

HYDRATION (for IV CT contrast):

All **outpatients** should be orally hydrated prior to and following their scans, unless on a fluid restricted diet. Instructions should be given for patients to drink:

- At least 1000 mL* of fluid** in the 10 hours preceding the exam,
- OR -
- At least 1500 mL* of fluid** the day preceding the exam.

*Poorly controlled diabetic patients may need higher volume intake per the discretion of requesting physician.

**Fluid: salt-containing fluids such as sports drinks or soups are preferred over water alone.

*** Avoid/discontinue the use of non-steroidal anti-inflammatory agents at least 2 days preceding the exam.

All **inpatients** should be adequately hydrated by the primary team, by either an oral or IV route.

All **ED patients** should be adequately hydrated intravenously as indicated (history or laboratory findings indicative of volume depletion).

eGFR:

Calculated eGFR should be obtained on all patients, regardless of underlying risk factors. The presence of a single kidney will not be considered to be a separate risk factor (ie, stratification will be performed based on total eGFR, regardless). All contrast enhanced CTs in adults will be performed with Iohexol 350 (Omnipaque), as the benefit in using Iodixanol 320 (Visipaque), which is significantly more expensive per dose, has never been confirmed.

For IV contrast-enhanced CT:

≥ 60 mL/min/1.73 m², administer IV contrast without restriction

45-59 mL/min/1.73 m², administer IV contrast at 70% dose (30% reduction) for any total dose ≥ 100 mL. Administer 500 cc water PO before and 500 cc water after examination.

≤ 45 mL/min/1.73 m², avoid IV contrast unless a *discussion regarding the risks/benefits of contrast have been discussed with the requesting clinician and patient.*

For IV contrast-enhanced MRI:

≤ 30 mL/min/1.73 m², avoid IV contrast

CT CONTRAST ADMINISTRATION PROTOCOL

Adult CT Contrast Administration Protocol[‡]			
Examination	Iohexol 350mgI/mL (Omnipaque 350)		
	<i>For GFR ≥ 60 mL/min/1.75m²</i>	<i>For GFR 45-59 mL/min/1.75m²</i>	<i>For GFR < 45 mL/min/1.75m²</i>
CT Head and/or Neck	60 mL IV bolus at time of scan	Consult radiologist	Consult radiologist
CT Chest, abdomen and/or pelvis*	100 mL IV bolus at time of scan	70 mL IV bolus at time of scan	Consult radiologist
CT Urogram	100 mL and 200 mL 0.9% NaCl IV split bolus at time of scan	70 mL and 200 mL 0.9% NaCl IV split bolus at time of scan	Consult radiologist
CTA Brain and/or Neck	80 mL IV bolus at time of CT scan	Consult radiologist	Consult radiologist
CTA Pulmonary Embolus	80 mL IV bolus at time of CT scan		Consult radiologist
CTA Aorta or Abdomen	100 mL IV bolus at time of CT scan	70 mL IV bolus at time of CT scan	Consult radiologist
CTA Peripheral Vessel	100 mL IV bolus at time of CT scan	Consult radiologist	Consult radiologist
<i>For GFR < 45 mL/min/1.75m² Consult Radiologist for IV contrast administration.</i>			

[‡] Other nonspecified protocols or modifications per Radiologist instruction

* Oral Contrast for CT abdomen/pelvis:

Outpatient: Administer 2.1% w/v Barium Sulfate suspension (Readi-Cat2) 450mL PO over 45 minutes prior to examination.

Inpatient: Dilute 30 mL of diatrizoate meglumine and diatrizoate sodium (Gastrografin) in 970 mL of water and administer PO over 45 minutes prior to examination as tolerated.

* For CT Enterography: Administer 0.1% Barium Sulfate suspension (VoLumen LVH) 450 mL PO 15, 30, and 45 minutes prior to examination.

Pediatric CT Contrast Administration Protocol[‡]			
Examination	Iodixinol 270 mgI/mL (Visipaque 270)		
	<i>For GFR ≥60 mL/min/1.75m²</i>	<i>For GFR 45-59 mL/min/1.75m²</i>	<i>For GFR < 45 mL/min/1.75m²</i>
All CT Examinations	2 mL/kg IV bolus at time of scan	Consult radiologist	Consult radiologist

[‡] Modifications subject to Radiologist instruction

MRI CONTRAST ADMINISTRATION PROTOCOL

Dose of Dotarem (gadoterate meglumine) per Weight For $GFR > 30$ mL/min/1.75m ²	
Weight (pounds)	Dose (mL)
22	2
44	4
66	6
88	8
110	10
132	12
154	14
176	16
198	18
220	20
242	22
264	24
286	26
308	28
330+	30
eGFR ≤ 30 mL/min/1.73 m ² , avoid IV contrast	

For Breast, MSK, Abdomen and Pelvis MRI: Administer gadoterate meglumine (Dotarem) dose per weight IV at the time of MRI scan, not to exceed 30 mL

For MR Enterography: Administer gadoterate meglumine (Dotarem) dose per weight IV at time of MRI scan, not to exceed 30 mL. Administer 0.1% Barium Sulfate suspension (VoLumen LVH) 450 mL PO 15, 30, and 45 minutes prior to examination.

For Eovist Liver MRI: Administer gadoxetate disodium (Eovist) 10mL IV at time of MRI scan.

For Brain and Spine MRI: Administer gadoterate meglumine (Dotarem) dose per weight IV at the time of MRI scan, not to exceed 15 mL.

Cardiac and Vascular MRI: Administer gadoterate meglumine (Dotarem). 0.3 mmol/kg IV at time of MRI scan, not to exceed 25 mL.

Other nonspecified protocols or modifications per Radiologist instruction.