University Health™	Policy #: Rad Proc 13.8
SUBJECT: CT Pediatric Technique	Effective: 10/2013 Reviewed: 03/07/2017
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Purpose: To provide computed tomography staff with the required protocol for performing CT on pediatric patients.

Scope: All patients under the age of 18.

Preparation: Patients who are to receive sedation, intravenous contrast medium or oral contrast medium should have food and liquids withheld prior to the examination. The length of time the patient is NPO (nothing by mouth) varies with patient age. See chart below

Age	length of time
Neonate to 1 year	3-4 hours
1year to 6 years	4-6 hours
7years to 17 years	6-8 hours

The advantages of making the child NPO is that it increases the likelihood that the patient will drink the oral contrast if needed. It decreases the likelihood of nausea or vomiting with possible aspiration during a bolus of intravenous contrast media injection.

Immobilization: Immobilization of children under the age of 5 years of age is required and may be accomplished by using a blanket. The child is snugly wrapped in the blanket and secured on the CT table by Velcro straps or adhesive tape. Velcro or adhesive tape is placed on the lower extremities for immobilization. For body scans the arms are extended above the head to avoid streak artifacts and to provide an easy accessible route for the intravenous injection. The upper arms can be immobilized with Velcro straps or adhesive tape. Children 5 years of age or older should cooperate after verbal reassurance and explanation of the procedure and may not need immobilization. If immobilization does not work, have the ordering physician sedate the patient.

Sedation: Pediatric sedation maybe accomplished either by the Pediatric Sedation team or the Anesthesia department. Contact Pediatric Sedation team at 626-2343 or page 3500. See hospital policy 5.26

Age	Amount 45 min	Amount
	Prior to Study	Prior to Study
Less than 1 month	2-4 ounces	1.5-2 ounces
1 month-1 year	4-8 ounces	2-4 ounces
1-5 years	8-12 ounces	4-6 ounces
6-10 years	12-18 ounces	6-9 ounces
11-15 years	18-32 ounces	9-16 ounces
>16 years	32 ounces	16 ounces

Oral Contrast Material: Oral contrast is based on age, see table below:

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Intravenous Contrast Material: When injecting intravenous contrast 3 important issues to be considered are contrast volume, flow rate, and the timing of image acquisition. Visipaque 320, a nonionic contrast media, will be used at a dose of 2mL/kg. The maximum dose is in children is the lesser of 4 mL/kg or 125 mL.

If the patient has a peripheral IV or a central line use one of the following for use of a power injector to deliver contrast material:

With a 24-gauge catheter or central line, contrast is injected at 1 mL/sec With a 22-gauge catheter or central line, contrast is injected at 1.5 to 2mL/sec With a 20-gauge catheter or central line, contrast is injected at 2-3 mL/sec

If the integrity of the IV is in question, contact radiologist to discuss possible hand injection.