

# **Your Medical Laser Safety Program - What you Need to Know.**

*Hospitals, Surgery Centers, Medical & Dental  
Offices and Medi-Spas*

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Hi - I'm Gregory Absten,

I've put together this page to help facilities that use medical or aesthetic lasers understand the Laser Safety Program requirements, including the appointment of a Medical Laser Safety Officer. My background includes teaching medical laser safety and procedures in all medical specialties for more than 45 years. I'm the Executive Director of this nonprofit Medical Education group. I am a Scientific Fellow with the American Society for Laser Medicine and Surgery, have served on their Board in the Laser Safety Seat, various committees including training and credentialing and written and taught the Laser Safety portions of their "Laser Fundamentals" courses regionally and at the annual Scientific Meeting. I've received their award for "Excellence in Education". I am a sitting member of the American National Standards Institute Z136.3 Committee for the Safe Use of Lasers in Health Care Facilities and the lead member on the training and certification, and legislative and regulatory working groups. I hope this explanation about your Laser Safety Program will be of use to you. If you have questions you may always email me at [Absten@LaserTraining.org](mailto:Absten@LaserTraining.org).

## **Overview:**

In order to be compliant with the American National Standards Institute (A.N.S.I.) Z136.3 Standard for the "Safe Use of Lasers in Health Care", every facility that uses a medical or aesthetic laser must establish a formal Laser Safety Program that is managed by an appointed Laser Safety Officer (LSO). Nurses or technicians that operate the laser control panel for a physician performing the procedure are known as the "Laser Operators", and they work under the authority of the LSO. Those that perform the actual procedures on patients or clients, whether it's a physician performing surgery or a non physician performing aesthetic procedures such as laser hair removal, are known as the "Laser Users". If you are in a VERY large facility, and it's beneficial, you may also appoint "Deputy" Laser Safety Officers" and "Laser Safety Site Contacts". All of that is explained in the ANSI standards.

While ANSI itself is a recommended standard rather than an actual law, it is enforced as such by various agencies such as the Joint Commission on Accreditation of Hospitals Organization (JCAH) who accredits medical facilities, and the Occupational Safety and Health Administration (OSHA) who enforces work safety issues in any business or office and who has the ability to levy large fines against offenders. Various States require the formal appointment and registration of a Laser Safety Officer, plus evidence of formal training. In a private practice or aesthetic laser setting many insurance companies will require proof of formal laser procedure and safety training and many want to see the formal Laser Safety Program documentation for that business.

Finally, if an accident occurs and litigation results, you are left extremely vulnerable without such an ANSI based safety program - whether it had anything to do with the accident or not. The bottom line is that ALL facilities that utilize lasers on people for medical, surgical, cosmetic, aesthetic, dental or healing purposes MUST have an ANSI compliant Laser Safety Program and appointed Medical Laser Safety Officer.

Our Medical Laser Safety Programs go into much more detail, but this should get you started with understanding the issues.

### **How we can help:**

Your first step is appoint ONE LSO. Once your LSO is appointed they will need to assess the potential laser hazards in your workplace and effect the knowledgeable control of those hazards, documented by a written set of Laser Safety Policies and Procedures. Your LSO will need to perform a formal audit of the Laser Safety Program periodically, and ANSI suggests once every year. Furthermore, they will need to have written documentation of Laser Safety training for ALL personnel that might have occasion or work in the laser environment. You'll need the correct Laser Safety Eyewear and appropriate Laser Warning Signs. **Here's where we can help** - some are available here for free, and others for purchase at reasonable fees:

[www.LaserTraining.org](http://www.LaserTraining.org) Look under the "Resources and Links" page

- [Sample Laser Safety Policies for a Hospital - free](#)
- [Sample Laser Safety Policies for an Aesthetic Laser Practice - free](#)
- [Laser Warning Signs - free](#)
- [Lasers in Medicine & Surgery Manual - free but you must register](#)
- [Laser Safety Equipment & Accessories - scroll down that page to that section \(we just list them - we don't sell them\)](#)
- [Laser Safety Audits - conducted at your facility](#)

Under the Laser course page you'll find:

- [Medical Laser Safety Officer Training](#)
- [Advanced Medical Laser Safety Officer Training- Hands-on with lasers](#)
- [In-House Laser Safety & Hands-on training for staff, surgical or aesthetic](#)
- [Aesthetic Laser & Light Based Procedures Training](#)

### **Laser Safety versus Clinical Treatment Safety - Two Separate Issues:**

Let's be very clear about this from the beginning. Establishment of an ANSI compliant Laser Safety Program, and the role of the LSO, is to maintain a safe working environment around Lasers. It is NOT to prevent patient injuries from inappropriate laser settings or use, nor to ensure that the actual laser procedure is performed correctly. Those are clinical issues that certainly must be addressed by the facility and users, but they have nothing at all to do with Laser Safety Officers and your laser safety program. Patient treatment safety comes through proper clinical training, licensing where applicable and a quality control or peer review process separate from the ANSI Laser Safety Program.

### **The Medical Laser Safety Officer (MLSO) - One LSO per facility:**

The very first step in establishing your Laser Safety Program is the appointment of a Laser Safety Officer (LSO). There are no prerequisites nor qualifications for who may be the LSO. They are simply appointed by the facility management or business owner. Practice owners should really have the same training and knowledge of the LSO whether they assume that role or not because they are ultimately responsible for ensuring that the program is properly established. The LSO is a manager and administrator of the safety program. They may or may not ever touch the actual laser equipment.

In a hospital this can be a surgical nurse, biomed, or health & safety personnel. But remember that they are responsible for the program throughout the entire facility in all departments - not just surgery. You don't appoint an LSO for individual departments. If inspected by JCAH or OSHA the person will want to speak with THE LSO - not several. In addition it's important to point out that the nurse or technician running the equipment for a physician is not necessarily the LSO - they are the laser operators - although one of them could also assume the LSO role. Because authority and responsibility of the LSO crosses all departmental lines you'll frequently find that they come from areas like Biomedical Engineering, or Health and Safety, because they already deal with all the departments. If you do have lasers used in various departments then they will all work under the umbrella of the facilities overall laser safety policies, but they certainly can be tailored to meet individual department differences. There will be Laser Operators working in those departments under the authority of the facility LSO, and if you so choose you can designate Deputy LSO's or Laser Safety Site Contacts for those departments. This also works well when the facility has separate campuses. You can have one overall LSO and then appoint certain assistants to oversee the program at each campus. Many hospitals will therefore train and sometimes certify multiple LSO's for their facility, with the idea that these "assistants" can take over if the LSO leaves employment. An LSO does not have to be physically in the facility all the time.

Small office and aesthetic practices frequently just have the practice or business owner assume the responsibilities of the LSO, although you certainly can appoint one of the staff to this role as well. Laser assistants and operators within each facility then work under the authority of that LSO and the company Laser Safety Policies.

International Certification is available for Medical Laser Safety Officers (MLSO), through the National Council on Laser Certification ([www.LaserCertification.org](http://www.LaserCertification.org)) Such Certification is desirable and a worthwhile professional credential (like the other laser certifications) and is a recommendation, but not a requirement, of the ANSI standards. For those individuals that have a Medical Laser Safety Officer Certification through the Board of Laser Safety (BLS) and wish to convert back to the longer established NCLC Certification, you may convert your existing Certification at no charge. Details are in the renewal application forms on the website [www.LaserCertification.org](http://www.LaserCertification.org)

Most states have no requirements for Laser Safety Officers. The handful that do require a formal Certificate of Laser Training as a Laser Safety Officer for an 8 hour or more

course. Our programs will meet this requirement for you - seminars or online/home-study. No Certification required. Some states have a requirement for registration of your lasers with the state, and on these forms the name of the Laser Safety Officer for that facility is required, although most don't ask for the training documentation. You have to check with your own state on these requirements.

A Medical Laser Safety Officer (MLSO) is different than an Industrial or Scientific Laser Safety Officer, in that the MLSO is not required to perform measurements and make calculations to determine hazard zones and eye safety requirements. This is because medical laser manufacturers must pre classify their laser "systems" (not just a laser head) and this minimizes or eliminates the need for such calculations. MLSO's may simply follow manufacturer recommended practices or other sources of laser safety information.

### **Safety Policies, Nominal Hazard Zone and Laser Treatment Controlled Areas:**

Although I've provided the link above for a template of some suggested laser safety policies, there really is no "cookie cutter" set of required policies that you must follow. They are individual to each facility and up to the informed judgment of the LSO. Central to Laser Safety Policies will be the designation of the Nominal Hazard Zone (NHZ) where safety eyewear will be required for everyone within that zone. There is a myth that this zone is the entire room so that anyone in this room must wear their laser safety glasses. This is not true and is not ANSI based. The LSO solely determines the extent of the NHZ and in many surgical laser cases the NHZ is actually quite small, and sometimes confined to the endoscopic cavity so that glass may not be required. This is probably most true with the use of Ho:Yag lasers - no safety glasses are really required. In an aesthetic practice there is also no requirement for the NHZ to be the entire room but it usually works out that way both because of the types of lasers used and the fact that aesthetic treatment rooms are fairly small, compared to a larger operating room.

The Laser Treatment Controlled Area (LTCA) is the entire room, whether or not the NHZ is that large. Signs must be posted on all entryways to the room, windows must be covered IF the wavelength passes through glass and IF the window is inside the NHZ. Only people with documented Laser Safety Training are permitted to be in the room (patient's excepted), and the room must be supervised by a person training in laser safety. This would be the Laser Operator if a physician is performing the procedure, or the actual Laser Operator in the case of non physician aesthetic laser operators.

### **Training - ALL personnel that might have occasion to work in or around the laser environment:**

ANSI is quite specific about this. In a hospital it covers ALL PERIOPERATIVE PERSONNEL, and in an office setting it would essentially include ALL EMPLOYEES. For those that aren't working directly with the laser but might only be in the room or down the hall, a basic laser safety inservice will suffice. A simple sign-in sheet for your own inservice will suffice if you want to do it yourself. Those actually working the laser cases or operating the equipment as the "operator" will require more in-depth training, and the Medical Laser Safety Officer requires the most training - aside from clinical

training. Those that are performing the actual procedures must of course have appropriate clinical training. We do have programs offered as seminars or home-study/online that can meet these requirements. A hierarchy of such training available from us includes:

- Laser Safety Inservice - the short 20 minute generic presentation on Laser Safety for staff that aren't actually working with the equipment or scrubbed on cases. These are available as affordable packages if you want to use them for your entire staff.
- Surgical Laser Principles & Safety - a more in-depth 4 hour presentation for those directly working with the equipment or scrubbed on cases. – Mostly surgical.
- Medical Laser Safety Officer - initial and advanced, starts with the Surgical Principles program above and expands into more administrative, ANSI and accident issues. Advanced includes hands-on work with lasers.
- Clinical Laser Training - for Aesthetic Procedures we offer a one day hands-on orientation with a wide variety of lasers, and also refer to various proctors for our students. . For surgical cases we offer in-house training with qualified surgical faculty in any specialty.

There is no requirement on who may do the training for your staff if you deem them to be otherwise qualified. Frequently the LSO is the trainer because they are supposed to have the most knowledge, aside from clinicians actually doing the procedures.

### **Safety Audits:**

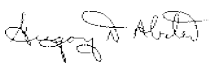
Whether you are a large Medical Center or a small one-laser hair removal office, you are still required to have formal Laser Safety Audits. ANSI suggests that they be done yearly but allows the LSO discretion in performing them as deemed appropriate. This is a formal review with a written report that considers all of your written safety policies, credentialing requirements for users and assistants, physically inspects all of your lasers and safety equipment and accessories, and assesses your actual laser operations and compliance with your policies. The written report is kept in your records.

The Safety Audit would be particularly relevant in the event of an accident and litigation, particularly if your policies were found to be outdated or irrelevant to your current operations.

If you would like professional help in conducting your Laser Safety Audit, or consultation regarding your safety program in general, visit the page <https://lasertraining.org/Laser-Safety-Audits---Consults.html> For hospitals and ambulatory surgery centers - if you would like more comprehensive help with your entire laser safety program, including safety training for all hospital staff, physicians, operators and laser safety officers, please review our Laser Safety Program Management information at <https://lasertraining.org/Library/LSMP-Flyer2511.pdf>

I hope this introduction to your Laser Safety Program and LSO has been helpful to you. If you'd like complete training as a MLSO for you or your staff please come to us. We'll ensure that they are knowledgeable and competent in this area.

Regards, Greg



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[www.LaserTraining.org](http://www.LaserTraining.org)