



Department of Health

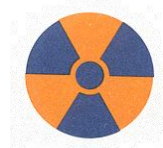
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Iodine-131 Therapy Guideline Document

A. Requirements for facilities where therapeutic doses of I-131 are administered and patients are hospitalised

1. Ward

Patients should be admitted to a special designated ward with an en suite toilet and shower for their exclusive use.

2. Floor

The floor of the ward must be of non-absorbent material such as linoleum or vinyl with sealed joints. Failing this, the floor must be covered with sheets of plastic or absorbent paper.

3. Waste disposal

A receptacle, lined with a plastic bag, must be placed at the door inside the ward for discarding contaminated articles such as gloves, aprons and overshoes.

4. Dose calibrator

An isotope calibrator must be available to verify the activity administered to a patient. The calibrator must be checked with a sealed source before measuring the activity.

5. Radiation monitors

An exposure meter must be available for monitoring the dose rate from the patient to quantify the time and distance that staff and family may attend the patient whilst hospitalised. A monitor must be available for routine contamination monitoring of working surfaces, and for use in the event of any accidental spillage. The personnel must use this monitor for monitoring their hands, clothes and shoes prior to leaving the ward.

6. Personal dosimeter (TLD)

Nursing personnel who do not wear personal dosimeters must be issued with direct reading pocket dosimeters. The daily readings must be noted in a logbook, which must be available for inspection purposes.

Any person who is likely to receive more than 3/10 of the annual dose limit for radiation workers must wear a personal dosimeter (TLD).

7. Radiation warning sign

A removable radiation warning sign, which displays the name of the patient, the nuclide, activity, time and date administered must appear on the door of the ward.

Comprehensive instructions for nursing staff regarding appropriate specialised patient care and monitoring requirements must be displayed at the radiation warning sign on the door.

8. Linen

The mattress must be covered with non-absorbent material.

No articles and/or linen may be removed from the ward without prior monitoring for contamination.

Following the discharge of the patient, the ward and linen must be thoroughly monitored for contamination. Contaminated linen must be washed separately.

9. Medical Physicist

A medical physicist must be available to perform the following duties, among others:

- 9.1 Supervise the administration of therapeutic doses: a physicist must be present at administration of all doses above 555 MBq (15 mCi).
- 9.2 Supervise monitoring of personnel, patients and family members (parents).
- 9.3 Monitor the patient to determine that the dose rate at 1 metre is below 25 μ Sv/h (2,5mR/h) before the patient is discharged.

B. Requirements for hospitalisation of children treated with I-131 (MIBG)

1. See the requirements 1 – 9 in paragraph A above.
2. Used nappies must be placed in plastic bags, which must be sealed, labelled and stored in the radioactive waste store.
3. The child may only be discharged when the estimated activity of iodine present in the body of the patient has reduced to below 15 mCi.
4. Adults are allowed to be present while children receive MIBG treatment, but not to nurse or change nappies (see paragraph C below).

NOTE

Faeces and urine of patients receiving therapeutic doses of radionuclides can be disposed of into the sewage system as non-radioactive waste. It need not be stored for any time, and the activity therein need not be included when calculating total activity releases from the hospital.

C. Precautions to be taken by a parent who wishes to be with a child during I-131 treatment

1. The parent must be issued with a direct-reading dosimeter for the period of treatment. The radiation dose equivalent should be kept below 1.2 mSv (120 mrem) per treatment, assuming repeated treatments take place at intervals greater than 4 weeks.
2. Thyroid blocking treatment (with stable iodine) must be given to the parent before and during the patient's stay in hospital.
3. Direct nursing of the patient by the parent must be limited. For example, the parent should not be allowed to change nappies.
4. Pregnant women are **not** permitted to be with children during treatment.

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