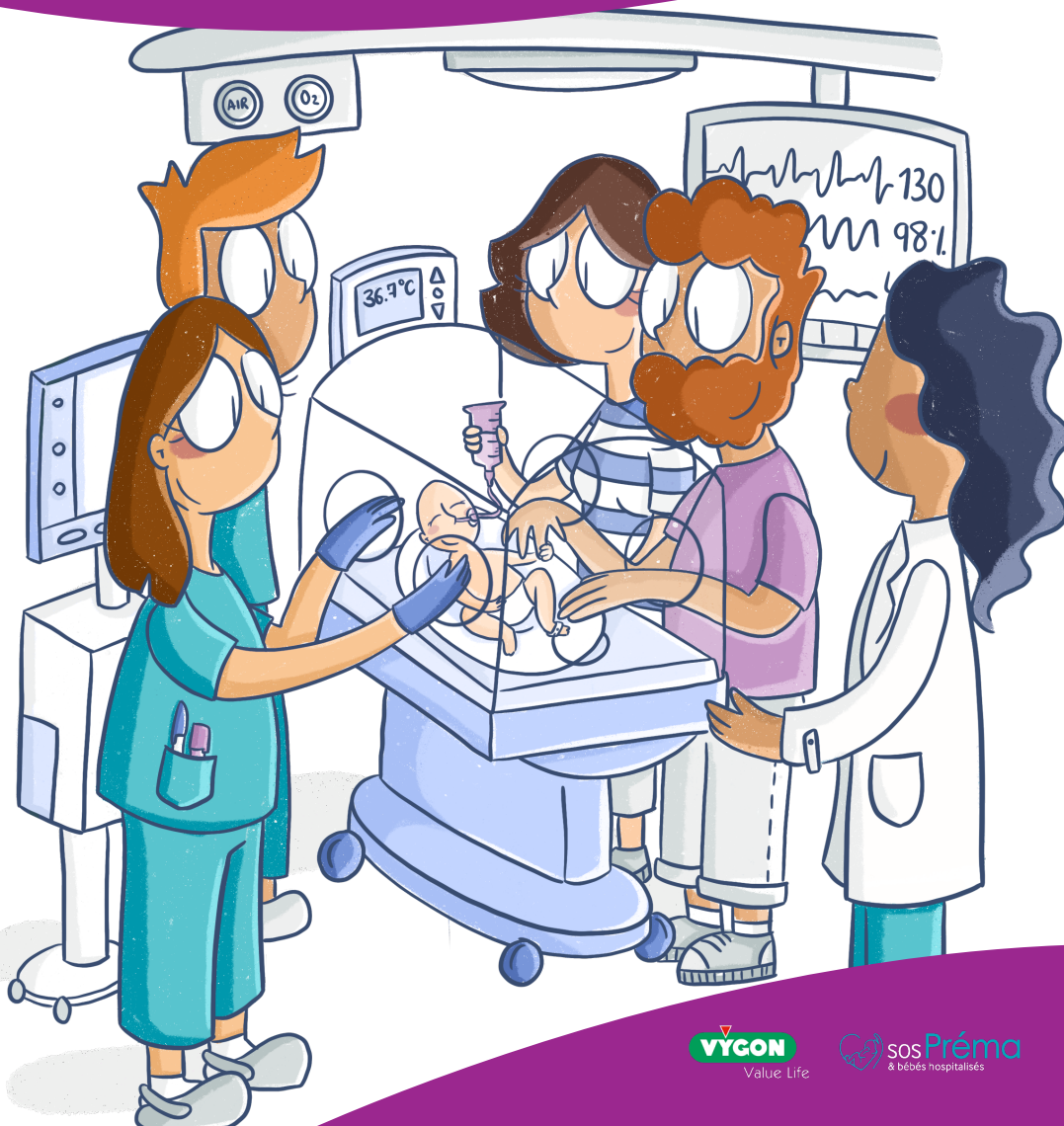


PRACTICAL GUIDE TO ENTERAL NUTRITION FOR PREMATURE BABIES





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This booklet was created in collaboration between SOS Préma and Vygon.

SOS Préma : The association supports parents of premature babies and hospitalized newborns, striving for better care of prematurity.

Vygon : The company specializes in the design, production and marketing of single-use sterile medical devices, particularly in the field of neonatology.

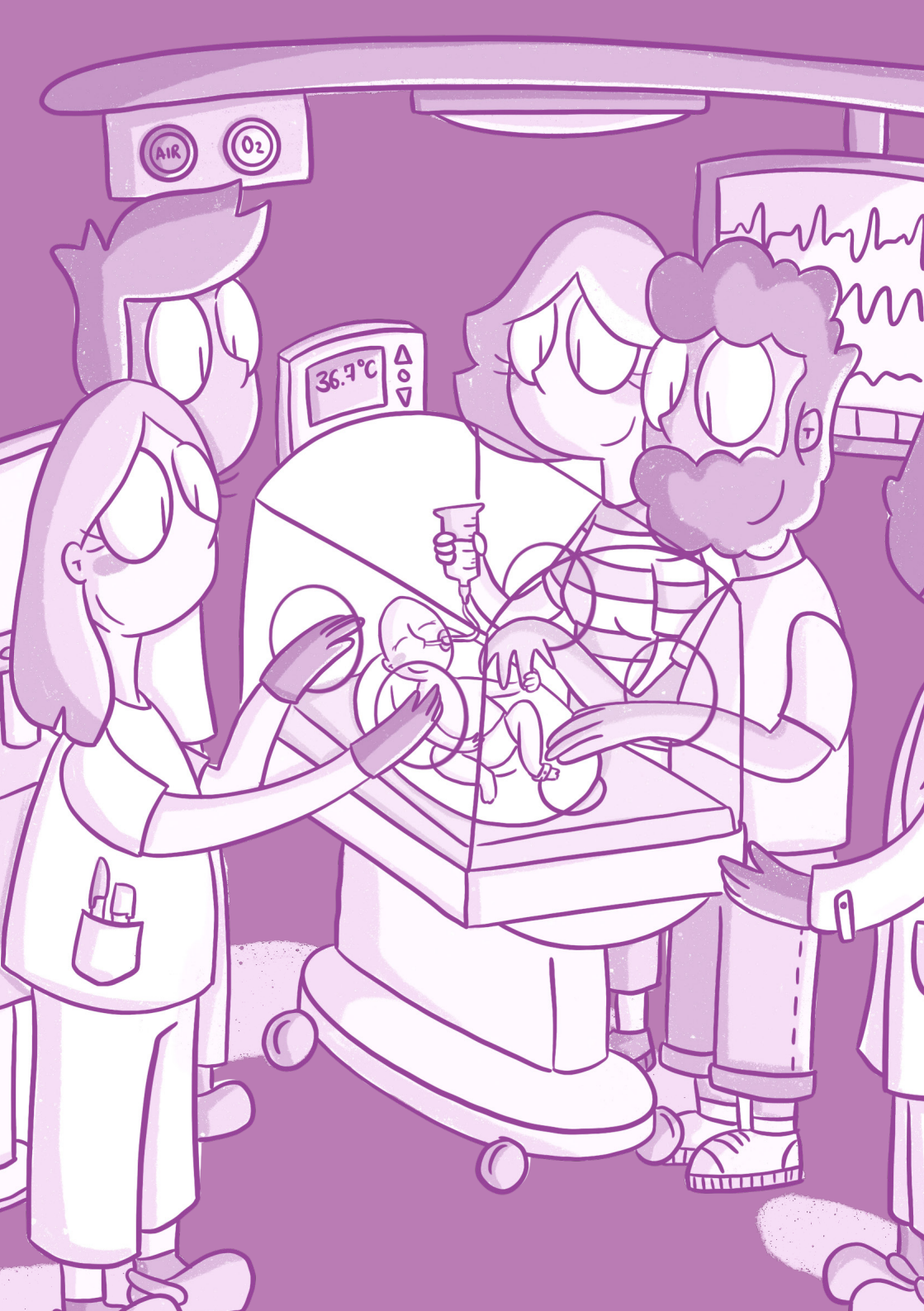
DEAR PARENTS,

This booklet is being given to you because your baby has come into the world a little earlier than expected, and we'd like to support you in your baby's journey in neonatology. Due to their immaturity, your baby requires specific care during their first weeks of life. This booklet will help you understand which medical devices are used to help them feed and will enable you to better understand how you can be involved at each step of their care.

You are surrounded by healthcare professionals specialized in this field (paediatrician, nurse, maternity nurse, lactation consultant, nursery assistants), who are here to support and guide you throughout this journey.

Above all, remember that you are not alone!





1 What is enteral nutrition and why does my baby need it?

FIRST OF ALL, WHY SHOULD MEDICAL DEVICES BE USED TO HELP YOUR BABY FEED?

When your baby is born prematurely, they'll need help feeding, as they are not yet able to swallow or feed directly from the mouth. They have the sucking reflex, but cannot yet coordinate **sucking, breathing and swallowing**. Their nutrition will initially be provided via a feeding tube.

A feeding tube, also known as a gastric tube, is a small, flexible tube that is gently inserted through your baby's nose or mouth into their stomach, through which breast milk (yours or donated milk) will pass using a syringe (more information on insertion on page 14). This method of feeding is known as **enteral feeding**.

You may be overwhelmed by this, but **it's a legitimate reaction** - many other babies and parents have been through it too. It's an **essential**, but necessary **step** that will help your baby grow and get all the nutrients needed for their development.

WHAT DOES ENTERAL NUTRITION PROVIDE FOR THEM?

Enteral nutrition is absolutely essential for your baby's development. They will need to go through this stage to be able to feed on their own later. Thanks to you, they will gradually acquire their autonomy. **Enteral nutrition will initially provide them:**

The simulation of intestinal function:

Your baby will learn to «digest», they will contract and move their intestines thanks to the milk introduced through the enteral feeding tube. Think of it as a first «training» for digestion.

The strengthening of the immune systems:

As you probably already know, breast milk helps your baby to **develop their immune system** and protect them from certain diseases and infections.

Your baby's healthy growth and neuro-sensory development:

It may seem obvious, but enteral nutrition will provide your baby with all the nutrients they need to grow. At the same time, your baby will try to suck. It's like a signal to their brain, teaching them that **eating is necessary for their well-being and growth.**

All these advantages make enteral nutrition **the recommended method** when oral feeding is not yet possible, or to complement breastfeeding.



Good to know

*Some medications that your baby will need can also be administered through **the gastric tube.***

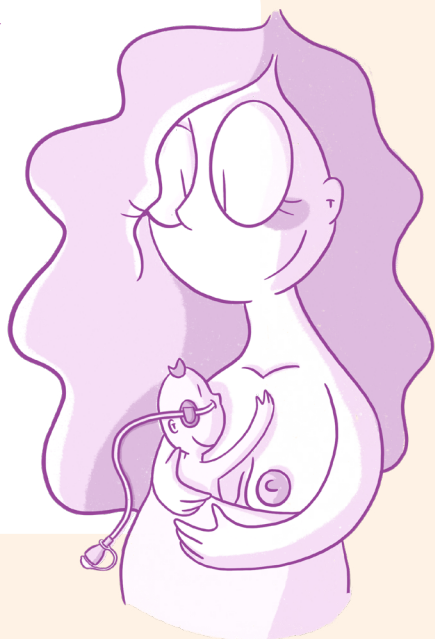
2 What are the different medical devices used to help my child feed?

Before being able to feed on their own (either by breastfeeding or bottle-feeding) and developing the coordination of suction/swallowing/breathing, or learning to breastfeed, your baby will receive milk **directly through the feeding tube**, used alongside other medical devices.



Good to know

*Doing “skin-to-skin” with your baby has a thousand benefits for them: not only will it reassure them (and you too!), but they will also discover their new «world» and understand that your breast is a possible source of nourishment (for babies who can be breastfed). Your involvement at every stage is essential to **reassure them, observe them and understand their needs**, in order to better support them in this learning process.*



1 **The feeding tube (or gastric tube)** is a small, flexible tube that healthcare professionals will gently insert into your baby's mouth or nose, which will then travel down the oesophagus to their stomach. It is used to **bring milk to your baby's stomach**, it's very thin, adapted to your baby's size and weight.

2 **The connector of the tube** : this component of the tube is very important. Thanks to it, nutrition can be done **safely**. An international standard (ISO 80369-1) requires this connector to be differentiated from all other types of connectors that may be found on the end of medical devices. The **secure screw connection** can only be used with other enteral nutrition devices. This ensure that this device is only used to give milk to your child!



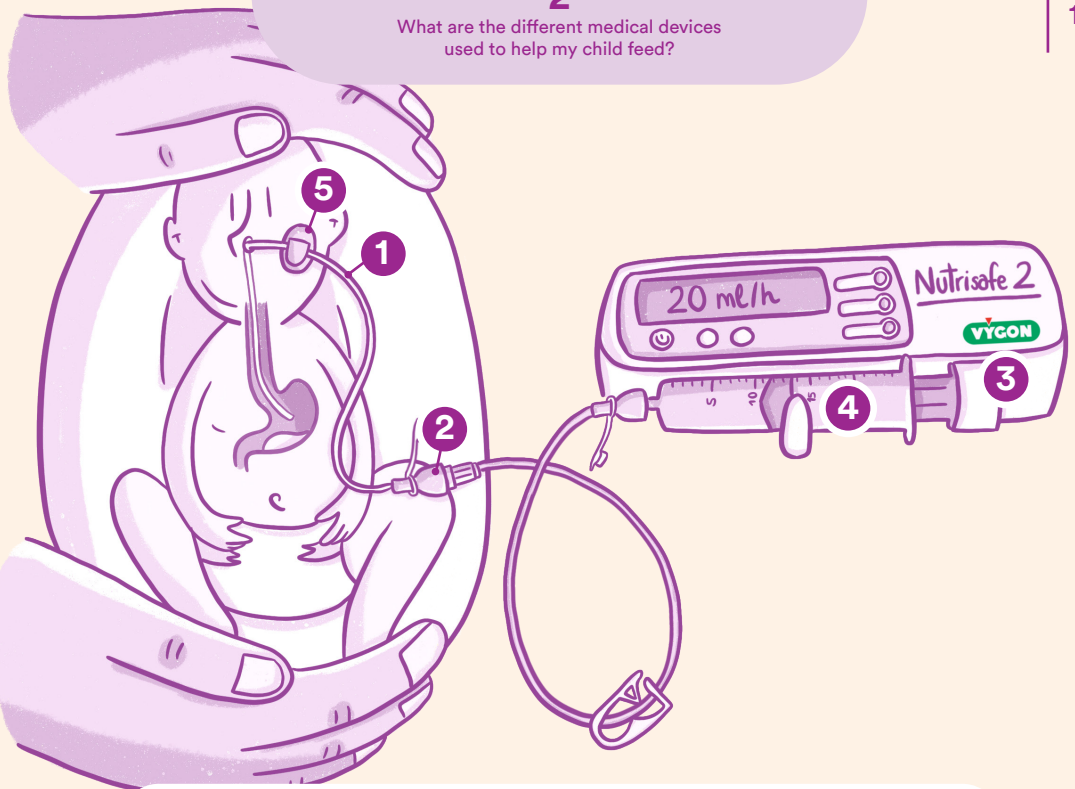
Good to know

You'll notice that enteral nutrition devices are purple - another easy way to identify them.

*The Nutrisafe2 range is specially designed for premature babies: the connectors are small (adapted to the smallest babies) which prevents **milk from stagnating** in the connector and allows for **more precise dosing** when administering **medications**.**

* Study on the over-dosing risk of the « ENFit Low Dose Tip » syringe during its use, March 2018, Vygon & Andheo

3 **The syringes** are used to **contain and push the milk into the gastric tube** to reach your child's stomach. This allows you to know exactly how much milk your child is receiving throughout the day. **See page 18** for different usage techniques.



4

The syringe driver. This device is often found next to your child's bed, and as its name suggests, it is **used to push the milk into the tube**. It is fitted with a screen which determines the quantity of milk to be pushed, as well as the speed (flow rate) at which it will be sent through the tube. This device is not always used if the milk is administered «manually» by one of the parents or a caregiver in their absence (**more information on page 19**).

5

The GripLok is a small, soft bandage which is placed on your baby's face **to hold the tube in place**. It's essential because it helps maintain the proper positioning of the feeding tube in your baby's stomach.

3 How is the enteral feeding tube placed?

For many parents of premature babies, tube insertion can be source of concern. We will explain each step to you.

A - BEFORE INSTALLATION

Reassuring your baby

When it comes to feeding your baby, it's important to offer as much comfort as possible. **As parents, you play a crucial role at this moment.** You can comfort your baby by talking softly to them, holding them skin-to-skin against you, or allowing them to suck (from the breast, his fingers or your fingers, or from the teat with breast milk).

Your presence and affectionate gestures are essential to soothe them. You can also place your hand next to them or on their head to comfort them. By being present and involved during the procedure, you can help **make the experience of the feeding tube placement as gentle as possible** for your baby.

Measure

Before inserting the tube, the healthcare professional **takes a precise measurement of the length** of the tubing outside your baby's body, along their head and chest. This ensures that the tube will reach your baby's stomach. This precise step is crucial to minimize any discomfort or risk when inserting the tube.

Here are three measurement techniques commonly used by healthcare professionals:

- From the tip of the nose, to the earlobe, and then to the navel.
- From the tip of the nose, to the earlobe, to the tip of the sternum, and then to the navel.
- From the corner of the nose, to the earlobe, to the midpoint between the tip of the sternum and the navel.

These precise measurements help determine the exact length of tubing to be insert, ensuring safe enteral feeding for your premature baby.



B - DURING INSTALLATION

Communication with the medical team

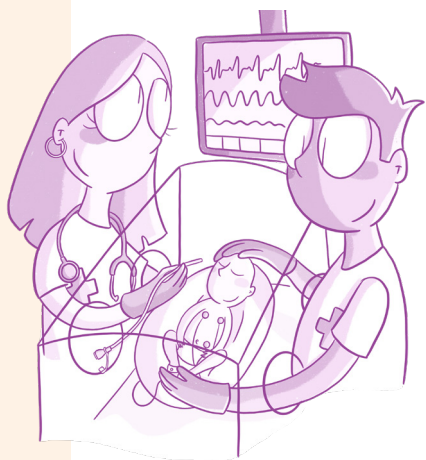
Don't hesitate to ask questions and express your concerns to the medical team. Your involvement in your baby's care is important, and it's essential that you understand every step of the procedure.

Preparation and comfort beforehand

Before the procedure, you can help prepare your baby by speaking softly and offering your reassuring touch. You can also use comforting techniques such as **skin-to-skin** contact to help them feel calm and secure.

Insertion of the tube by the nurse (or childcare nurse)

When inserting the tube, several steps are taken to ensure your baby's comfort and safety:



1 Waiting for the right moment:

Before inserting the tube, the nurse will wait for your baby to open their mouth naturally, making it easier to pass the tube. This procedure will also be carried out according to your baby's rhythm (sleep protection), unless the tube needs to be placed urgently (for example, in the event of hypoglycemia).

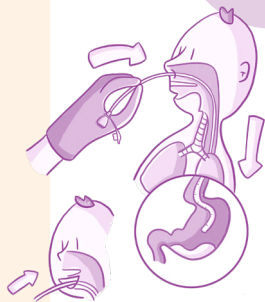
2 Insertion and sliding of the tube:

Once your baby's mouth is open, the tube is gently inserted and slid over their tongue. The nurse ensures that this process is done smoothly to avoid any discomfort.



3

How is the
enteral feeding tube placed?

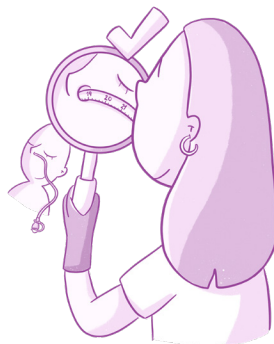


3 Sliding through the oesophagus:

Ideally, the tube should slide down the oesophagus to reach your baby's stomach.

4 Verification of the length:

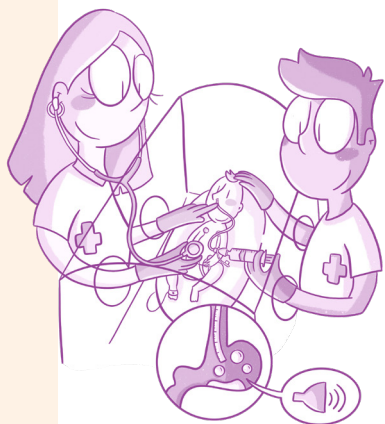
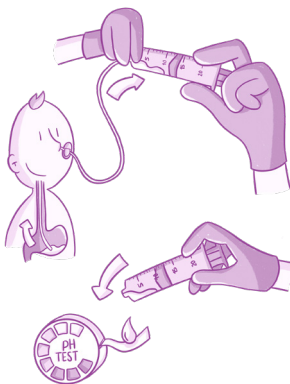
The nurse checks the length of the tube by referring to the initial measurement taken outside your baby's body, at chest level. The tube is inserted up to the previously measured length to prevent it from going too far.



5 Verification of the tube placement:

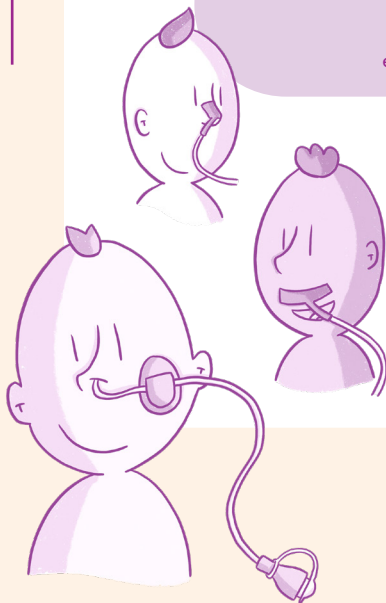
Verification tests are performed, such as:

- **Auscultation** (a small amount of air is injected, allowing the nurse to check the location of the tube with a stethoscope).



- Sometimes a **pH test** is performed - a small amount of gastric fluid is aspirated with a syringe to confirm that the tube is correctly positioned in the stomach. The pH is different in the stomach and oesophagus, and gastric juices are more acidic, which makes it possible to determine the correct positioning of the tube.

How is the
enteral feeding tube placed?



6 Securing the tube:

Once the positioning check is complete, the probe is secured to your baby's face with a bandage (see page 11) to prevent it from slipping further and to maintain its position safely.

C - AFTER: COMFORTING YOUR BABY AFTER THE TUBE INSERTION

Soothing after installation

After the tube is placed, **take time to comfort your baby** by holding them gently, speaking to them softly and offering affection. You can even hold them **skin-to-skin**. Don't forget that the procedure can also be stressful for you as a parent. Taking care of your baby and offering your love can also help you manage your own stress and feel more relaxed.





How do you prepare the milk for the syringe?

As part of enteral nutrition, **breast milk** is essential for your baby's health and well-being. Breast milk is recommended due to its many health benefits for your baby, including its ability to **boost the immune system** and promote healthy growth. If expressing breast milk or breastfeeding is not possible, you may consider using donated milk.

WHERE DOES "DONOR MILK" COME FROM?

This milk is collected from women who have generously donated their excess milk. Before being administered, this milk is **rigorously tested, pasteurized and controlled** to guarantee its safety and quality.

It's important to emphasize that all mothers do their best to feed their babies, regardless of the choice of nutrition. If you encounter difficulties, you can always resort to alternatives such as donated milk. The most important thing is to ensure that your baby receives the nutrition they need to stay healthy and support their growth.

Expressing breast milk:

If you do manage to express your milk, it's important to take the time to relax (have a moment of connection with your baby through skin-to-skin contact), which can help you express it.

Syringe preparation:

This crucial stage takes place in the hospital's milk room. Procedures vary from unit to unit: it may be carried out by the infant dietetics/lactarium department, or directly in a dedicated room of the unit. In all cases, strict hygiene measures must be followed.

MILK ADMINISTRATION AND DIFFERENT TECHNIQUES

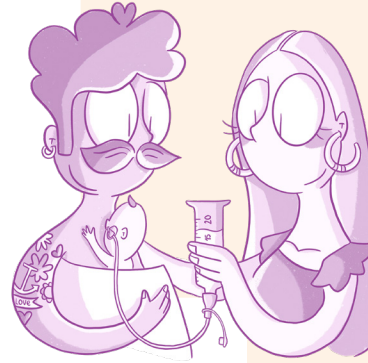
The administration of milk can be done using various techniques, actively involving parents in the care of their baby:

By parents:

You can hold your baby skin-to-skin while gently pushing on the syringe to give milk. The healthcare staff will show you how to perform this action. You will learn to observe your baby's signs of satiety to adjust or stop feeding according to their reactions.

By gravity:

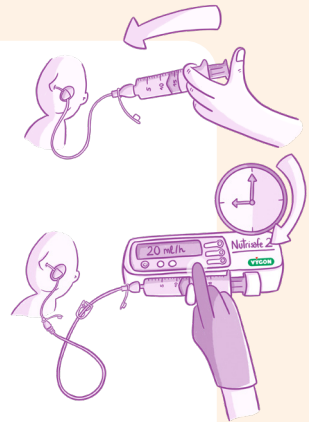
This process involves letting the milk flow naturally into your baby's stomach using a syringe. During this procedure, your involvement as a parent is encouraged, particularly through skin-to-skin contact and careful observation of your baby.

**Good to know**

By adjusting the height at which the syringe is held, you can influence the flow rate (the higher you raise the syringe, the faster the flow rate).

By syringe driver:

This method involves the continuous administration of milk using a syringe pump (see page 11 more information). You don't have to do anything except monitor your baby! The feeding is programmed by the nursing team and will take place automatically. It allows the milk to be administered at a very low flow rate and adjusting the amount based on your baby's capacity.



By understanding the various steps of milk preparation and administration, you can play an active role in your baby's nutritional well-being and provide them the best possible care.

5 What happens next? When will my baby be able to feed themselves?

This will depend on each baby and their development; they will need a transition period to develop their sucking reflex before on to breastfeeding. Initially, your baby will probably need some form of support, such as the Supplementary Nursing Systems (SNS). **Talk to the health-care team (nurse or lactation consultant) about this.**

WHAT ARE SNS?

Supplementary Nursing Systems (SNS) are tools used to encourage babies to suck and stimulate feeding. This method can be particularly useful for easing the transition to breastfeeding, or for completing a course of enteral nutrition when the baby is ready. Parental involvement in using SNS is crucial, as their support and active participation can greatly enhance the success of breastfeeding.

We hope this booklet has given you a little more information about enteral nutrition and the medical devices associated with it. Don't forget the importance of your role as parents, and what you can offer to your child during this important stage in the hospital. Healthcare professionals are on hand to support you, so don't hesitate to call on their expertise.

**Good to know**

In several countries, associations exist to support parents of premature babies, such as SOS Préma in France. Don't hesitate to look for the resources available near you.

TESTIMONIAL

Alicia, mother of Timaé (born at 27 weeks and 4 days)

«Timaé spent around 60-70 days with an enteral feeding tube. He very often removed it himself. Putting it back in was extremely difficult for him (desaturation, bradycardia, etc.). One day, during skin-to-skin care, the tube was pulled out again. Timaé's nurse didn't put it back in immediately. She put my son on top of me, then came to put his tube back in when he was awake at the end of the skin-to-skin session.

She asked me to manually extract a few drops of milk. Which I fed her at the same time as she inserted the enteral tube. It was the first time I'd been involved in the insertion of the enteral tube, and the first time I'd seen my little one in comfort before, during and after the insertion.

We had it all: the syringe, the syringe driver, the bottle and finally breastfeeding. The nursing team was very attentive... The transition was made quickly, following a stoppage in feeding (enteropathy). The nursing team decided to restart feeding without using a feeding tube. Timaé therefore resumed bottle-feeding, alternating with some breast-feeding. Finally, at home, we were able to do on-demand breastfeeding only, accompanied by a lactation consultant.»

