

# SEDATING YOUR CHILD IN RADIOLOGY

Your child's doctor has ordered a radiologic exam that requires your child to lie perfectly still in order to get clear pictures. Because children can be restless or afraid of the equipment, your child may need medication to help him/her fall asleep for a short nap.

There are doctors and nurses in Radiology who are specially trained in caring for children. While your child is asleep and undergoing the exam, someone will watch the child closely and observe monitors that give important information about the child's vital signs. After the exam is completed, your child will continue to be observed until he/she is awake or transferred to another observation area such as a doctor's office or nursing unit.

Before your child comes to Radiology, follow these guidelines to help the process go as quickly and smoothly as possible:

**Sleep Deprivation:** On the night before the exam, put your child to bed 2 hours later than the usual bedtime. In the morning, wake the child 1-2 hours earlier than usual and keep the child awake until you arrive for the exam. It is easier to sedate a tired child than a well-rested one.

**Food and Medications:** If your child is younger than 18 months, do not let the child have anything by mouth, except necessary medications, within 2 hours before the exam.

Children older than 18 months should not eat or drink, except medications, within 4 hours of the exam.

**Early Arrival:** Because your child may need medication or contrast material through an IV (needle in a vein of the child's arm, hand, etc.) you may be asked to arrive up to 1 1/2 hours before the exam. When you come early, a numbing cream can be applied on the skin over your child's vein to prevent the pain of the needlestick later.

In the Radiology Department, a nurse or physician will talk with you about your child's exam and about the medication that will be given for sedation. You will be asked questions about the child's medical history and will need to sign a consent form that gives your permission for the exam to be done with sedation.

**Medications:** The Department of Radiology generally uses one of two common medications for sedation. One is **Chloral Hydrate**.

Chloral Hydrate is probably the most widely used drug for pediatric sedation and is perhaps the safest overall. It is usually taken by mouth as a syrup and has a somewhat bitter taste. Sometimes it may be necessary to give Chloral Hydrate in a suppository form placed in the child's rectum.

The average time for a dose to take effect is 30 minutes. Recovery time (wake-up time) varies among different children, but is usually within 1-2 hours. Some effects of the medication may last 4-8 hrs.

Sometimes a second smaller dose of Chloral Hydrate may be needed to cause the child to sleep. All doses of medication are carefully calculated according to your child's weight and will not exceed the safe dosage recommended for your child.

The other medication used in Radiology for sedation is **Pentobarbital Sodium (Nembutal)**.

Pentobarbital is used when Chloral Hydrate fails to cause the child to sleep or when an exam may take longer and the child needs to remain asleep for a longer period of time. Pentobarbital is usually given intravenously (through an IV) so that doses can be given in small amounts as needed during the exam. Occasionally, Pentobarbital is given intra-muscularly (an injection into a muscle). Again the dose is based on your child's weight and the safe recommended dosage.

Pentobarbital takes effect quickly, within 10 minutes after given, and the recovery time (wake-up time) is about 1 hour. Again, these times may vary among children, and the effects of medication may last as long as 3-4 hours or longer .

**Side Effects:** As with all medications, there is a small chance that your child may have an adverse reaction to one of the medications commonly used for sedating children in Radiology. This could include but is not limited to itching, rash, dizziness, blurred vision, nausea or vomiting, stomach discomfort or problems with breathing or blood pressure. Another side effect, called a paradoxical reaction, may be seen as extreme restlessness or agitation, sometimes with hallucinations.

**Contraindications:** These medications are to be used with caution in children with certain conditions. Please let the Radiology nurse or physician know if your child has:

- ☒ Heart Disease
- ☒ Lung Disease
- ☒ Liver Disease
- ☒ Kidney Disease
- ☒ Allergy to Chloral Hydrate or Pentobarbital

Reference: USPDI 1993, 13th Edition, Vol I., Drug Information for the Health Care Professional

Occasionally a child will be sedated in the doctor's office or on a nursing unit before coming to Radiology. Also, but rarely, when routine medications fail, a child may require general anesthesia by the Department of Anesthesia. If a medication other than the two discussed here is to be given to your child, someone will explain this to you and answer any questions you have.

**Afterward:** After recovery, a nurse or physician will give you an information sheet that includes the medication and amount given to your child and special instructions for home care.

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