

SEDATION FOR NUCLEAR MEDICINE IMAGING AT CHW

LOCAL WORK PROCEDURE[®]

To be read in conjunction with Procedural Sedation (Paediatric Ward, Clinic, and Imaging Areas) guideline [2011-9017 v5]

The following guidelines are provided on the basis that only staff members who are familiar with the pharmacology of the sedative agents being used and their adverse effects profile will administer sedative agents to children. Sedation will be required for some patients, particularly when requiring high resolution images.

Sedation requirements and timing should always be discussed in consultation with the Nuclear Medicine Department staff. Coordinating of timing of sedation with Nuclear Medicine staff is essential.

Common indications for sedation

Description of Scan	Usual Age Range	Approximate Duration of Procedure	Sedative
Cystograms: Children require catheter insertion then have their bladder filled. No IV injection required.	2months – 10 years	35-40 minutes	Nitrous Oxide is commonly used for catheter insertion
MIBG diagnostic scans: Children have an isotope injection on the day before imaging. They must lie reasonably still under the imaging camera for approximately 120 minutes.	2months – 6yrs	60- 120 minutes	Chloral hydrate is commonly administered 15-20 minutes prior to scan.
Bone scans: Children require IV access for injection of an isotope just prior to imaging. Images are captured at 10-15 mins and again, 2hrs after injection.	2months – 10 years	30-45 minutes	Chloral hydrate is commonly administered 15-20 minutes prior to scan.
Cerebral Perfusion Scans: Children require IV access for injection of an isotope just 15 minutes prior to imaging. Images are captured at 15 mins and patients require imaging for 30 minutes.	2months – 15 years		Chloral hydrate is commonly administered 15-20 minutes prior to scan.
Bone Mineral Density: Children may require sedation for the duration of the scan.	4-18 years	20 minutes	Nitrous Oxide is commonly used during scan.
Positron Emission Tomography (PET Scan) The PET scanner is located at Westmead Adults Hospital. Children will require IV access for the isotope injection.	2 months- 18 years	20- 45minutes	Chloral hydrate is commonly administered 15-20 minutes prior to scan

<p>Imaging will follow 35 minutes post injection on the PET scanner.</p>			<p>by the PET suite nurse. If a General Anaesthetic is required this should be discussed with the Nuclear Medicine scan staff.</p>
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- **Site where procedure is undertaken:** Nuclear medicine Department & Westmead Adults Hospital PET Suite.
- **Nearest resuscitation trolley:** CT/MRI scan area & PET scan department
- **This protocol can be used for:** inpatients and outpatients using the same protocol.
- **Consent obligations:** Verbal consent for sedation should be documented.

Usual sedation protocol(s)

Study
<p>MIBG diagnostic scans. Oral chloral hydrate 50 mg/kg 45 minutes before procedure. Use comfort measures such as wrapping in blankets to encourage sleep.</p>
<p>Bone scans/ Brain scans. Most children do not require sedation. Oral chloral hydrate 50 mg/kg 45 minutes before procedure. Use comfort measures such as wrapping in blankets to encourage sleep. Total maximum 100 mg/kg (not to exceed 1 g).</p>

Monitoring

- Pulse oximetry is mandatory when using sedative agents are used.
- If the patient is an in-patient and our nuclear medicine RN is unavailable, a nurse from the ward must stay with the patient at all times. The patient must also be transported on a bed/cot with oxygen, suction and a pulse oximeter.

Following sedation and the procedure

- Children receiving only nitrous oxide can be discharged into the care of their parents as soon as the study is complete.
- Children who have received oral sedation must remain under supervision until 'sign out' and discharge criteria are met. They must be assessed by the RN or NM Physician before leaving the department and a discharge summary completed and the patient must meet the required discharge criteria