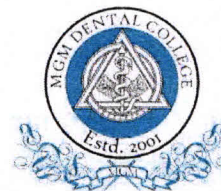




**MAHATMA GANDHI MISSION'S DENTAL COLLEGE &
HOSPITAL**

Accredited by NAAC with "A" Grade
Plot No. 1 & 2 Sector-01 (Old 18 & 19),
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RADIATION SAFETY POLICY

Purpose:

Although the medical uses of X-rays to examine a patient without surgery became an amazing medical breakthrough, X-rays have negative side effects due to its use of radiation. During X-ray examination, not only the patient gets exposed to radiation but also the persons around the X-ray equipment, albeit low, get exposed to radiation.

Atomic Energy Regulatory Board (AERB) rules and regulations require to assure that exposure to radiation is ALARA (As Low As Reasonably Achievable). The Radiation Safety Policy sets forth the means by which the institution complies with applicable rules and regulations. The Radiation Safety Policy further stipulates the duties and responsibilities for the development, implementation, and oversight to ensure the safe use of radiation.

Institutions have the responsibility to promote the safe use of the equipment in order to minimize radiation hazard to patient, operator and members of public. One of the ways to ensure radiation safety is to create awareness among everyone concerned. It must be realized that responsibility of ensuring radiation safety in the use of X-ray equipment lies with the owner of the facility.

Measures:

The institution is committed to an effective radiation protection program to eliminate unnecessary exposures to radiation and to reduce all exposures to levels that are as low as reasonably achievable (ALARA), taking into account all social and economic considerations. The ALARA principle is implemented by a comprehensive radiation protection program that includes specific requirements and procedures for:

1. Standard operating procedure for each radiography modality.
2. X-ray Room Layout and Shielding Requirements as per Atomic Energy Regulatory Board (AERB) guidelines should be fulfilled for installation of dental radiography equipment.
3. Regular (quarterly) monitoring of radiation exposures of operators using Personnel monitoring services (Thermoluminescent Dosimeter (TLD)).
4. Regular quality assurance (QA) testing all radiography equipment's.
5. The responsibilities of facility owner, operating personnel and the public communicated and stringently followed.

What the personnel (dentist, radiographers) who are operating the equipment need to know:

- 1) While operating dental X-ray equipment, operate from a distance as far away as possible from the equipment
- 2) Always use the TLD at chest level while dental -ray unit is being operated.
- 3) Always use Lead apron (0.25 mm lead equivalent) and wear TLD below the apron.
- 4) For intra-oral radiography, the angle of emission should be so adjusted that the patient's eyes / thyroid should not come in the primary X-ray beam.
- 5) When it is necessary that separate films of the maxillary(related to upper jaw) and mandible (related to lower jaw) regions to be exposed, the angle of emission should be so adjusted that maxillary region is not irradiated during radiography of the mandibular region and vice versa.
- 6) Ensure that Lead apron is worn by the person assisting an infirm patient or holding film during exposure.

What the general public need to know:

- 1) Get the dental X-ray procedures done only in hospitals/facilities having registration from AERB.
- 2) Co-operate with the operator, to avoid repeat dental X-ray examination.
- 3) Female patient, if pregnant, must inform the operator so that necessary precaution can be taken during dental X-ray examination.
- 4) Carry your old dental X-ray records.

What the owner / employer needs to know:

- 1) Only AERB Type approved dental X-ray equipment shall be installed /used.
- 2) AERB Registration certificate shall be displayed at prominent place for public information.
- 3) Quality Assurance tests of dental X-ray equipment is carried out periodically and after any maintenance and the records thereof are maintained.
- 4) TLD badges are provided to all the operators and workers involved during X-ray examination.
- 5) During non-working hours, TLD cards must be stored along with Control TLD card outside the X-ray room (in a radiation free area).
- 6) Sufficient number of lead aprons (0.25 mm lead equivalent) are available for use.
- 7) Lead aprons shall be stored either on a hanger or on a flat surface without crumpling.
- 8) Consistency of lead aprons shall be checked once in two years. Qualitative check can be done by taking radiograph of lead aprons.
- 9) Routine maintenance of the dental X-ray equipment is carried out.
- 10) Radiation symbol and warning placards in local languages are placed outside the dental X-ray room

Policy Statement:

This policy establishes the duties and responsibilities for the Radiation Safety Program to ensure compliance with the Atomic Energy Regulatory Board (AERB) rules and regulations. These regulations require that the institution establishes and enforce a written policy to govern activities using radiation producing devices to ensure the safety of the public, employees, and students.