**Medical Laser Procedures – Eye Protection**

*Purpose:* To provide eye safety and protection for laser team members and patients during procedures

Eye safety has to be enforced because Class 4 and Class 3B laser can cause eye injury either by direct contact with the beam or by reflection of the beam off a reflective surface.

1. During laser procedures performed under general anesthesia or regional anesthesia, the patient’s eyes will be protected with moistened gauze pads or appropriate laser protective eyewear.
2. During local anesthesia laser procedures, the patient’s eyes will be protected by moistened pads, towels, special laser eye shields, or appropriate protective eyewear. Laser eye shields must be reprocessed according to the manufacturer’s written instructions. If steam sterilization is used, adequate cooling of the eye shields is mandatory before use to avoid corneal burns.
3. All persons (including visitors) within the laser treatment area must wear appropriate eye protection during the laser procedure.
4. Different laser wavelengths require different eyewear. Nd: YAG or argon protective eyewear should have an optical density of at least 4.0.
5. For CO2 procedures:
6. Side shields are recommended for anyone near the laser-tissue interaction site.
7. Prescription glasses are not considered appropriate eye protection because the lens material may not stop the transmission of the laser beam.
8. Half-glasses and contact lenses are not considered appropriate eye protection because the sclera is left exposed.
9. Protective eyewear must be cleaned, dried, inspected, and stored according to the manufacturer’s written protocols.
10. Protective eyewear must be regularly inspected by the laser team members. Any scratched surface will allow the laser beam to be transmitted, and the wearer’s eye could be harmed. Protective eyewear should be stored properly to prevent damage or scratching of the lenses.
11. Protective eyewear inventory is checked and counted routinely.
12. When using the laser through a microscope or endoscope, all persons in the laser treatment room or operating room must use appropriate eye protection.
13. Warning signs stating that eye protection is needed must be placed on all access doors to the laser treatment room or surgical room where a laser procedure is to be conducted. Appropriate protective eyewear should be available at all door entrances.
14. Access doors to the laser treatment area should be closed during the laser procedure.
15. Windows must be covered appropriately, depending on the wavelength of the laser used.
16. To prevent reflection of the laser beam, special precautions must be followed. Instruments that are not dulled or ebonized should be covered with wet towels or sponges to decrease reflection.