

Doncaster & Bassetlaw Medicines Formulary

Contrast agents

Carbex sachets

E-Z-HD® powder for oral suspension (barium sulphate; 98% w/w)

Gastrografin® Solution (1ml contains 100mg sodium amidotrizoate and 660mg meglumine amidotrizoate)

Niopam 150 Injection (Iopamidol; 150mg/ml of elemental iodine)

Niopam 300 Injection (Iopamidol; 300mg/ml of elemental iodine)

Niopam 370 Injection (Iopamidol; 370 mg/ml of elemental iodine)

Omnipaque 300 Injection (Iopamidol; 300mg/ml of elemental iodine)

Omnipaque 350 Injection (Iopamidol; 370 mg/ml of elemental iodine)

Polibar® 94% w/w powder (barium sulphate)

Approved by Drug and Therapeutics Committee: March 2018

Review Date: March 2021

Prescribing Guidance:

CT Examinations requiring iv contrast, fluoroscopic procedures in angiography and insertion of PICC lines

Niopam and **omnipaque** are non-ionic contrast medium that are indicated for use in computed tomography (CT) of the head and body, fluoroscopic procedures in the angiography department and intravenous urograms.

Administered by Intravenous injection via peripheral cannula or power injectable PICC with appropriate use of sodium chloride 0.9% flush before and after injection.

Dose and rate depending on examination (see below)

Volume of contrast for fluoroscopic procedures may vary depending upon the clinical findings on the x-ray.

KEY: ^[UL] Unlicensed Preparation; **Drug** – first line choice; **Drug** – hospital only; Drug – **Amber** (TLS), **Drug** – Red (TLS), see <http://medicinesmanagement.doncasterpct.nhs.uk/>

List of CT Examinations and amount of Omnipaque used

CT Examination (adults)	Omnipaque 300 Amount (mls) and flow rate		Omnipaque 350 Amount (mls) and flow rate	
	Adult	Paediatric	Adult	Paediatric
CT Head	50 1.5mls/sec	1ml per kg 1ml/sec	40 1.5mls/sec	1ml per kg 1ml/sec
CT Head Venogram	60 3mls/sec		50 3mls/sec	
CT Intracranial/ carotid angiogram	100 5mls/sec		90 5mls/sec	
CT Pulmonary Angiogram	80 5mls/ sec (pregnant patients 6mls/sec)		80 4mls/sec (pregnant patients 6mls/sec)	
CT Neck and/or Chest and/or Abdomen and/ or Pelvis	80 3mls/sec	2ml per kg 1ml/sec	60 3mls/sec	2 ml per kg 1ml/sec
CT Aortic Angiogram	100 5mls/sec		100 5mls/sec	
CT Cardiac Angiogram	110 5mls/sec		90 5mls/sec	
CT Upper Limb Angiogram	90 5mls/sec		80 5mls/sec	
CT Urogram	110 3mls /sec		110 3mls/sec	
CT Peripheral Angiogram	150 5mls/sec		130 5mls/sec	
CT Lower Limb Venogram	120 5mls/sec		100 5mls/sec	
CT Polytrauma	150 5mls/sec	2ml per kg 1ml/sec	150 5mls/sec	2 ml per kg

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				1ml/sec
Intravenous Urogram	50 2mls/sec		40 2mls/sec	

List of Fluoroscopic Examinations and amount of Omnipaque used

Examination	Omnipaque 300 Amount (mls) and flow rate	Omnipaque 350 Amount (mls) and flow rate
Insertion of PICC/Hickman Lines.	5-10 1ml/sec	5-10 1ml/sec

List of CT Examinations and amount of Niopam used

CT Examination (adults)	Niopam 300 Amount (mls) and flow rate		Niopam 370 Amount (mls) and flow rate	
	Adult	Paediatric	Adult	Paediatric
CT Head	50 1.5mls/sec	1ml per kg 1ml/sec	40 1.5mls/sec	1ml per kg 1ml/sec
CT Head Venogram	60 3mls/sec		50 3mls/sec	
CT Intracranial/ carotid angiogram	100 5mls/sec		90 5mls/sec	
CT Pulmonary Angiogram	80 5mls/ sec (pregnant patients 6mls/sec)		80 4mls/sec (pregnant patients 6mls/sec)	
CT Neck and/or Chest and/or Abdomen and/ or Pelvis	80 3mls/sec	2ml per kg 1ml/sec	60 3mls/sec	2 ml per kg 1ml/sec
CT Aortic Angiogram	100 5mls/sec		100 5mls/sec	
CT Cardiac Angiogram	110 5mls/sec		90 5mls/sec	
CT Upper Limb Angiogram	90 5mls/sec		80 5mls/sec	
CT Urogram	110 3mls /sec		110 3mls/sec	
CT Peripheral Angiogram	150 5mls/sec		130 5mls/sec	
CT Lower Limb Venogram	120 5mls/sec		100 5mls/sec	
CT Polytrauma	150 5mls/sec	2ml per kg 1ml/sec	150 5mls/sec	2 ml per kg 1ml/sec

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Intravenous Urogram	50 2mls/sec		40 2mls/sec	
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List of Fluoroscopic Examinations and amount of Niopam used

Examination	Niopam 300 Amount (mls) and flow rate	Niopam 370 Amount (mls) and flow rate
Insertion of PICC/Hickman Lines.	5-10 1ml/sec	5-10 1ml/sec

CT Chest/ Abdomen/Pelvis where the Radiologist has specified that use of oral contrast would be beneficial

Gastrografin (Diatrizoate Meglumine and Diatrizoate Sodium Solution) is indicated for radiographic examination of segments of the gastrointestinal tract (oesophagus, stomach, proximal small intestine, and colon). The preparation is particularly indicated when a more viscous agent such as barium sulfate, which is not water-soluble, is not feasible or is potentially dangerous.

Gastrografin may also be used as an adjunct to contrast enhancement in computed tomography of the torso (body imaging); the preparation is indicated, in conjunction with intravenous administration of a radiopaque contrast agent, when unenhanced imaging may not provide sufficient definition in distinguishing normal loops of bowel from adjacent organs or areas of suspected pathology.

Gastrografin may also be used as part of a small bowel meal barium study
CT Abdomen/Pelvis (Adults) - 1L of approx. 3% Gastrografin (30ml /1L water) orally administered 1 hour immediately prior to scan.

CT Upper GI tract to demonstrate perforation/leak - 500ml of 10% Gastrografin (50ml/450mls water) solution, orally administered 10 mins prior to scan.

Barium meal study - 20mls Gastrografin is mixed with the barium sulphate solution for studies of the small bowel and taken orally.

Hysterosalpingograms.

Niopam 300 or Omnipaque 300 are used as a non-ionic contrast medium in hysterosalpingograms. 60ml is injected into the uterine cavity via a catheter inserted through the cervical os.

CT colon

Omnipaque 300 is given orally before the examination in patients undergoing CT colon

3 x 50ml bottles are taken orally the day before the examination.

50mls to be taken orally before breakfast.

50mls to be taken orally before lunch.

50mls to be taken orally at 4pm.

In the case of a failed colonoscopy, same day CTC can be performed. 1 x 50 ml bottle is taken orally 2 hours prior to the examination.

Barium swallow, barium meal and video-fluoroscopy swallow examinations.

Carbex effervescent granules are used during Barium meal examinations to extend the stomach. Carbon dioxide is produced when the products are mixed together in the stomach.

E-Z-HD® is a Barium Sulphate X-ray contrast medium. It is indicated for use in fluoroscopic examination of the oesophagus, stomach and small bowel.

The contents of one prefilled bottle (177g) are dispersed in 250-300 ml of water to produce a 60% w/v as indicated by the line on the container. 20mls of **Gastrografin** is added to the suspension (unless contraindicated)

Patients drink the solution immediately prior to commencing the examination

Barium Enema Examinations

Polibar® 94% w/w powder (barium sulphate).

Polibar is a Barium Sulphate X-ray contrast medium. It is indicated for use in Fluoroscopic examination of the colon (barium enema).

Adults: 150-750 g barium sulphate in a suitable suspension.

For double contrast of the large bowel, give as required 60-115% w/v. The amount of barium administered will be determined by the clinical findings on the x-ray. The maximum amount used is 750g per examination.

The polibar unit dose pre-filled enema bag should be reconstituted using the appropriate amount of warm water as indicated on the polibar density graph included in the kit.

Prevention of Contrast Induced Nephropathy (CIN) Guidelines in Adults can be found via:

<https://www.dbth.nhs.uk/about-us/our-publications/publications-scheme/our-policies-and-procedures/treatments-and-investigations/> (Policy PAT/T48 v.3)