MEDICAL CERTIFICATE FOR LASER OPERATORS (MC-2)

Regulations 8 & 20(c) of the Radiation Protection (Non-Ionising Radiation) Regulations, 1991

HISTORY*
Family:
Medical:
Occupational:
CLINICAL & SPECIAL INVESTIGATION **(SATISFACTORY / UNSATISFACTORY)**
Dermatological:
Others:
OPHTHALMOLOGICAL EXAMINATION* **(SATISFACTORY / UNSATISFACTORY)**
Date of Examination:
Medical History of Eyes:
Colour Vision:
Visual Acuity Far : Near:
Amsler Grid :
Manifest Refraction :
External Ocular Examination :
Examination of the Ocular Fundus with an ophthalmoscope :
Other Examinations :
Optional : Examination by slit lamp: Tonometry: Photograph of Posterior: Pole of the Fundus:
* , ** , *** see overleaf

STATEMENT

This is to certify that:

Dr/Mr/Ms/Mdm: _____

NRIC No.: _____

Employed by: _____

has undergone a medical examination by me and I am of the opinion that this person is **FIT / UNFIT** [§] to engage in laser work. In addition, I have the following comments to make:

_____

_____

_____
Name of Hospital / Clinic

_____
Name of Medical Practitioner

_____
Address of Hospital / Clinic

_____
Date and Signature of Medical Practitioner

[§] Delete "fit" or "unfit" as applicable.

* The patient medical history on the current and past medication use is reviewed. His general health status should be inquired about with special emphasis upon diseases which can give ocular or skin problems. Certain medical conditions may cause the laser worker to be at phenothiazine and psoralens, lower the threshold for biological effects in the cornea, lens and retina. Aphakic individuals would be subject to additional retinal exposure from near UV radiation. Unless chronic viewing of lower levels of laser radiation in these wavelengths is required, there should be no reason to deny employment to these individuals. With current laser systems, chronic exposure even to low levels of blue laser radiation is very unusual.

** A dermatological examination is important for laser workers with history of photosensitivity or those working with ultraviolet lasers as well as for persons operating with or maintaining of high power lasers. Examination of the skin for presence of abnormal pigmentation of depigmentation, keratoses, malignancies, etc.

*** **Examination Protocols**

Medical history of eye
Medical history of eye is required for preplacement examinations of all laser workers. His past eye history and family eye history are reviewed. Any current complaints, which he now has about his eyes, are noted.

Colour Vision
Colour vision on eye is required for preplacement examination of all laser workers. His ability to perceive differences of colours must be examined and recorded.

Visual Acuity
Required for preplacement examinations of all laser workers. Distance visual acuity should be tested both with & without corrective lenses to 20/15. Results should be recorded in Snellen figures. The visual acuity at near is tested at 35 cm and recorded in Jaeger-tested figures or Snellen figures with & without lenses. Visual acuity screening instruments may be used.

Amsler Grid
The Amsler grid sheet is presented to each eye separately and any distortion of the grid is noted by the patient and drawn by him; it is part of a thorough ophthalmologic examination.

Manifest Refraction
Required for preplacement examinations of all laser workers when indicated. This is to measure the patient's refractive error, and the new visual acuity of the patient must be noted if the visual acuity is improved over that achieved with the patient's old lens prescription, or if he has no lenses at the time of examination. This examination shall be carried in all personnel whose best corrected distance visual acuity in either eye is less than 20/20.

External Ocular Examination
Required for preplacement examinations of laser workers using laser systems producing radiation below 350 nm or above 1400 nm. This includes examination of brows, lids, lashes, conjunctiva, sclera, iris and pupillary size, equality, reactivity and regularity.

Examination of the Ocular Fundus with an Ophthalmoscope
Required for preplacement examinations of laser workers using laser systems producing radiation between 390 nm and 1400 nm and any aphakic worker. In the recording of this portion of the examination the points to be covered are: the presence or absence of opacities in the media; the sharpness of outline of the optic nerve; the size of the physiological cup; if present, the ratio of the size of the retinal veins to that of the retinal arteries; the presence or absence of a well-defined macula and the presence or absence of a foveolar reflex; and any retinal pathology that can be seen with a direct ophthalmoscope. Even small deviations from normal should be described and carefully localized.

Other Examination
Further examinations should be done as deemed necessary by the eye specialist.

Optional

I Examination by Slit Lamp
Required for preplacement examinations of laser workers using laser producing radiation below 429 nm or above 750 nm. The cornea, iris and lens are examined with a biomicroscope and described.

II Tonometry
This is the measurement of intraocular pressure; should be part of a thorough ophthalmologic examination.

III Photograph of the Posterior Pole of the Fundus
This includes the area of the macula and head of the optic nerve and should be taken in color, may be obtained by the examining physician to more fully describe retinal abnormalities. Appropriate techniques to reduce the patient's exposure to optical radiation should be employed.

Notes:

a. This certificate should be given to the examining Medical Practitioner for completion and should be submitted together with the application form to the address shown on page 2.
b. Where the person examined is considered unfit to be engaged in laser work, please give the reasons.