

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 the patient is a child, concerns about anxiety and comfort are just as important. Your child's care givers are committed to making tests and procedures as comfortable as possible. They know that your child's welfare is your greatest concern. The idea of sedating your child may be hard for you to think about, or even discuss. Nevertheless, you probably have many questions. Your health care team put together this information to 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, Versed, Ativan, Ketamine, and Propofol. The effects from these medications vary from just a few minutes to several hours. Each child responds differently to sedation, but the

major effects often go away within an hour or so after the test or procedure.

How are they given?

Sedatives are given through a vein (intravenously, or I.V.) in 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 should be more comfortable and feel less pain during a test or procedure.

Some sedatives give your child temporary amnesia, so 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. The side effects 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. This may be done by using oxygen (given through a nose tube or breathing mask) during the procedure to decrease risks related to sedation.

Some sedating medications lower blood pressure. This may require treatment with intravenous fluids or medications.

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 is planned and expected of them. 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, 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 the arm (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 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.

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

Before the procedure

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, and temperature.
- ▶ Blood may be drawn for laboratory tests. If your child does not have a central line, 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?

- ▶ For infants up to 6 months old, milk products or solid food should not be given for 4 hours before sedation.
- ▶ For children 6 to 36 months old, milk products or solid food should not be given for 6 hours before sedation.
- ▶ For children over 36 months old, milk products or solid food should not be given for 8 hours before sedation.
- ▶ Clear, see-through liquids (like apple juice or ginger ale) may be allowed until 2 hours before sedation is given. Your child should not drink colored juices such as red Kool-Aid or cranberry juice. *After this time, your child cannot have anything by mouth until after the test or procedure.*
- ▶ If your child has a medical condition like diabetes, which may be affected by not eating for an extended period of time, talk to your child's doctor. He or she can guide you about taking medication on the day of the procedure.

Note

Not following the previous 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.

During the procedure

How can I help my child cope?

Most children want their parent or guardian to be with them. Wherever possible, parents or guardians will be allowed to stay with the child—before the procedure as the

sedation medication is taking effect, and after the procedure while the medication is wearing off. 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. This can be discussed with your child's nurse or doctor before the procedure. 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 be something to look forward to.

How will my child be monitored?

After any medication is given, your child will be watched closely—not only during the procedure or test, but also 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:

- ▶ Oximeter: An 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.

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- ▶ **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.

Helping your child cope with a painful or distressing 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. Some children pretend they are somewhere else: they close their eyes and imagine this other place.
- ▶ **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 bottle 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.**

After the 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 (postanesthesia 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 may feel nauseated and even vomit after a procedure.)
- ▶ 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 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, 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

and ask for

Summary

▶ What is sedation?

Sedation means using medication to relax your child or to make your child sleep. Sedation also can ease pain and make your child more comfortable.

▶ Why would children need sedation before or during a test?

Children might need sedation if they have severe anxiety or are unable to relax and lie still. Usually, these children are young or have trouble coping with anxiety or pain.

▶ Why use sedation?

Sedation helps calm children so that they can relax and accept medical treatment.

This can lessen the risk of injury and reduce pain during a test.

▶ What medications are used for sedation?

Several medicines can be used for sedation. They are given intravenously. Some of these medicines include: fentanyl, morphine, Versed, Ativan, Ketamine, Propofol.

▶ Is sedation safe?

Yes. The nurses and doctors caring for your child are specially trained to give, monitor, and manage children under sedation.

▶ Should I do anything special for my child after a procedure with sedation?

Ask your nurse or doctor if your child should follow a special diet or limit physical activity in any way.

Children who are outpatients usually return home the day of the procedure. A responsible adult must stay with them for the rest of the day. Children who are inpatients will go back to their hospital room after they recover from sedation. Recovery may take place in the PACU or in another part of the hospital.

This information is prepared specifically for persons taking part in clinical research at the National Institutes of Health Clinical Center and may not apply to patients elsewhere. If you have questions about the information presented here, talk to a member of your health care team.

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