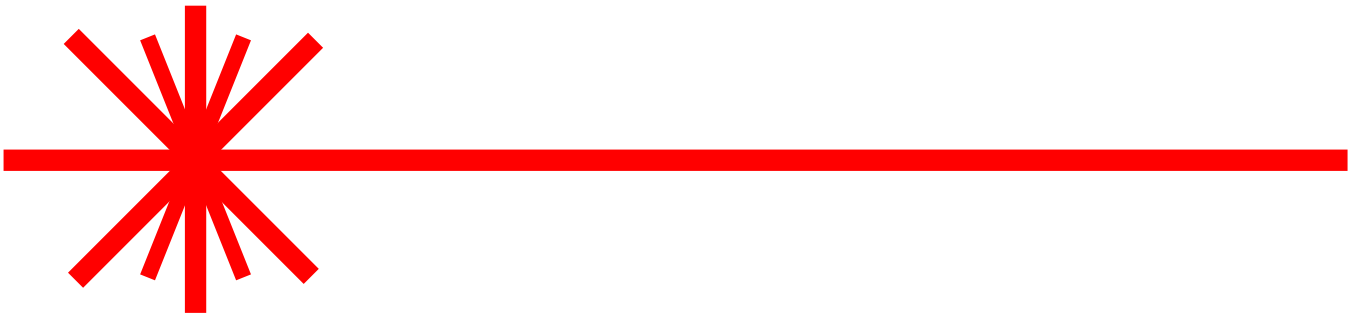


The New York Eye and Ear Infirmary

LASER SAFETY POLICIES AND PROCEDURES MANUAL



Handwritten signature of Paul A. Sidoti, M.D.

Paul A. Sidoti, M.D.
Chairman, Laser
Technology Committee

Handwritten signature of Arthur Tortorelli.

Arthur Tortorelli
Laser Safety Officer

**The New York Eye & Ear Infirmary
LASER SAFETY POLICY AND PROCEDURE MANUAL
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This manual **must** be located with each laser or laser system in this institution. The following areas have Lasers or laser systems: North Building - 2nd floor operating room, 4th floor ASU, and the Retina Center (8th floor); South Building - the Glaucoma Center 1st floor Area B.

REVISION INFORMATION

THE NEW YORK EYE AND EAR INFIRMARY Laser Technology Committee: Laser Safety								
Distribution:			Title: Laser Technology Committee Table of Organization				Policy No. 1.0	
Original Date of Issue: 1/28/97						Patient Population		
						Infant	x	
REVIEWED	02/03	02/05	6/08			Pediatric	x	
						Adolescent	x	
REVISED						Adult	x	
						Geriatric	x	
Prepared by:					Approved by:			
 Arthur Tortorelli Laser Safety Officer					 Paul Sidoti, Chairman Laser Technology Committee			

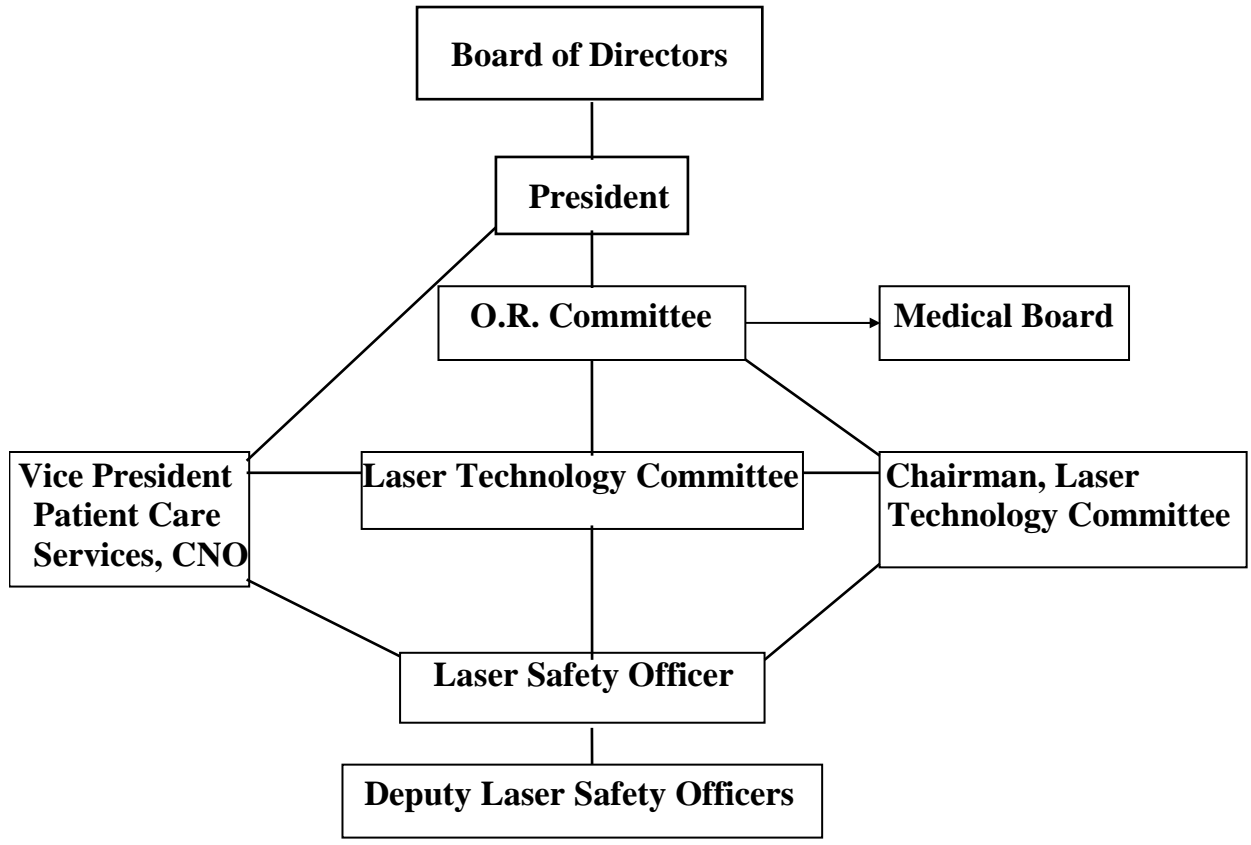
POLICY

It is the policy of The New York Eye and Ear Infirmary to develop and implement procedures for delineating a Table of Organization which shall be maintained and made available to the Board of Directors, Medical Board, and Administrative staff.

The purpose of this policy is to communicate the organizational relationships in effect within the Medical and Administrative staff.

PROCEDURE

1. A formal Table of Organization shall be established by the Laser Technology Committee and approved by the President.
2. The Table of Organization shall be distributed to the Safety Committee, O.R. Committee, the Medical Board, the Board of Directors, Management Council and Department Heads.
3. The Table of Organization shall be distributed to new employees during their orientation sessions.



LASER TECHNOLOGY COMMITTEE
POLICY AND PROCEDURE GUIDELINES FOR
OBTAINING LASER SURGERY PRIVILEGES

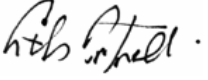

THIS GUIDELINE REFERS TO POLICY NUMBER 2 WHICH CONCERNS PROCEDURES FOR OBTAINING LASER SURGERY PRIVILEGES AS RELATED TO LASER SAFETY DOCUMENTATION.

- 1) Obtain an application from the Medical Staff Office.
- 2) Submit proof of current staff privileges.
- 3) Documentation for laser safety training SHALL be required.
- 4) Residency training MUST be verified by a letter from the Director of the program.
- 5) Each physician MUST complete an equipment orientation given by the Laser Safety Officer or designee, of each NEW laser to be used, PRIOR to first clinical use.
- 6) If the physician has current privileges but requests use of NEW TECHNOLOGY lasers,
documentation of proof of physics, tissue reactions, safety and hands-on training, SHALL be provided PRIOR to first clinical use.

-

The complete policy and procedure on the following page shall be read to insure compliance with Obtaining Laser Surgery Privileges.

REVISION INFORMATION

THE NEW YORK EYE AND EAR INFIRMARY Laser Technology Committee: Laser Safety								
Distribution:		Title: Procedure for Obtaining Laser Surgery Privileges					Policy No. 2.0	
Original Date of Issue: 1/28/97						Patient Population		
						Infant	x	
REVIEWED		02/05	6/08			Pediatric	x	
						Adolescent	x	
REVISED	2/10/03					Adult	x	
						Geriatric	x	
Prepared by:					Approved by:			
 Arthur Tortorelli Laser Safety Officer					 Paul Sidoti, Chairman Laser Technology Committee			

POLICY

It is the policy of The New York Eye and Ear Infirmary to develop and implement procedures for obtaining laser surgery privileges. The scope of this policy will reflect the medical staff with current surgery privileges. All laser surgery privilege applications will be submitted to the Credentials Committee of the Medical Staff.

The application must include proof of laser safety training, as outlined in this policy.

PROCEDURE

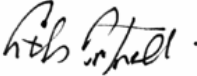

1. Applications:
 - a. Obtain an application from the Medical Staff Office in the Administrative Suite.
 - b. Submit proof of current staff privileges
 - c. Documentation for laser safety training shall be required. This may be accomplished either by attendance at an approved laser safety training course or through the laser safety training manual and self-assessment test which will be provided by The Infirmary. The Medical Staff Coordinator will provide the laser safety training manual and self-assessment test to those physicians who request them.
 - d. Residency training must be verified by a letter from the Director of the program and it must be equivalent in substance to a training course as stated above. The Infirmary will conduct an annual laser safety course for all new residents.

2. Each physician must complete an equipment orientation, given by the Laser Safety Officer or designee, for each new laser to be used, prior to first clinical use.
3. If the physician has current privileges, but requests use of new technology lasers and laser systems, he/she will be required to document proof of didactics relating to the physics, safety and tissue responses specific to the new wavelength, and tissue laboratories designed to demonstrate safe and appropriate surgical applications of the laser.
4. Completed applications will be submitted to the Medical Staff Office and will then be forwarded to the Credentials Committee for initial verification and recommendations. The Medical Board will grant final approvals.

REFERENCE

American National Standard For Safe Use of Lasers in Health Care Facilities ANSI Z136.3-1996

REVISION INFORMATION

THE NEW YORK EYE AND EAR INFIRMARY Laser Technology Committee: Laser Safety							
Distribution:		Title: Medical Surveillance Of Health Care Personnel Involved With The Use Of Lasers And Laser Systems				Policy No. 3.0	
Original Date of Issue: 1/28/97						Patient Population	
						Infant	x
REVIEWED	02/03	02/05				Pediatric	x
						Adolescent	x
REVISED			06/08			Adult	x
						Geriatric	x
Prepared by:				Approved by:			
 Arthur Tortorelli Laser Safety Officer				 Paul Sidoti, Chairman Laser Technology Committee			

POLICY

It is the policy of The New York Eye and Ear Infirmary to develop and implement procedures which will determine the status of ocular health of all employees who will be working with Class 3B and Class 4 lasers prior to working with lasers, and following unprotected exposure to any form of laser energy, while working in this facility.

PROCEDURE

1. Visual acuity, color vision, and Amsler grid exams will be performed on all staff involved with the use of lasers and laser systems, and all incidental personnel working in a laser environment.
2. Examination will be required if there is an unprotected exposure to any form of laser energy, while working in this facility.
3. Records will be maintained in employee health.
4. Employees will be responsible for complying with recommendations that may result from this examination.

REFERENCE

AMERICAN NATIONAL STANDARD FOR SAFE USE OF LASERS IN HEALTH CARE FACILITIES ANSI Z136.3-1996

LASER TECHNOLOGY COMMITTEE

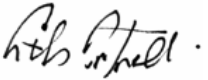

**POLICY AND PROCEDURE GUIDELINES FOR
CONTROLLED ACCESS TO THE LASER ROOM**

THIS GUIDELINE REFERS TO POLICY NUMBER 4 WHICH CONCERNS THE CONTROL MEASURES THAT SHALL BE FOLLOWED IN ORDER TO MAINTAIN A SAFE ENVIRONMENT FOR PATIENTS, AND HEALTH CARE PERSONNEL.

- 1) Post REGULATION DANGER LASER signs at eye level on the door of the laser room when the laser is in use.
- 2) Place SAFETY GOGGLES of appropriate wavelength and optical density for the laser in use at the entry where each door sign is posted. ALL PERSONS IN THE ROOM DURING THE LASER PROCEDURE MUST WEAR SAFETY GOGGLES.
- 3) All windows MUST be covered with shades or filters of appropriate optical density whenever a fiberoptic laser is used.
- 4) No one will be permitted to enter the laser room unless properly authorized and protected.
- 6) The laser shall not be operated when it is necessary to open the door
- 6) All safety procedures will be followed during service demonstrations.
- 7) The laser room key and the laser key must be secured when the procedure has been completed.

The complete policy and procedure on the following page shall be read thoroughly to insure compliance with Controlled Access to the Laser Room.

REVISION INFORMATION

THE NEW YORK EYE AND EAR INFIRMARY Laser Technology Committee: Laser Safety								
Distribution:			Title: Controlled Access To The Laser Room				Policy No. 4.0	
Original Date of Issue: 1/28/97						Patient Population		
						Infant	x	
REVIEWED						Pediatric	x	
						Adolescent	x	
REVISED						Adult	x	
	02/03	12/04	6/08			Geriatric	x	
Prepared by:					Approved by:			
 Arthur Tortorelli Laser Safety Officer					 Paul Sidoti, Chairman Laser Technology Committee			

POLICY

It is the policy of The New York Eye and Ear Infirmary to develop and implement procedures which will define the area in which control measures shall be applied, and to describe the control measures necessary in order to maintain a safe environment for patients, and for health care personnel (HCP). Class 3B and Class 4 lasers will be operated only in areas where traffic flow and compliance with all safety procedures can be monitored.

PROCEDURE

1. Regulation Danger laser signs will be posted at eye level on all doors that access a room where a laser will be operated. These signs will state all required information as described in the ANSI Z136.3 standard, and will be removed when the laser is not in use.
2. Safety goggles labeled with the appropriate wavelength and optical density will be available at the entry where each door sign is posted. In the Retina Center, safety goggles will be available at the Nurse's station located adjacent to the designated laser rooms, for patient's entrance to the room. For the rear door physician's entrance, goggles will be available at the door.
3. Glass windows will be covered with shades or filters of appropriate optical density whenever a fiber optic laser system is operational.
4. All safety procedures will be followed during service demonstrations.
5. No one will be permitted to enter into a laser room unless properly authorized, and protected.
6. The laser should not be activated when it is necessary to open the door, if the Near Hazard Zone (NHZ) extends to the doorway. The door(s) to the laser room MUST be closed when the laser is activated.

7. The laser room keys will be kept in a secured area in the designated laser rooms. In the Retina Center, laser keys will only be available from the nurse who shall keep them secured at all times. Physicians will be required to return the key to the nurse following use of the laser.

REFERENCE

American National Standard for Safe Use of Lasers in Health Care Facilities ANSI Z136.3-1996.



LASER TECHNOLOGY COMMITTEE
POLICY AND PROCEDURE GUIDELINES
FOR OCULAR SAFETY

THIS GUIDELINE REFERS TO POLICY NUMBER 5 WHICH CONCERNS THE PROCEDURES THAT SHALL BE FOLLOWED IN ORDER TO PREVENT OCULAR INJURIES TO PATIENTS AND HEALTH CARE PERSONNEL.

- 1) Appropriate eyewear (glasses or goggles of sufficient optical density for the wavelength in use) will be worn by EVERYONE working in the NEAR HAZARD ZONE while the laser is in operation. The eyewear must also have side shields to protect against peripheral injury and impact. The eyewear is color code coordinated with the laser for which it is to be used in order to facilitate proper selection.
- 2) Contact lenses are NOT ACCEPTABLE as protective eyewear. Prescription lens wearers MUST use appropriate laser safety eyewear.
- 3) If safety eyewear is damaged, it must not be worn. Damaged eyewear must be reported to the supervisor, and the Laser Safety Officer.
- 4) Any articulated arm or observer scope which is not shuttered MUST be capped when not connected to the handpiece.
- 5) The laser system MUST be placed in standby mode when the delivery optics are moved away from the target.

The complete policy and procedure on the following page shall be read thoroughly to insure compliance with Ocular Safety.

REVISION INFORMATION

THE NEW YORK EYE AND EAR INFIRMARY Laser Technology Committee: Laser Safety									
Distribution:			Title: Ocular Safety					Policy No. 5.0	
Original Date of Issue: 1/28/97							Patient Population		
							Infant	x	
REVIEWED		02/05					Pediatric	x	
							Adolescent	x	
REVISED	2/10/03		06/08				Adult	x	
							Geriatric	x	
Prepared by:					Approved by:				
 Arthur Tortorelli Laser Safety Officer					 Paul Sidoti, Chairman Laser Technology Committee				

POLICY

It is the policy of The New York Eye and Ear Infirmary to develop and implement procedures to prevent ocular injuries to patients receiving laser treatment, or to health care personnel (HCP) working with Class 3B and Class 4 lasers. Within the Near Hazard Zone (NHZ), all personnel will adhere to appropriate eye protection procedures during all laser applications. Service personnel, biomedical technicians, and those involved in demonstrations of equipment, will follow all safety procedures whenever a laser is in operation in this facility.

PROCEDURE

1. Appropriate eyewear will be worn by everyone in the NHZ while the laser is in operation. Appropriate eyewear consists of glasses or goggles of sufficient optical density to prevent ocular damage at the laser wavelength in use. Exception to this is the operator looking through an attached microscope/endoscope with a lens that has the appropriate optical density filter for the laser in use.
2. Prior to use, the operator and ancillary personnel will be responsible for selecting and examining eyewear for comfort, proper fit, and presence of labels describing both wavelength and proper optical density. The safety eyewear and lasers will be color coded to facilitate selection of the proper eyewear.
3. If eyewear is damaged, it must not be worn, and a report must be made to the Laser Safety Officer (LSO).
4. Contact lenses are not acceptable as protective eyewear. Prescription lens wearers must use appropriate laser safety eyewear.
5. All goggles must have side shields to protect from peripheral injury and impact.
6. Any articulated arm or observer scope, which is not shuttered, must be capped when not connected to the hand piece or the operating microscope.

7. The laser system must be placed in standby mode when the delivery optics are moved away from the target.

REFERENCE

American National Standard for Safe Use of Lasers in Health Care Facilities ANSI Z136.3-1996.

LASER TECHNOLOGY COMMITTEE

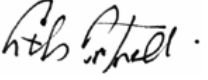

POLICY AND PROCEDURE GUIDELINES FOR RECORDING LASER USE IN THE LASER LOG BOOK

THIS GUIDELINE REFERS TO POLICY NUMBER 6 WHICH CONCERNS THE PROCEDURES FOR PROVIDING A TROUBLE SHOOTING GUIDE, AND TO SCHEDULE MAINTENANCE BY RECORDING USE OF THE LASER IN THE APPROPRIATE LASER LOG BOOK.

- 1) Physicians who perform laser surgery MUST make an entry in the appropriate laser log book each time the laser is used, including non surgical applications (i.e. suture lysis, research projects). Please refer to the policy and procedure on the following page for the specific information required to be logged.
- 2) An entry MUST be made in the appropriate log book for each device used during a laser procedure (i.e. ALI initially started with the argon laser, but completed with the Nd: YAG laser).
- 3) Each time the laser malfunctions or is shutdown, an entry MUST be made in the appropriate laser log book indicating the type, date and time of the occurrence. The date and time the laser is placed back in to service will also be recorded in the log book.

The complete policy and procedure on the following page shall be read to insure compliance with Recording Laser Use in the Laser Log Book.

REVISION INFORMATION

THE NEW YORK EYE AND EAR INFIRMARY Laser Technology Committee: Laser Safety								
Distribution:			Title: Recording Laser Use in the Laser Log Book				Policy No. 6.0	
Original Date of Issue: 1/28/97						Patient Population		
						Infant	x	
REVIEWED		02/03	02/05	06/08		Pediatric	x	
						Adolescent	x	
REVISED	12/07/98					Adult	x	
						Geriatric	x	
Prepared by:					Approved by:			
 Arthur Tortorelli Laser Safety Officer					 Paul Sidoti, Chairman Laser Technology Committee			

POLICY

It is the policy of The New York Eye and Ear Infirmary to develop and implement procedures which will enable the recording of all laser procedures for the purpose of scheduling maintenance service calls, and for providing a troubleshooting guide.

PROCEDURE

1. Physicians who perform laser surgery must enter the following information in the appropriate laser log book each time the laser is used, including no surgical applications (i.e. suture lysis, research projects):
 - a. date
 - b. patient's name
 - c. patient's unit number, if a clinic or in-patient
 - d. surgeon's name
 - e. assistant surgeon's name, if applicable
 - f. technician's or nurse's name, if applicable
 - g. anesthesia
 - h. laser procedure
 - i. pre operative diagnosis

- j. post operative diagnosis
 - k. complications, if any
 - l. delivery system, if applicable
1. Each outpatient laser in the institution will have its own log book clearly identified on the cover of the book. Additionally, the laser model number and serial number will be inscribed on the inside cover to further facilitate the identification of the laser to which the book belongs.
 2. The 2nd floor and 4th floor operating rooms and the 6th floor private ENT offices will log all laser procedures in the computerized laser log.
 3. An entry must be made in the appropriate laser log for each laser device used during laser procedure (i.e. ALI initially started with the Argon but completed with the Nd:YAG laser).
 4. Each time the laser malfunctions, or is shutdown, an entry must be made in the appropriate log book indicating the type, date, and time of occurrence. The date and time the laser is placed back into service must also be entered into the appropriate log book.

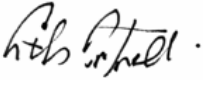

LASER TECHNOLOGY COMMITTEE
POLICY AND PROCEDURE GUIDELINES FOR
CRITERIA FOR LASER SHUTDOWN

THIS GUIDELINE REFERS TO POLICY NUMBER 7 WHICH CONCERNS IDENTIFICATION OF CONDITIONS WHICH MAY EXIST REQUIRING THE IMMEDIATE SHUTDOWN OF THE LASER.

- 1) If the laser system fails for any reason, it MUST be shutdown, and a report made to the Laser Safety officer or the Deputy Laser Safety Officer.
- 2) Log the occurrence in the appropriate laser log book, including date, time and description of the failure.
- 3) DO NOT activate the laser or laser system until given permission by the Laser Safety Officer.
- 4) Reduction of power 5% or greater by local power company, except for diode lasers.

The complete policy and procedure on the following page shall be read thoroughly to insure compliance with Criteria for laser Shutdown.

REVISION INFORMATION

THE NEW YORK EYE AND EAR INFIRMARY Laser Technology Committee: Laser Safety								
Distribution:		Title: Criteria for Laser Shutdown					Policy No. 7.0	
Original Date of Issue: 1/28/97						Patient Population		
						Infant	x	
REVIEWED		02/03	02/05	06/08			Pediatric	x
							Adolescent	x
REVISED	7/16/99						Adult	x
							Geriatric	x
Prepared by:					Approved by:			
 Arthur Tortorelli Laser Safety Officer					 Paul Sidoti, Chairman Laser Technology Committee			

POLICY

It is the policy of The New York Eye and Ear Infirmary to develop and implement which will identify conditions, which may exist requiring the immediate, shut down of the laser. If potentially hazardous conditions develop while the laser is being tested or operated, the equipment should be shut down by the operator and a report should be made to the Laser Safety Officer.

PROCEDURES

1. Turn the laser off and remove the key should any of the following conditions occur:
 - a. shutter failure
 - b. failure of the helium-Neon aiming beam
 - c. electrical hazard or broken power cord
 - d. water or coolant leakage
 - e. fire
 - f. inability to calibrate fiber properly
 - g. broken fiber during operation
 - h. unsafe or inappropriate use
 - i. surgeon request
 - j. staff non-compliance with safety policy

- k. unexplained or abnormal operation.
 - l. power reduction by local power company to the hospital greater than 5%, except for diode lasers.
2. Document fault or hazardous condition in the laser log, and operative record.
 3. Report condition / incident, to the LSO BEFORE calling for service or repairs.
 4. Do not turn the laser on following a shut down, until given permission by the Laser Safety Officer.

REFERENCE

American National Standard for Safe Use of Lasers in Health Care Facilities ANSI Z136.3 - 1996.

LASER TECHNOLOGY COMMITTEE

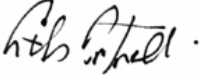
**POLICY AND PROCEDURE GUIDELINES FOR
ELECTRICAL HAZARDS INVOLVING LASER EQUIPMENT**

THIS GUIDELINE REFERS TO POLICY NUMBER 8 WHICH CONCERNS THE PROCEDURES THAT SHALL BE FOLLOWED IN ORDER TO PREVENT ELECTRICAL HAZARDS INVOLVING LASER EQUIPMENT.

- 1) NO EXTENSION CORDS shall be used with any laser equipment.
- 2) Dedicated outlets will be used for any laser requiring GREATER THAN a 110 volt source.
- 3) Solutions must not be placed on or near any laser or related equipment.
- 4) Visual inspection of the laser system shall be performed by the OPERATOR prior to activating the system to insure there are no hazards present.
- 5) Laser equipment brought in for demonstration, evaluation or seminars MUST be inspected PRIOR to use by the Laser Safety Officer.
- 6) Defects or damage to ANY ELECTRICAL COMPONENT must be reported to the Laser Safety Officer and repaired prior to clinical use.

The complete policy and procedure on the following page shall be read thoroughly to insure compliance with Electrical Hazards Involving Laser Equipment.

REVISION INFORMATION

THE NEW YORK EYE AND EAR INFIRMARY Laser Technology Committee: Laser Safety								
Distribution:			Title: Electrical Hazards Involving Laser Equipment				Policy No. 8.0	
Original Date of Issue: 1/28/97						Patient Population		
						Infant	x	
REVIEWED	02/03	02/05	06/08			Pediatric	x	
						Adolescent	x	
REVISED						Adult	x	
						Geriatric	x	
Prepared by:					Approved by:			
 Arthur Tortorelli Laser Safety Officer					 Paul Sidoti, Chairman Laser Technology Committee			

POLICY

It is the policy of The New York Eye and Ear Infirmary to develop and implement procedures which will prevent electrical accidents involving laser equipment.

PROCEDURE

Personnel will review hospital policy regarding the use and handling of electrical equipment.

All laser equipment will be inspected quarterly by contract service and the LSO for electrical leakage and labeled at the time of inspection, according to hospital policy.

Laser equipment being brought in for evaluations, demonstration, or seminars must be inspected prior to operation in a patient care area by the LSO, the engineering department and the contract service company.

Dedicated outlets will be designated for any laser requiring greater than a 110-volt source.

No extension cords will be used on laser equipment.

Visual inspection of the laser system shall be performed by the operator prior to activating the system to insure there are no hazards present.

Defects or damage to any electrical component of the laser will be reported to the LSO and repaired prior to clinical use.

Solutions must not be placed on or near the laser.

REFERENCE

American National Standard for Safe Use of Lasers In Health Care Facilities ANSI Z136.3-1996

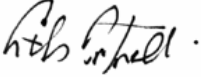

LASER TECHNOLOGY COMMITTEE
POLICY AND PROCEDURE GUIDELINES FOR
NON-BEAM HAZARDS

THIS GUIDELINE REFERS TO POLICY NUMBER 9 WHICH CONCERNS THE PROCEDURES THAT WILL RECOGNIZE AND EFFECTIVELY DEAL WITH POTENTIAL NON-BEAM HAZARDS INVOLVING LASER PROCEDURES.

- 1) NEVER USE ALCOHOL in THE OPERATIVE FIELD.
- 2) DO NOT boil, autoclave or use alcohol on laser lenses.
- 3) NEVER place a hot fiber directly on paper drapes.
- 4) Use fire retardant drapes, damp packs or pads.
- 5) ALWAYS place the laser in stand-by mode when a procedure is interrupted or terminated.
- 6) Oxygen levels shall NOT EXCEED 28% in the operative field when using a CO₂ laser.
- 7) Use a smoke evacuator whenever plume management is anticipated. The distal collection port shall not be more than 2 cm from the impact site, when practical.
- 8) All tubing, connectors, adapters, and wands shall be changed after each case, and disposed of according to biohazard procedures.

The complete policy and procedure is on the following page and shall be read thoroughly to insure compliance with Non-Beam hazards.

REVISION INFORMATION

THE NEW YORK EYE AND EAR INFIRMARY Laser Technology Committee: Laser Safety								
Distribution:			Title: Non-Beam Hazards				Policy No. 9.0	
Original Date of Issue: 1/28/97						Patient Population		
						Infant	x	
REVIEWED	02/03	02/05	06/08			Pediatric	x	
						Adolescent	x	
REVISED						Adult	x	
						Geriatric	x	
Prepared by:					Approved by:			
 Arthur Tortorelli Laser Safety Officer					 Paul Sidoti, Chairman Laser Technology Committee			

POLICY

It is the policy of The New York Eye and Ear Infirmary to develop and implement procedures which will recognize and effectively deal with a variety of potential non-beam hazards which may present during laser procedures. Non-beam hazards are the purview of safety and industrial hygiene personnel, who will effect the appropriate hazard evaluation and control.

PROCEDURE

1. FIRE

- A. Never use alcohol in the operative field. Fibers may be rinsed in hydrogen peroxide or saline intraoperatively.
- B. Each lens used during a laser procedure must be washed using a solution of soap and water to aseptinize the lens. Do not boil, autoclave or use alcohol on these lenses.
- C. Never place a hot fiber directly on paper drapes. Wait until tip is cool before contact is made with flammable material.
- D. Use fire-retardant drapes, damp packs or pads.
- E. Put the laser system in standby mode when a procedure is interrupted or terminated.
- F. Oxygen levels shall not exceed 28% in the operative field during use of a CO₂ laser.
- G. Avoid laser beam exposure of the sheaths of flexible fiber endoscopes, since many of the sheaths are flammable.

2. PLUME MANAGEMENT

- A. Remove laser generated airborne contaminants from the energy impact site to reduce the transmission of potentially hazardous particulates.
- B. Position smoke evacuator in the operating room whenever plume is anticipated.
- C. Check operation of the plume management system prior to the beginning of each case.

- D. Check the plume monitor and, if needed, install a clean filter.
 - E. In-line filters with a minimum 0.3 um filtration will be placed between wall suction and the fluid canister for:
 - Suction line not connected to evacuator
 - Cases producing minimal plume
 - Failure of the evacuator before or during operation
 - F. Distal collection port must be no more than 2 cm from impact site, when practical.
 - G. All tubing, connectors, adapters, and wands will be changed per case, and disposed of according to biohazard procedures.
3. ELECTRICAL SHOCK
- A. Lasers shall be installed and operated in conformity with the National Electrical Code.

REFERENCE

1. Ocular Instruments-- manufacturer's instructions.
2. American National Standard for Safe Use of Lasers in Health Care Facilities ANSI Z136.3 - 1996.

LASER TECHNOLOGY COMMITTEE



**POLICY AND PROCEDURE GUIDELINES FOR
HANDLING OF LASER FIBER DELIVERY SYSTEMS**

THIS GUIDELINE REFERS TO POLICY NUMBER 10 WHICH CONCERNS PROCEDURES THAT SHALL PROMOTE SAFE AND PROPER HANDLING OF LASER FIBER DELIVERY SYSTEMS.

- 1) Appropriate eye safety filters SHALL be used with endo/microscopes.
- 2) Laser room windows SHALL be covered completely with appropriate filters, if necessary.
- 3) Fibers and associated equipment SHALL be positioned for to permit safe traffic patterns in the room.
- 4) Examine the fiber for breaks or damage. If damage or deficiencies are noted, acquire another fiber.
- 5) DO NOT use clamps or other devices to secure the fiber in the operative field.
- 6) NEVER operate the laser unless the aiming beam and the tip of the fiber is visible beyond the endoscope.

The complete policy and procedure is on the following page shall be read thoroughly to insure compliance with Handling of Laser Fiber Delivery Systems.

REVISION INFORMATION

THE NEW YORK EYE AND EAR INFIRMARY Laser Technology Committee: Laser Safety									
Distribution:			Title: Handling of Laser Fiber Delivery Systems				Policy No. 10.0		
Original Date of Issue: 1/28/97							Patient Population		
							Infant	x	
REVIEWED	02/03	02/05	06/08				Pediatric	x	
							Adolescent	x	
REVISED							Adult	x	
							Geriatric	x	
Prepared by:					Approved by:				
 Arthur Tortorelli Laser Safety Officer					 Paul Sidoti, Chairman Laser Technology Committee				

POLICY

It is the policy of The New York Eye and Ear Infirmary to develop and implement procedures which will promote safe and proper handling of laser fiber delivery systems and to limit the potential for fiber breakage, damage and reduced efficiency during clinical laser procedures. Personnel handling laser fibers will assure compliance with all safety procedures and will consider the fiber an extension of the laser system, governed by applicable standards and regulations.



PROCEDURE

1. Appropriate eye safety filters will be used with endo/microscopes.
2. Laser room windows will be covered completely with appropriate filters, if necessary.
3. Fibers and associated equipment will be positioned to allow for safe traffic patterns in the room.
4. The fiber will be examined for breaks or damage of the distal tip, the proximal connector, and the catheter sheath. Fiber will be calibrated in accordance with manufacturer's directions. If deficiencies or damage are noted, another fiber must be obtained.
5. Do not use clamps or other instruments to secure fiber in the operative site.
6. Always use coaxial cooling that is appropriate to the procedure.
7. Never operate the laser unless you see the aiming beam and the tip of the fiber beyond the end of the endoscope.
8. Monitor the fiber for distortion of the beam, decreased power transmission, and accumulation of debris on the tip.

REFERENCE

1. American National Standard for Safe Use of Lasers in Health Care Facilities ANSI Z136.3-1996.

REVISION INFORMATION

THE NEW YORK EYE AND EAR INFIRMARY Laser Technology Committee: Laser Safety								
Distribution:		Title: CONTROLLED ACCESS TO THE GLAUCOMA CLINIC LASER					Policy No. 11.0	
Original Date of Issue: March 14, 2005						Patient Population		
						Infant	x	
REVIEWED						Pediatric	x	
						Adolescent	x	
REVISED	06/08					Adult	x	
						Geriatric	X	
Prepared by:					Approved by:			
 Arthur Tortorelli Laser Safety Officer					 Paul Sidoti, Chairman Laser Technology Committee			

POLICY

It is the policy of The New York Eye and Ear Infirmary to develop and implement procedures which will define the area in which control measures shall be applied, and to describe the control measures necessary in order to maintain a safe environment for patients, and for health care personnel (HCP). Class 3B and Class 4 lasers will be operated only in areas where traffic flow and compliance with all safety procedures can be monitored.

PROCEDURE

- During normal working hours, ONLY the glaucoma department technicians will provide access to the glaucoma clinic laser. Under no circumstances will the receptionist staff provide access to this room.
- During hours when the glaucoma department technicians are not present (after 6:00 pm Monday through Friday or Saturdays when eye clinic is in session), the key to the laser room and the key to the laser supply cabinet are available at the nurses triage area.
 1. The physician requesting the key to the room and the nursing personnel issuing the key must sign the log sheet when the key is issued, and when it is returned (date, time key issued, time key returned).
 2. The person issuing the key will also be responsible to insure that the paper work has been correctly filled out prior to permitting the physician access to the room.
 3. It is the responsibility of the physician and nursing personnel to insure that all laser safety policies and procedures are followed.
- It shall be the responsibility of the physician to insure the following has been done upon completion of the laser procedure:
 1. the laser has been turned off.

2. lenses used (if any) are cleaned and returned to the cabinet.
 3. the laser key is returned to the cabinet and the cabinet is locked.
 4. the laser sign is reversed on the door to the laser room.
- If the nursing personnel find any of the above items not done, he/she will contact the physician and instruct him/her to return and properly secure the laser room. Should the physician fail to return, the nursing personnel shall be responsible for securing the laser room and filing an occurrence report with the Laser Safety Officer.
 - When the general clinic ends, and on holidays and weekends (after Saturday clinic ends) all laser procedures are to be done in the Retina Center.

Under no circumstances, unless previously arranged, is the glaucoma clinic laser to be used by attending physicians for their private patients.