

Sedation for Children

Parents' Information

What is sedation?

Sedation is a process to make one sleepy and comfortable by administering drug(s) (sedatives) during procedures. It is required in many medical procedures in children including radiological examination because these tests require children's cooperation and to be still throughout the procedure. Sometimes, these procedures are associated with some discomfort. Sedation enables your child to undergo the procedure without discomfort or fear. With sedation, your child may or may not be aware of what is going on during the procedure. Your child may or may not remember the procedure after sedation and when effects of drugs are worn off.

Who is there to provide the sedation?

A team of anaesthesiologist and nurse will be responsible for the sedation and taking care of your child during the procedure. The team will monitor your child's wellbeing and stay with your child throughout the procedure and manage any emergencies and complications related to sedation. They will also be responsible for your child's recovery and discharge.

Assessment before sedation

Your anaesthesiologist will assess your child before sedation. He/she may ask some questions about your child's past and current health status. He/she will perform relevant physical examination, review investigation results and order further investigations if needed.

Your anaesthesiologist will also discuss with you about your child's sedation plan and obtain your consent. This is a good time to express any particular concern you have about sedation.

How can I prepare my child for sedation?

These are some useful points shared by many parents to prepare their children for sedation

- Except for very young children, explain to your child about the timing of procedure. If your child will stay in hospital, let him/her know the duration and when he/she can see you.
- Explain that the procedure will help him/her get better
- Bring his/her favourite toy/blankets to admission and procedure.



Q

Why must my child fast?

If there is food or liquid in your child's stomach during sedation, it could come up from the stomach and get into his/her lungs (aspiration). Fasting improves your child's safety. If your child fails to fast, the procedure may be cancelled or postponed. Anaesthetic, paediatric and radiological teams will try their best to keep fasting as short as possible. The anaesthesiologist will give you clear instructions on fasting.

Q

Should my child take his/her usual medications during fasting?

The anaesthesiologist will advise you on the arrangement of these medications. When needed, your child can take medications with a mouthful of water during fasting.



Q

What should I do if my child feels unwell before/on the day of procedure?

Please inform hospital staff if your child feels unwell within a few days of the procedure. Generally speaking, it may be best to delay the procedure until he/she feels better. Please inform hospital staff if your child has been in recent contact with chickenpox, hand-foot-mouth disease or other infectious diseases.

What will happen on the day of procedure?

- ✓ Before going to procedure, your child may get changed. A staff concerned and you will accompany your child to the examination room. Your child can bring his/her favourite toy or comforter.
- ✓ You may be allowed to stay with your child until he/she is asleep. However, there are few circumstances when this will not be possible. You can discuss with the anaesthesiologist about this.
- ✓ Monitors will be attached to your child to keep him/her safe throughout the procedure.
- ✓ Your anaesthesiologist can start sedation by giving your child a drug to swallow, applying to his/her nose or asking him/her to keep it under tongue or between cheeks.
- ✓ An intravenous cannula may be placed for other medications (e.g. contrast used during CT or MRI scans) or additional sedative may be directly given to your child during the procedure.
- ✓ Your child may also receive pain relieving drugs if necessary.
- ✓ To ensure safety, anaesthesiologist or nurse will monitor your child's physical conditions during the sedation.



What will happen after sedation?

- Your child will be monitored for an appropriate duration after the sedation/procedure is completed.
- Your child may feel confused and unsteady after procedure. It can also affect his/her judgement so he/she may not be able to think clearly. This may last for up to 24 hours.
- Please avoid vigorous game or activities for at least 24 hours after procedure.
- Your child may eat and drink again after the procedure. However, it is advised to take food/drink slowly and gradually as some children feel sick or may vomit after the procedure.

- In the outpatient setting, your child can go home after recovery from sedation with a responsible adult escort.
- Upon discharge, you will be given instructions of possible complications and how to obtain medical advice if needed. Please follow the instructions.

Is there any risk of sedation?

In general, sedation is safe. The underlying risk is related to your child's medical condition, the sedative drugs used, the experience and training of the doctor administering sedation and the procedure being performed. The possible complications associated with sedation can be classified into the following groups: Common, Uncommon, and Rare:

Common side effects (1 in 100)

- Nausea or vomiting
- Paradoxical excitation
- Failed sedation that may lead to rescheduling of procedure, or conversion to general anaesthesia

Uncommon side effects (1 in 1,000)

- Airway obstruction
- Decreased breathing effort
- Unstable blood pressure and irregularities of heartbeats

Rare side effects (1 in 10,000)

- Aspiration of gastric contents
- Adverse drug reactions, including allergy reactions which may be severe

Remarks

This is general information only and the list of complications is not exhaustive. Other unforeseen complications may occasionally occur. In special patient groups, the actual risk may be different. Please contact your doctor for further information.

Complications may sometimes occur despite all precautions. However, if they do occur, your doctor will take appropriate steps to manage them.

Reference:

1. Sedation for Diagnostic and Therapeutic Procedures. PILIC 0238E. Hospital Authority, Coordinating Committee in Anaesthesiology.
2. General Anaesthesia for Children. PILIC 0290E. Hospital Authority, Coordinating Committee in Anaesthesiology.
3. Sulton C, McCracken C, Simon HK, Hebbar K, Reynolds J, Cravero J, Mallory M, Kamat P. Pediatric Procedural Sedation Using Dexmedetomidine: A Report from the Pediatric Sedation Research Consortium. *Hosp Pediatr*. 2016 Sep;6(9):536-44.
4. Bellolio MF, Puls HA, Anderson JL, et al. Incidence of adverse events in paediatric procedural sedation in the emergency department: a systematic review and meta-analysis. *BMJ Open* 2016;6:e011384.doi:10.1136/bmjopen-2016-011384
5. Cravero JP, Beach ML, Blike GT et al. The Incidence and Nature of Adverse Events During Pediatric Sedation/Anesthesia with Propofol for procedures outside the Operating Room: A Report from the Pediatric Sedation Research Consortium. *Anesth Analg* 2009;108:795-804
6. Bhatt M, Johnson DW, Chan J et al. Risk Factors for Adverse Events in Emergency Department Procedural Sedation for Children. *JAMA Pediatr* 2017: 171(10)957-964