Jan Yperman Ziekenhuis

Anaesthesia and supervision of your child

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INTRODUCTION

Your child will soon undergo surgery or an examination at the Jan Yperman Hospital. For this surgery or examination, your child will be anaesthetised. An anaesthetist (a doctor specialising in anaesthesiology and resuscitation) of the Jan Yperman Hospital will administer your child's anaesthesia.

This brochure provides you with information about the anaesthesia to be used for your child and about the necessary preparations.
If after reading the brochure, you still have questions and/or wish to consult an anaesthetist in advance, you can contact the **preoperative outpatient clinic** at the number **057 35 61 21** between **08:30 and 18:00**.

You will talk with the anaesthetist before the surgery and your definitive approval will be requested for the planned anaesthesia and any additional pain relief techniques. This permission must be given by a legal guardian (parent or appointed guardian), who may sign at the bottom of this brochure. Please bring this brochure on the day of the surgery.

THE ANAESTHETIST

An anaesthetist is a doctor who specialises in the various forms of anaesthesia, pain management and intensive care during the surgery.

The anaesthetist will remain at the side of your child to adjust the anaesthesia as needed. In particular, the anaesthetist will ensure that:

- the pain and stress associated with surgery or medical procedures is suppressed
- vital signs (including blood pressure, heart rate, oxygen level in the blood, etc.) are monitored and stabilised
- breathing continues properly or is supported as needed

The anaesthetist will remain with your child after the anaesthesia in the recovery room to supervise your child waking up and until the child is returned to the children's ward.

PREOPERATIVE CONSULTATION

When it is decided that your child will undergo surgery, you will take your child to the preoperative clinic at the Jan Yperman Hospital for a preoperative interview. After the interview, both of you will return home. You will bring your child back on the agreed upon admission date.

During the preoperative interview, we will inquire about the general health of your child and ask for information that is important to the anaesthetist. It is very, very important that you report whether your child has any known allergies to medication or follows a diabetic diet. We will also ask whether your child has undergone any previous surgeries and whether they had a reaction to the anaesthesia. Your child's weight and height will be recorded. This brochure provides you and your child with more information about the various forms of anaesthesia and pain relief techniques. In addition, you will agree to ensure your child's stomach is empty on the day of the surgery.
Finally, it is always possible to ask questions of the anaesthetist, also during the preoperative consultation.

PREPARING FOR THE SURGERY

EMPTY STOMACH

This means your child must not eat or drink anything starting from a certain time before the surgery. This is necessary to prevent a child from vomiting during the anaesthesia and stomach contents possibly entering the lungs. Thus, it is very important that your child has an empty stomach before the surgery.

The following rules about food and drink should be adhered to before surgeries:

- up to 6 hours before surgery, eating is permitted (solid food)
- up to 6 hours before surgery, breastfeeding is permitted

NOTE: milk, milk products and infant formula fall under the category of solid food

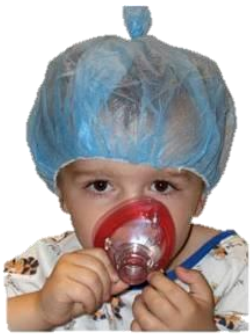
- up to 4 hours before surgery, drinking water is permitted

Calculate the time to start fasting prior to the moment you expect the surgery to happen in the hospital.
The child may eat a little extra before they go to sleep on the evening before the surgery. For example, a slice of bread or some milk. This prevents your child suffering from too much hunger on the day of surgery.
If your child **eats or drinks** within the times listed above, you must report this to the nurse of the child's ward. It is possible that the operation will be postponed.

PREPARING YOUR CHILD

It is prudent to inform your child properly ahead of time. This will allow your child to calmly absorb the information.
The following points are most often discussed beforehand:

- the size and busyness of the hospital and the many strange people who work there
- the hospital gown and bracelet with your child's name on it
- the procedure that your child will undergo
- the air mask that your child wear in order to be anaesthetised
- people who work in the operating theatre and who wear special clothing and hats



Before the surgery, all **jewellery** must be removed, such as watches, rings, bracelets and piercings. Piercings can cause serious injuries (e.g. tears and burns).
Glasses or contact lenses must also be removed before surgery.

Moreover, in the hospital, your child will be prepared in the best possible way about what will take place. An attendant will use photos and stories to inform you and your child about the procedure in the operating theatre. The attendant will then accompany you both to the operating room.

Finally, before leaving the ward, your child will usually receive a small amount of a soothing mixture (premedication) or have a suppository administered. This should make your child sleepy. To prevent falls, make sure your child does not get up.

WHEN WOULD WE DELAY THE SURGERY?

If your child is sick (fever, cough with phlegm, is generally unwell), the operation will be postponed until your child is completely better. If your child recently had a childhood disease (less than three weeks before admission), then it is prudent to postpone the surgery, for example, chickenpox, mumps, rubella, measles or whooping cough. This also applies if your child has recently had a childhood illness or vaccinations.

Before going to the hospital, you must first **record your child's temperature**. If their temperature is 38°C or higher, it is important that you contact and report this to the children's department (phone: 057 35 63 01).

If during the period between the visit to the preoperative clinic and the admission time, your child's health changed (e.g. sick or admitted to hospital), it is important to report this on the day of admission. If necessary, the anaesthetist or paediatrician will once again come to the ward.

A PARENT IS PRESENT

Although not required, a parent may go with their child to the waiting area in the operating department. This is where your child needs to wait a while in bed in the children's corner (TV, DVD and special wall coverings).

In this room, a brief discussion is held with the anaesthetist and it is the last time information is collected prior to the anaesthesia being administered.
When your child is about to be taken into the operation room, you will be asked to say "see you later" or similar to your child. A first-rate team of child attendants will make sure your child receives a suitable reception and comfort. A favourite teddy bear or similar soft toy is allowed.

Although not required, after the changing clothes procedure, a parent may go along with the child to the operation room and remain until the anaesthetist starts initial anaesthesia for your child. You will be accompanied by a member of the operation department. Keep in mind that the anaesthetist may decide for you not to be present at the initial anaesthesia for medical reasons and to ensure the maximum safety of your child.
For emergency surgery and with babies younger than three months, farewells are always said in the waiting area of the operating theatre to ensure the maximum safety of your child.
Some children may not fall asleep during the initial anaesthesia, but show the following behaviours:

- become unsettled
- hitting or hitting out with their arms/legs
- rotate their eyes
- coughing
- breathing fast, followed briefly by holding their breath

So, do not be shocked if these behaviours occur. It is completely normal. Moreover, your child does not notice it because they are already going under the anaesthetic.

After the surgery, a parent or carer may also be present in the recovery room. It is not possible to be present during the operation.

GENERAL ANAESTHESIA

There are two ways your child can be anaesthetised, either with an **air mask** or **intravenously.** The anaesthetist will decide which is the most suitable method.

- With an **"air mask"**, your child falls asleep breathing a mixture of oxygen and anaesthetic gas. The child is then given anaesthetic intravenously.

In general, children usually do not like the smell of the anaesthetic gas mixture.

You can prepare your child for this smell by telling them that they can blow it away.

- With **intravenous** anaesthesia, a small needle is first inserted. This is then used to administer medication to induce sleep.

Prior to a lot of surgeries, a plastic tube is inserted into your child's windpipe to monitor their breathing while anaesthetised. Your child is already in a deep sleep and will not notice it.

The anaesthetist strives to minimise the pain your child will experience after surgery. This is why painkillers are administered during the surgery.

COMPLICATIONS

Today, anaesthesia is very safe due to the advances in and availability of monitoring devices, modern medicines and proper training for the anaesthetist and their staff. Nevertheless, complications are still a possibility.

In this brochure, only the most common and most relevant side effects and complications are listed below. It is practically impossible to list every possible side effect and complication arising from general anaesthesia. Naturally, if you have any specific questions or concerns, you can contact the preoperative clinic who will then refer you to an anaesthetist.

Common side effects or complications (about 1 in 100)

- **Bruising and pain at the injection site**

Contusions and pain at the injection site for the drip may be caused by the bursting of a blood vessel due to physical movements or infection. This usually goes away without requiring treatment.

- **Nausea and vomiting**

Different factors may cause nausea and vomiting after a surgery. It is not always due to the anaesthesia. Possible causes are:

- stress
- fear
- pain
- pain medication (e.g. morphine or equivalent drug)
- specific type of surgery (e.g. keyhole surgery in the abdomen, eye surgery)

Fortunately, we have modern medicines that prevent these unpleasant side-effects and/or complaints. Nausea and vomiting usually goes away within a few hours or days, whether or not with the help of medication.

- **Sore throat/hoarseness**

If your child has a rough or tickling sensation in the back of their throat and/or a hoarse voice, it may be because of the tube inserted in their throat during surgery to regulate their breathing. This irritation will usually go away within a few days.

- **Chills and shivering**

Feeling chilly and shivering is caused by heat loss during the surgery, certain drugs and/or stress. This can be treated with a heating blanket (with hot air) and/or medication.

- **Itching**

Itching is a side effect of potent painkillers, but can also be caused by an allergic reaction. Both cases can be treated with medication.

Uncommon side effects or complications (about 1 in 1000)

- **Lung infection**

This usually occurs because your child did not fast properly and vomited during the anaesthesia. The anaesthetist will take all possible preventative measures, but is prepared to deal with such events.

- **Muscle pain**

In some cases (e.g. emergency surgery when the stomach of your child is not empty), the anaesthetist must administer a specific type of muscle relaxant, which may cause muscle pain after surgery. This goes away spontaneously.

- **Difficulty breathing and/or muscle weakness**

Some pain medication may cause slowed breathing after a surgery. If muscle relaxants have not yet fully worn off, it may cause general muscle weakness, possibly including the muscles used for breathing. Both forms of discomfort can be treated with medication.

- **Damage to teeth, lips, or tongue**

If your child bites down hard when waking up from general anaesthesia, they may damage their teeth, lips and/or tongue. In addition, teeth may be damaged if the anaesthetist has difficulty inserting a tube in the trachea. Unfortunately, this cannot always be prevented despite all vigilance and precautionary measures.

Rare side effects or complications (about 1 in 100,000)

- **Damage to the eyes**

Even though the anaesthetist takes great care to ensure nothing will injure your child's eyes during anaesthesia (protective eye ointment and taping of the eyes), there is a very small possibility that superficial, even painful damage to the eye (the cornea) can occur. This damage is usually temporary and can be treated with appropriate eye drops and/or ointment (in consultation with an ophthalmologist).

- **Severe hypersensitivity (allergic reaction) to drugs**

During the anaesthesia and the surgery, your child's body will come into contact with all sorts of substances that are foreign to it: sleep medication, pain medication, muscle relaxants, antibiotics, intravenous fluids, the latex (rubber) of the gloves of the surgeons, and so on. Your child might be allergic to one of these substances without anyone knowing it.
The reaction may be slight causing problems, such as skin rash, asthma, and/or a decrease in blood pressure.
However, on rare occasions these substances can cause a severe reaction, called "anaphylactic shock". This may be life-threatening.
If this occurs, the anaesthetist will do everything possible to stop an allergic reaction and treat the effects of it.

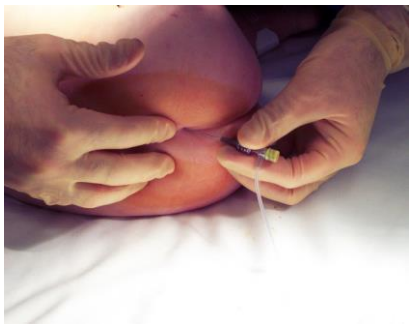
- **Nerve injury**

The body must be placed in a specific position for certain surgeries, which may cause a nerve and/or blood vessel in the arm or leg to be pinched. Among other things, this may cause temporary tingling and weakness. Very exceptionally, it may cause permanent paralysis and/or permanent sensory disorders.

- **Delayed waking or not waking up after general anaesthesia**

The recovery of consciousness is gradual and is determined by how the anaesthetic drugs wear off. When the administering of modern anaesthetic drugs is stopped, these usually wear off quite quickly. The anaesthetist monitors the quality of your child's 'recovery of consciousness' and decides when it is best to wake your child up.

The most common cause of **delayed** awakening is the prolonged use of anaesthetic drugs or tranquillisers.



LOCO (REGIONAL) ANAESTHESIA

For certain surgeries, after your child is asleep, additional regional anaesthesia may be administered. This is known as **a caudal block or epidural**. This epidural anaesthetises the large nerve that runs to the buttocks and genitals. This ensures that your child will have sufficient pain relief immediately after the surgery.

SIDE EFFECTS AND COMPLICATIONS AFTER AN EPIDURAL HAS WORN OFF

It is practically impossible to list every possible side effect and complication arising from an epidural in this brochure. Only the most common and most relevant side effects and complications are listed below. Naturally, if you have any specific questions or concerns, you can contact the preoperative clinic who will then refer you to an anaesthetist.

Common side effects or complications

- **Itching**

Itching is a side effect of injected drugs, but it can also be caused by an allergic reaction. Both cases can be treated with medication.

Uncommon side effects or complications

- **Hypersensitivity reactions**

Occasionally, a person will be hypersensitive to the anaesthetics used. This can manifest as a feeling of tightness in the chest and/or as a rash. It is usually quite possible to treat these complaints.

- **Toxic reactions**

The nerves that need to be anaesthetised often pass near small and large blood vessels. The anaesthetic may enter the bloodstream. Your child will notice this by experiencing a metallic taste, tingling around the mouth, feeling sleepy, cardiac arrhythmias, twitching and possibly unconsciousness. It is usually quite possible to treat these complaints.

- **Difficulty urinating – decreased pain reflexes in the legs**

The anaesthetic in an epidural also reaches the bladder. This may make it more difficult to urinate.

Your child may have decreased pain reflexes in the legs up to 24 hours after a caudal block. Thus, tight bandages must not be used during this period.

Rare side effects or complications

- **Infection**

On rare occasions, even though an epidural is performed under surgically sterile conditions, an infection may occur at the site where the epidural was inserted or even in the central nervous system (e.g. epidural abscess, meningitis, etc.). The consequences depend on the severity of the infection and the type of pathogen.

- **Nerve damage**

Nerve damage caused by directly puncturing the nerve during an epidural is very rare. Symptoms will vary, ranging from tingling, skin sensitivity disorders, nerve pain or even paralysis of the limb innervated by the nerve (bundle).
The nerve damage is usually temporary. Only in rare cases, is it permanent.

AFTER THE SURGERY

During the surgery, a parent may rest in the waiting room until asked to go to the recovery room.
When the surgery is over, your child will be taken into a separate recovery room specially designed for children. If possible, one parent should be present for the child.

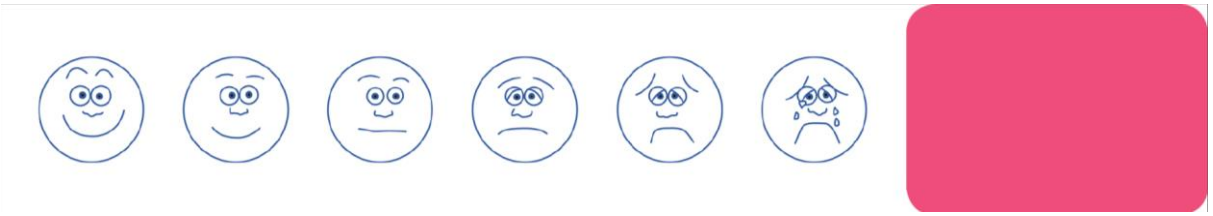
It is important to know that children are sometimes unsettled during the recovery phase.

The presence of a parent can greatly reassure and comfort a child.

Your child may feel a little sleepy after surgery. Nausea and vomiting are also possible.

POST-OPERATIVE PAIN RELIEF

The anaesthetist strives to minimise the pain your child will experience after surgery. This is why it is important that your child or you (the parent) regularly inform the nurse how it is going with the pain. It is well known that children, who receive sufficient pain treatment, generally recover faster.
A pain scale is used to estimate the severity of the pain (see figure below). '0' means no pain and '10' means the worst pain possible.



After a painkiller is administered, your child may behave as described with initial anaesthesia (breathing faster, hitting out with arms and legs, rotate their eyes, etc.). This unrest may last up to 20 minutes. It is important not to disturb your child during this phase.

BACK IN THE WARD

If your child has undergone major surgery, he/she may have a drip, a stomach tube or other thin tubes. Keep in mind that children after surgery may be sleepy or feel nauseous. They sometimes look pale and are usually thirsty. Ask the nurse whether your child may drink, and if so, what and how much. Drinking too much can also make them feel nauseous.

If your child has a rough or tickling sensation or pain in the back of their throat, it may be because of the tube inserted in their windpipe during surgery to support their breathing. This irritation will usually go away within a few days.

After surgery, the doctor will usually come along, but it is hard to predict when this will be. Thus, make sure you have enough time.
If a day hospitalisation was planned, it is still possible that your child may have to stay overnight after the surgery. This may be for several reasons, such as, persistent nausea, discharge or bleeding from the site of the surgery, etc.

FOLLOW-UP AT HOME

Make sure the child takes it easy for 24 hours after the surgery. For the first few days, provide them with easily digested foods, if this is permitted. Make sure your child drinks regularly.

It is possible that your child does not feel very fit or feels listless. This might be due to a number of factors: the surgery itself, the anaesthesia and/or dealing with feeling traumatised by the hospitalisation. Make sure your child can rest as needed and is provided with the necessary time to recover.

Aftercare depends on the type of surgery. The doctor who treated your child will provide you with appropriate instructions.

INFORMED AGREEMENT
- anaesthesia for a child

Name: .....

PATIENT STICKER

Date of birth: .....

I, the undersigned .....

Address .....

.....

Give the anaesthetist my consent to use anaesthesia on .....

- I confirm that I have received the Anaesthesia and supervision of your child' patient brochure and have read it thoroughly.
- I confirm that I could speak to an anaesthetist before the surgery.
- I understand that on the day of the surgery, the anaesthetist may decide to use another anaesthetic technique for medical reasons and after consultation with me.
- **I know that my child is not permitted to eat or drink at least 6 hours before the operation or examination.**
- I know that jewellery (e.g. earrings and other piercings, bracelets, etc), glasses and contact lenses have to be removed before the surgery.
- I understand that the surgery may be postponed to another date.
- I know that I have to contact the surgeon or paediatrician if my child has been seriously ill 14 days before the surgery or in case of a fever above 38°.

Additional for outpatients:

- Upon discharge, an adult will pick up my child and someone will be present at my home during the first 24 hours after the surgery.
- I will be able – after being discharged from the hospital – to contact my family doctor or the hospital (by telephone).
- I agree that I may have to stay overnight or an even longer period of time in the hospital, if this should be required on medical grounds.
- I **give / do not give* my permission for my medical records to be passed on to my family doctor or his / her substitute. *(*cross out as appropriate)*

Planned anaesthetic technique:	**Pain technique:**
❑ General anaesthesia	❑ Patient-controlled intravenous analgesia (PCIA)
❑ Neuraxial block	❑ Patient-controlled epidural analgesia (PCEA)
❑ Peripheral nerve block	❑ Peripheral nerve block single shot analgesia
	❑ Patient-controlled neural anaesthesia (PCRA) plexus catheter
Other:❑ ……	❑ ……

Date: …… / …… / …….. **Time [4]:** ……

Name of the patient or legal representative: ……

The undersigned is (*tick as appropriate):

- □ patient
- □ appointed by the patient representative[1]
- □ legal guardian[2]
- □ cohabiting partner
- □ adult child
- □ parent
- □ adult brother / sister
- □ doctor[3]

Signature

date: …../…../….

Time[4]: ……

Doctor's name/signature:

[1] Is in possession of a written mandate

[2]Can present an authorisation from the justice of the peace.

[3] In urgent cases or if one of the above is missing.

[4] time must be filled in if IC is obtained on the day of the procedure