser treatments and must maintain a record of those assessments.

Registrants must use lasers in compliance with existing standards and occupational health and safety regulations. Registrants must refer to [CSA Z386 Safe use of lasers in health care](#), and [ANSI Z136.3 Safe use of lasers in health care](#), as referenced in the [WorkSafeBC Occupational Health and Safety \(OHS\) Regulation - Part 7 Division 3 Radiation Exposure](#).

## Laser Safety Principles

All settings in which lasers are used must have an identified medical director who assumes overall responsibility for the safe use of lasers and compliance with laser hazard controls.

The role of the medical director must include responsibility for ensuring that:

- administrative control measures are in place to support the safe use of lasers, including the appointment of an appropriately qualified laser safety officer (LSO) in all settings where class 3B and class 4 lasers are used
  - the minimum training requirements for the LSO are specified in CSA Z386
  - the LSO could be the medical director if they possess the minimum education and training required

- all personnel possess the appropriate level of laser education and training based upon their role (e.g. laser user, laser operator, observer) in the laser-controlled area
- a comprehensive laser safety program is in place
- a hazard analysis and risk assessment (to identify the physical, chemical and biological hazards of the laser based on tissue interaction, dosimetry, the delivery system and the practice setting) has been completed for each laser system, including when there is a new laser, when laser equipment is replaced, and in the event of a laser safety incident
- procedural, environmental, and engineering control measures have been taken based on relative hazards to ensure the safe use of lasers; this includes the responsibility of ensuring a laser safety program is established and maintained in accordance with current standards
- there is a mechanism in place for evaluating the effectiveness of and compliance with their laser safety program

All registrants providing laser therapy must ensure that:

- laser equipment is set up and routinely monitored for safe operation
- the area in which the health-care laser is used provides a safe environment to address beam hazards (e.g. tissue interaction, skin damage, eye damage, fire) and non-beam hazards (e.g. electrical, surgical plume, gases/dyes)
- they, and others to whom they order laser use, possess the appropriate level of laser safety training and are competent in the safe use of the laser system being used for patient care and/or treatment
- patient safety or quality is not compromised through the delegation of a medical act
- appropriate eye protection and personal protective equipment (PPE) is used to eliminate, or control hazards associated with the laser system being used
- appropriate documentation is done in the patient's medical record, which includes accurate account of the patient's status, the laser system parameters and settings, the actions of the laser team and the patient's outcome