



DEPARTMENT OF HEALTH
DIRECTORATE: RADIATION CONTROL



GUIDELINES

RADIATION PROTECTION OF PERSONNEL IN THEATRE

The Department is guided by the NATIONAL COUNCIL ON RADIATION PROTECTION AND MEASUREMENTS as stated in NCRP Report No. 102 regarding the following aspects:

- 3.7.4 (h) “Only persons whose presence is necessary *shall* be in the theatre during exposures. All such persons *shall* be protected (e.g., provided with leaded aprons, leaded gloves, eye protection (leaded glasses), thyroid shields and/or portable shields).”
- (j) “The operator *shall* stand behind a barrier if possible and *shall* observe the patient during radiographic exposures.”
- (q) “People who must move around the room during the procedure *should* wear a wraparound protective garment.”
- (aa) “When possible, the specialist and all other personnel required in the room *should* step back from the table and behind portable shields during fluoroscopy and serial radiography procedures.
Comment: This action can decrease the exposure of the specialist and other personnel by a factor of three or more.”
- (cc) “All personnel not required in the room *shall* leave the room during serial radiographic exposures.”

It can thus be stressed that all full time personnel in the theatre must be monitored and that eye protection (leaded glasses) shall be added to the list in paragraph (h). The Department accepted the recommendations of the ICRP 57 (Radiological Protection of the Worker in Medicine and Dentistry) regarding protective aprons and gloves, namely

“If workers cannot remain in the protected area when the X-ray machine is operated, they shall wear a **protective apron** of at least **0.25 mm lead equivalent**. As far as reasonably practicable they should occupy areas of the room where the levels of radiation exposure are low.

Any person required standing within 1 metre of the X-ray tube or patient shall wear a protective apron of at least **0.35 mm lead equivalence**, eye protection (leaded glasses) **and thyroid protection**. **Protective gloves** should be of at least **0.35 mm lead equivalence**. All such protective clothing should bear an identifying mark and shall be examined for holes and cracks at 3 monthly intervals and if suspect perform an x-ray test. Defective items should be withdrawn from use.

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