

# **UNIVERSITY OF KANSAS - LAWRENCE CAMPUS LABORATORY SAFETY MANUAL PART V - LASER SAFETY PLAN**

## **Section 5) Medical Factors to Consider in Laser Safety**

### **5.1) Introduction**

This chapter identifies several factors (not necessarily complete) that may need to be considered in the establishment of laboratory-specific safety requirements and/or procedures when non-exempt lasers are being used. This chapter should be used together with Chapter 5 of Part I on exposure assessment and medical surveillance.

### **5.2) Medical Factors in Evaluating Access Restriction**

The Authorized Laboratory Supervisor shall:

5.2.1) Inform users that some individuals may have special sensitivity (for example, allergies) to products created by the laser beam or chemicals that must be used in the operation of the laser. In such cases, Part II-section 5.2.1 applies.

### **5.3) Medical Care**

#### **5.3.1) Emergency Response to Exposure to Hazardous Non-exempt Lasers**

The Authorized Laboratory Supervisor shall:

5.3.1.1) Add laboratory-specific procedures to the general emergency procedures described in I-2.9 and I-5.3 that address any actions that need to be taken very quickly to reduce the magnitude of the medical consequences of the emergency if an evaluation indicates the need. The responding and attending medical services personnel need to know the type and level of exposure the person might have experienced.

Note: There may be no action other than obtaining medical assistance as soon as possible but the possibility that there are actions that could be taken needs to be explored.

#### **5.3.2) Effects of Acute Exposure above MPE levels**

5.3.2.1) Evaluate and address actions that should be taken if an individual receives a laser beam exposure that is potentially greater than the MPE.

#### **5.4) Laser Use Requiring Mandatory Medical Surveillance**

##### 5.4.1) Medical Surveillance for Level IV Laser Hazards

The Authorized Laboratory Supervisor shall:

5.4.1.1) Inform authorized users of their responsibility for medical surveillance with Watkins Student Health Center as described in 5.4.2 below. The costs of such surveillance shall be covered by the user's lab/Department.

Authorized resident users potentially exposed to laser beams assigned to Level IV shall:

5.4.1.2) Participate in the medical surveillance program arranged for them by the authorized laboratory supervisor.

##### 5.4.2) Nature of the Medical Surveillance Program

- a) The purpose of laser medical surveillance is twofold. The first purpose is to establish a baseline of ocular conditions before exposure to laser radiation.
- b) The second purpose is to detect and document, as early as possible, ocular damage in the event of a suspected exposure incident. Both purposes serve to assess the effectiveness of control measures and to promptly institute appropriate therapeutic measures.

Note: Laser medical surveillance includes a preliminary baseline eye exam. Additional eye exams may be required in the event of exposure or suspected exposure to laser radiation above the MPE. An eye exam also is required upon termination of laser work or upon termination of employment at KU. Other routine laser eye exams are not required.