

INTENSIVE CARE FOLLOWING SURGERY

You (or your child) will be transferred to the Intensive Care Unit (ICU) immediately following the surgical procedure

WHAT IS INTENSIVE CARE?

In the ICU any missing, out of balance or endangered body functions (respiration, circulation, liquid balance and glucose metabolism, etc.) are restored and/or replaced using a wide range of observation, diagnostic (examination) and therapeutic (treatment) methods in the treatment of a basic disorder.

Intensive care includes the following:

- ✓ intensive observation,
- ✓ intensive care,
- ✓ intensive therapy.

Disorders requiring intensive care:

- ✓ major surgery,
- ✓ following difficult, lengthy and complicated anaesthesia,
- ✓ resuscitation,
- ✓ major bleeding,
- ✓ serious complications of liquid, electrolyte or acid-based imbalance,
- ✓ acute respiratory deficiency,
- ✓ artificial respiration,
- ✓ acute circulatory deficiency,
- ✓ acute myocardial infarction,
- ✓ pacemaker,
- ✓ acute kidney failure,
- ✓ acute metabolic disorder,
- ✓ brain disorders,
- ✓ disorders requiring artificial feeding,
- ✓ injuries involving several organs or organ systems,
- ✓ burns,
- ✓ poisoning,
- ✓ cranial and spinal injuries.

INTRODUCING THE INTENSIVE CARE UNIT!

Our Intensive Care Unit is set up to treat 6 patients at any one time in two intensive care rooms. The placement of a patient is not always according to sex but, rather, according to the treatment criteria. The patient's general condition, the length of probable in-hospital stay and the risk of infection are all taken into consideration when placing a Patient in a room. Each bed is equipped with its own Patient Monitoring Device that continuously follows the patient's condition.



Illust. 1: Patient Monitoring Device

THE ICU STAFF

Specially-trained health care providers make up the staff of the ICU.

One to two intensive care doctors and 2 to 3 nurses will attend to you and provide optimal care for you (or your child) 24 hours a day.

Our doctors are anaesthesiologists as well as intensive care therapists.

The anaesthesiologist is specially trained in surgical anaesthesia, in the treatment and care of diseases requiring intensive therapy, in preventing and treating serious, life-threatening conditions and in the various techniques of pain relief.

You will first meet your anaesthesiologist at the anaesthesiology clinic at the time of your pre-surgery examination. The doctor will be in charge of your anaesthesia during surgery and supervise your care in the ICU following surgery.

The nurses are registered nurses who specialized in critical care in their advanced studies following their training. A few have earned university degrees.

Patient care is under the continuous direction and supervision of the intensive care doctors.

Surgery and the following intensive therapy is supervised by the operating surgeon and the surgeon on duty in cooperation with the intensive care doctor.

In addition to the intensive care staff, physiotherapists, dietitians, psychologists and x-ray technicians will be part of the team taking care of you (your child).

WHAT CONSTITUTES INTENSIVE MONITORING?

Intensive monitoring includes checking the following:

- ✓ blood circulation,
- ✓ respiration,
- ✓ body temperature, and
- ✓ the balance of fluids.

Surgical procedures and anaesthesia put a strain on the body necessitating monitoring of life functions following the intervention.

Monitoring is accomplished with the help of state of the art equipment and patient monitoring devices that continually register the patient's heart function, breathing and temperature and, in the event of an abnormality, immediately alert the staff with sound and light signals.

The Monitoring of Blood Circulation

Blood circulation is monitored through the ECG and blood pressure, in every case.

For checking heart function, 5 electrodes are placed onto your chest. These will send signals that show as ECG waves on the monitor.

Blood pressure is also checked with the help of a monitor. The measuring occurs in the usual manner with a cuff secured around the upper arm with the only difference that the cuff is not removed but remains on your arm. The cuff will be blown up at intervals (5, 10, 15, 30, 60 minutes) ordered by the doctor, the blood pressure measured and shown on the monitor. The measuring occurs more seldom during the night though typically, still every hour. The process should not disturb your restful sleep.

Another form of blood pressure measuring is wherein an arterial catheter (a thin plastic tube) is placed in an artery in the wrist under sterile conditions and local anaesthesia. The arterial catheter is usually put into place under anaesthesia in the operating room for monitoring your blood pressure during surgery. It will remain in place in the recovery room to continue monitoring your blood pressure there tied into the recovery room monitor. Continuous blood pressure measuring is necessary following major surgery and in cases of medication that affect circulation.

Monitoring Respiration

The anaesthesiologist will guide a tube into your trachea in order to monitor your respiration during surgery with the help of the anaesthesia machine. In the majority of cases, the tube will be removed after surgery when respiration will return to normal.

The medications used in anaesthesia affect the rhythm and depth of breathing making close monitoring necessary following surgery.

Breathing frequency is monitored by the total number of diaphragmatic excursions per minute measured by the nurses and breathing excursions are continually checked with the help of the ECG electrodes placed on your chest for checking heart function. The recovery room monitors also determine the breathing frequency by diaphragmatic excursions. Monitoring also includes measuring the depth and effect of respiration. (Flat breathing and panting does not insure oxygen-carbon dioxide exchange in the cells and tissues.)

Monitoring of Body Temperature

Since your temperature decreases during surgery, we have to ensure that your temperature returns to normal following surgery. This requires constant monitoring possible with the aid of the recovery room monitor connected to an electrode fitted with a small metal knob placed under your back in direct contact with your skin. No unpleasant sensation is caused.

Monitoring the Balance of Fluids

By balance of fluids we mean that the ratio between the fluids entering and leaving the body is adequate.

Blood loss during surgery cannot be avoided. This upsets the balance of fluids and requires the anaesthesiologist to replace the fluids in the correct amount and quality. After surgery, the intensive care nurses closely monitor the amount of fluid taken in and voided and inform the doctor who then orders the amount and quality to be replenished.

Fluid replenishment during surgery occurs through IV infusions.

WHAT IS A VENOUS CATHETER ?

Some medications and infusions are only effective if entered into the body through the vascular bed.

Peripheral venous catheter

The venous catheter is a thin plastic tube that is guided into a vein through which medication is administered to avoid repeated injections. Aside from the initial prick when

the tube is inserted, the catheter, when in place is painless and may stay in place for a couple of days.

Central venous catheter

Some preparations, such as special solutions used in artificial feeding, cannot be administered peripherally only, exclusively, into big veins. In these cases, you will be informed ahead of time of the procedure which entails guiding a special catheter under local anaesthesia into a big vein below the collarbone or in the neck area.

METHODS OF PAIN RELIEF

Infusion: factory prepared combination of an analgesic and muscle relaxant or an analgesic vial injected into the infusion.

Pills: a wide variety of analgesics available in this form, good complements to other methods.

PCA (Patient Controlled Analgesia): a pump with which the patient controls the amount and the timing of the analgesic within the limits prescribed by the doctor.

EDC: This method is used in some types of surgeries (i.e., hip surgery) for the continuous injection of pain medication through a catheter inserted between the vertebrae of the lumbar or dorsal segments.

WHAT IS OXYGEN THERAPY?

Oxygen therapy is the administration of oxygen to patients following surgery due to the body's temporarily reduced capacity of oxygenation following the lengthy anaesthesia and blood loss. Oxygen is added into the system through a face mask. The therapy is not painful - the face mask may be uncomfortable.

WHAT IS RESPIRATORY PHYSIOTHERAPY ?

Respiratory physiotherapy includes respiratory exercises and techniques for clearing the chest with the use of vaporizers assisting in deep breathing and chest clearance. It is important that you cooperate with the team and do the exercises prescribed in order to prevent the development of pneumonia following surgery.

The excess mucus collected in the airways during lengthy surgery is at times difficult to cough up or remove. We help this process along with the use of a special vaporizer similar to an oxygen mask. This, again, is painless but may be uncomfortable.

The physiotherapist will show you the various breathing exercises. While in intensive care following surgery, you will be given a rubber glove to blow up big through a thin tube 2 or 3 times per hour in order to increase your breathing depth and power.

WHAT IS ARTIFICIAL RESPIRATION?

Respiration is a complex physiologic process that usually requires no attention, works spontaneously and naturally on its own becoming the center of attention only when an illness causes it to be ineffective.

Certain diseases or surgical interventions may cause you to temporarily not be able to breathe on your own necessitating artificial respiration.

Artificial respiration requires clear air passages. These are attained with the help of a special tube placed in the trachea.

The special tube in your trachea necessary for your artificial respiration is connected to an artificial respiratory machine by a sterile, tight and closed tube system that ensures free and safe air circulation and respiration.



Illust. 2: Artificial Respiration Machine

The mucus accumulated in the airways normally exits the body through a cough and the discharge of sputum. Since artificial respiration obstructs this process, the accumulation is removed through a thin tube connected to a closed suction device. The airways are cleaned with the help of a vaporizer. This respiration therapy is continued even after the removal of the artificial respiratory tube. This may be uncomfortable but definitely not painful.

The tube is removed from the trachea when the patient has shown the capacity to breathe independently. Once removed, breathing will continue naturally and spontaneously. A sore throat may follow the tube removal, but, should disappear within a day or two. You may also find that you can speak only softly or in a whisper but this too should disappear within a day or two.

WHAT IS MEANT BY ARTIFICIAL FEEDING?

Artificial feeding is the process whereby nutrients are entered into the body in a manner other than the natural way.

The following are the most common forms used by us:

- ✓ administering special nutrient fluids through a gastric tube,
- ✓ administering nutrient fluids into a vein through a special infusion.

Gastric tube feeding is accomplished by guiding a thin plastic tube through the nostril into the stomach. This procedure is uncomfortable, may be mildly painful in some cases and cause nose bleeds, though seldom. The gastric tube is secured to the nose with a special skin friendly glue. The nutrient prescribed by the doctor is then fed into the tube in the amount and at the intervals ordered.

Should stomach insufficiency develop and the nutrients not be forwarded to the intestines, then the stomach contents may be removed through the gastric tube thus avoiding vomiting.

Patients on the artificial respirator are fitted with a gastric tube for feeding purposes in all cases.

In some instances, such as low stomach and intestinal activity, the feeding must be through the veins. The nutrients are then administered through a central venous catheter according to doctors' orders with the help of an infusion pump.

ARE VISITORS ALLOWED IN ICU?

Yes, visitors are allowed under certain conditions.

Please let your family know ahead of time that they should NOT visit you if they are ill (i.e., have a cold) since in doing so they might set back your recovery.

All visitors to ICU must wear a protective covering over their street clothes and cover their shoes in order to protect you against infection. These are available at the entrance. We cannot accept responsibility for any items left behind at the entrance.

Visitors are not allowed to visit:

- ✓ during treatments,
- ✓ during doctors' rounds,
- ✓ during times of admission and discharge,
- ✓ during physiotherapy.

These rules are for your own good!

You may wait in the waiting room at the entrance to the ICU. The nurses will let you know when you may enter the patient's room.

HOW LONG WILL I HAVE TO STAY IN THE ICU

You may leave the ICU once your blood circulation, breathing, body temperature and the balance of fluids are normal and do not require further observation and the body functions work independently.



Thank you for choosing us!