

# NIH Clinical Center Patient Education Materials

## Sedating a child for a test or procedure

Tests or procedures often make patients anxious. To gain the most benefit from tests or procedures, some patients need sedation to help them stay calm. When a child is a patient, concerns about anxiety and comfort are just as important. Your child's health care team is committed to making tests and procedures as comfortable as possible. They know that your child's welfare is your greatest concern and that you may have questions about sedation. This information can help you make the best choice for your child.

### **Should my child be sedated?**

You know best how your child handles anxiety, pain, and fear. You also know what calms your child. Because of this, you can help the health care team decide if your child needs sedation for a test or procedure.

### **What medications might be used?**

Some common medications used for sedation and pain relief are fentanyl, morphine, midazolam, lorazepam, ketamine, and propofol. The effects from these medications last from just a few minutes to several hours. Each child responds differently to sedation, but the major effects often go away within an hour after the test or procedure.

### **How are medications given?**

Sedatives are given through a vein (intravenously, I.V.) into your child's arm or through a "central line."

### **What are the benefits of sedation?**

Since these medications help your child relax and possibly feel sleepy, your child will be more comfortable and feel less pain during a test or procedure. Some sedatives give your child temporary amnesia. This means that your child may remember very little about the test.

### **What are the side effects of sedation?**

The nurses and doctors caring for your child are specially trained to give, monitor, and manage children under sedation. Any side effects that your child may have depend upon the medication used and how it is given.

- Sleepiness from sedation may last several hours.
- Some children have slowed or difficult breathing. If this occurs, a nurse or doctor will help your child breathe by administering oxygen (either through a nose tube or a breathing mask).
- Some sedating medications lower blood pressure. This may require treatment with I.V. fluids or medications.
- Some medications, such as ketamine, may cause restlessness, hallucinations, or disorientation upon awakening.

These effects can be decreased by waking up in a quiet environment. If needed, short-acting medications to decrease anxiety can be given.

Some children may experience nausea. Medications, such as Ondansetron, may be used to control nausea and/or vomiting. For more specific information about the medications that your child will receive, please ask your child's nurse for the drug information handouts.

### **How should I prepare my child for a test or procedure with sedation?**

#### Talk to your child

- Most children cope better when they know what to expect. We encourage you to talk to your child in a

way that is easy to understand.

- Explain what will be done, what the test may feel like, and who will be there during the test. Your child's nurse or recreation therapist can help you with this. He or she may also have picture books or storybooks that describe a test or procedure.
- Teenagers usually have a lot of questions. It is best to answer them completely.
- Be honest. For example, if a test will be painful, explain this.
- If your child will receive sedation, then it is very important for your child to follow eating and drinking instructions given by the doctor or nurse.

#### Dress your child appropriately

- On the day of the procedure, dress your child in something loose and comfortable. This allows easy access to their arms (for the I.V.) and the chest (for breathing and heart monitoring).
- If your child is scheduled for an MRI (magnetic resonance imaging), remove all of the child's jewelry, watches, hair decorations, and clothing made with metal items such as zippers or buttons.
- Leave all valuables at home or with a responsible adult.

To decrease risks related to sedation, the procedure may be postponed if your child is sick. Contact your NIH Clinical Center doctor if your child develops a cold or fever or has any other health changes.

#### **What happens before sedation?**

A nurse or doctor will examine your child before he or she receives sedation. This "history and physical" involves the following:

- The doctor or nurse will ask questions about your child's past medical and surgical history, allergies, and current medications.
- Your child's height and weight will be taken as well as heart rate, respiratory rate, blood pressure, and temperature.
- Blood may be drawn for laboratory tests. An I.V. may be started when blood is taken.

These things are done to make sure that your child is prepared for sedation. The doctor will decide if it is okay for your child to have the test or procedure and the sedation.

#### **Will my child be able to eat or drink before getting sedation?**

If your child's sedation is provided by an anesthesiologist, then he or she will be seen in the Pre Anesthesia Clinic. At that time, the anesthesiologist will give you instructions regarding when your child should stop eating or drinking prior to the procedure.

- Clear, see-through liquids (like apple juice or ginger ale) may be allowed up to several hours before the procedure. Be sure to discuss an appropriate time frame with your doctor.
- Certain medical conditions may be affected by not eating for an extended period of time. Be sure to discuss any medical conditions with your child's doctor. He or she will also guide you about taking medication on the day of the procedure.

#### Note

Not following these guidelines will put your child at risk for vomiting, choking, pneumonia, or other serious problems. The procedure may be done without sedation, cancelled and rescheduled, or delayed until enough time has passed to decrease the risk of vomiting.

#### **How can I help my child cope?**

- Most children want their parent or guardian to be with them. Whenever possible, parents or guardians will be allowed to stay with the child before and after the procedure. Please bear in mind that sometimes staying with your child is not possible.
- For example, you cannot be present when procedures are done in the operating room. Because you cannot be present, let your child know where you will be waiting. Waiting areas are close by, and you

can reassure your child that you will be with him or her as soon as you can.

- Children will need encouragement or praise. Your child might deserve a special reward or treat. Letting your child know this ahead of time will give them something to look forward to.

#### During the procedure

- Use imagery. Imagery uses the imagination, almost like pretending. For example, you can help your child imagine or remember a good or happy time.
- Use distraction. This can also help your child to relax. Some children relax when distracted by gentle stroking, massage, listening to music, or watching videos.
- Let the child have special comfort items. Small children may find a special toy, blanket, or pacifier very soothing right up to the time of the procedure. Check with the nurse to find out if your child can keep this item during the procedure.
- Do breathing exercises with your child.
- Tell a story.

#### **How will my child be monitored?**

After any medication is given, your child will be watched closely during the procedure or test and until the medications wear off. A nurse will constantly check your child's breathing, blood pressure, pulse, and oxygen levels.

During the procedure, the nurses will keep track of your child's condition. Your child may be monitored in many ways, including the following:

- Pulse Ox: A pulse oximeter measures the level of oxygen in the blood. This is done with a little probe that fits on your child's finger like a Band-Aid or a gentle clothes pin.
- Blood pressure cuff: This will be placed on your child's upper arm or leg to allow the nurse to monitor your child's blood pressure.
- EKG: An EKG (electrocardiogram) monitor may be used to watch your child's heart rate and breathing rate. Wires from the monitor will attach to small pads placed on your child's chest. This monitoring is not painful.

Along with these machines, staff will also keep a close watch on your child during the whole procedure.

#### **When can my child go home?**

Expect your child to remain at the hospital for a little while after the test or procedure is completed. For some procedures, recovery may take place in the PACU (post-anesthesia care unit, also known as the recovery room).

Your child will usually be able to go home (or back to their hospital room if he or she was an inpatient) when certain health conditions are met.

#### When your child will be ready to go home

- Your child must breathe well without needing extra oxygen (if extra oxygen was not needed before the procedure).
- Your child must have blood pressure, pulse, and breathing rates close to what they were before the procedure.
- Your child must feel only slight nausea and not vomit for at least 20 minutes.
- Your child should be able to drink clear liquids.
- Your child must not have a lot of bleeding from the procedure site.

#### **What should I watch for at home?**

- Sleepiness: Your child will probably be sleepy, but should be easy to wake up. Sleepiness may

last for several hours after the procedure.

- Complications: Watch for complications discussed by your doctor or nurse.
- If your child has problems with vomiting or waking up, call your NIH doctor right away.
- If liquids are kept down without nausea or vomiting, solid foods can be started. Your child can eat popsicles, pudding, crackers, ice cream, and cereal.
- The day after the test or procedure, a nurse may call you to see how your child is doing.

If you are concerned or worried about your child when you are home, please call our staff at the phone number we have written below:

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