THE ROTUNDA HOSPITAL
DUBLIN

A Parent's Guide To The Neonatal Unit

Caring for Generations
Since 1745

Baby Record

Name _____

Date of Birth _____

Time of Birth _____

Weight _____

Length _____

Head Circumference _____

I had my first cuddle with Mum on _____

I had my first cuddle with Dad on _____

I cried for the first time on _____

My first breast or bottle feed was on _____

I went into a cot on _____

I went home on _____

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Introduction

Congratulations, you have just become the proud parents of one or more beautiful babies. We know and appreciate that this may be a difficult time for you as you have to entrust your baby or babies to our care. Please be reassured that each baby and family are central to our care and our philosophy is to give high quality specialised care to each and every one. The aim of this booklet is to let you know what to expect and to try to reduce some of the anxiety that you are bound to feel when your baby is unwell.

The Neonatal Unit in the Rotunda has been providing care for all sick or premature infants born in the hospital, and those transferred from other hospitals, since the 1950's. The Rotunda hospital is located on Parnell Square, just off O'Connell Street, Dublin 1. The Neonatal Unit is situated on the second floor of the hospital and consists of intensive care, high dependency and special care sections.

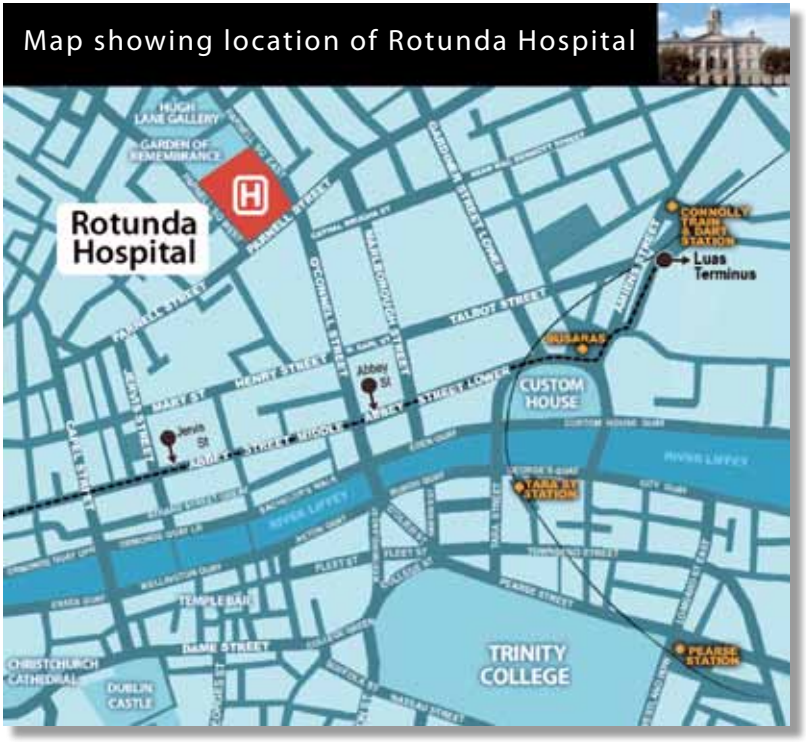
Most babies are in good health at birth but around 10% will require admission to the Neonatal Unit. Small premature babies (born before 34 weeks gestation) and sick bigger babies will be admitted to the Neonatal Unit for observation, treatment and ongoing care. Premature babies, because they are born early, may take some time before they are well enough to go home. Bigger babies are

transferred back to their mothers on the postnatal ward once their condition improves. Babies transferred from other hospitals to the Rotunda Neonatal Unit will be transferred back to their referring hospital for ongoing care, once their condition is stable enough to permit this transfer.

Not everything described in this booklet will apply to your baby. Furthermore it is not intended to replace your regular talks with nursing and medical staff.

'He/she' is used interchangeably throughout this booklet for the sake of simplicity.

Where to find us?



Hand Hygiene

Germs that naturally live on a person's skin and normally cause few problems may be more serious when brought into the unit. Therefore, everyone who enters the Neonatal Unit is asked to wash his or her hands. This applies even if you are not planning on touching your baby. Hand hygiene is recognised internationally as the single most important preventative measure to stop the spread of these germs.

To perform hand hygiene properly everyone needs to be "bare below the elbows". This means that you should remove your coat, watch and rings except your wedding ring. (Please keep your jewellery safe.) Roll up your sleeves and wash your hands. Remember to turn off the taps with your elbows. There are posters beside the sinks to fully explain the hand washing technique. Germs love moist skin so it is important to make sure you dry your hands well, placing the paper towel in the bin by using the pedal and without touching the lid. Please leave your jewellery off until you are leaving the unit.

It is important that you use alcohol gel before and after handling your baby. Alcohol gel is placed throughout the unit for use on visibly clean hands. Apply one squirt to the palm of your hands and rub them together, covering the palm, back and fingers of each hand. Continue rubbing until hands are dry.

Hand hygiene also applies to all hospital staff. Staff will not be offended if you ask them whether they have cleaned their hands.

Visiting

You, as parents, are welcome and encouraged to visit anytime up to 10pm. We don't have set visiting times. We may ask you to leave for a short time when it is necessary to protect the privacy and confidentiality of babies being discussed nearby.

Examples are:

- Nursing handover which happens at 7.30 am and 8pm each day. Please allow 30 to 45 minutes for shift changes.
- Medical ward round which occurs at 9am Tuesday to Friday and 10am Monday. Please allow one hour for ward round.
- When an emergency arises or certain procedures are being carried out for your baby or a baby closeby.
- Sometimes during the admission of an ill baby.

During your visit we would ask you to stay by your baby's side and respect the privacy of the other babies by not straying over to their incubator or cot. Please do not ask the staff questions about other babies.

Unfortunately we do not allow children or other relatives to visit except in exceptional circumstances. This is due to the risk of illness carried by young children (e.g. Chicken pox etc) and the numerous infection outbreaks in the community (e.g. H1N1) which can be very dangerous for premature and newborn infants. This policy has been developed for the protection of your baby and all the other babies in the unit. Your co-operation and understanding are appreciated.

Please turn off mobile phones at the door as they can interfere with equipment used in the treatment of your baby. If you have a cold, an active cold sore, feel unwell or any children at home are unwell, please check with the staff before entering the unit.

Who will look after my baby?

The Neonatal Unit is staffed around the clock with specially qualified Neonatal Nurses/Midwives. A Neonatal Registrar and/or Advanced Nurse Practitioner (Neonatology) and a Senior House Officer are on duty at all times. A Consultant Neonatologist is always contactable. All other essential services, such as x-rays and blood tests are available 24 hours a day.

Our philosophy is to provide a high standard of holistic care to all sick newborns and their families. We see the babies in our care and their families as central to the activity in the unit so you matter to us and we will try to support you during what is a very traumatic and difficult time. We will always be happy to keep you fully informed about your baby's progress and to answer your questions.

A Who's Who of the Neonatal Team

The Nursing Staff

Clinical Midwife Manager 3 (CMM3) is a senior manager with overall responsibility for the nursing team.

Clinical Midwife/Nurse Managers 2 and 1 (CMM/CNM2 and 1) are responsible for the day to day running of the unit and are available twenty four hours a day.

Staff Midwives (SM) and Staff Nurses (SN) are midwives and nurses with specialised knowledge who provide direct care to your baby.

Student Midwives and Student Nurses are midwives and nurses undertaking their education and training.

Advanced Nurse Practitioners [ANP] (Neonatology) are nurses who have advanced education in the care of newborn babies and their families.

Clinical Nurse Specialist for Paediatric Neurology (CNS) is a nurse with advanced education in the care of babies with a neurological issue.

Discharge Planning Co-coordinator is a midwife or nurse with advanced knowledge and whose primary goal is to help you prepare and be confident in taking your baby home.

Clinical Skills Facilitator (CSF) is a nurse with advanced education who coordinates the continued education of all the nurses within the unit.

Maternity Care Assistants (MCA) assist the nursing staff in providing care to babies and families in the unit.

The Medical Staff

Consultant Neonatologists are doctors who specialise in the care of newborn babies.

Non Consultant Hospital Doctors comprise of registrars and senior house officers who provide twenty four hour cover within the hospital.

Support Staff

Ward Clerk is responsible for the clerical running of the unit.

Household Staff ensure the daily hygiene services are maintained within the unit.

Neonatal Unit Porter is responsible for the portering duties.

Your Baby and You

The initial shock of seeing a small baby for the first time can be very frightening for parents. Your first thoughts may be that your baby is so small and fragile that you may cause pain or distress by touching him. This is a common reaction and staff are always available to help you.

At first if he is ill, rest is very important for him so handling is minimised. We may also ask you not to stimulate him too much in this early stage. You may not be able to hold him straight away. Nevertheless he will know your voice so do spend some time talking to him and gently touching him if he is able. As he becomes stronger he will come out for cuddles and kangaroo care. You can also help with his cares (nappy changes, feeds etc) and other tasks important to his comfort. This time spent with him helps create a strong bond between you all. You will get to know him, discover his unique personality and identify and recognise his needs. With time you will become very comfortable with handling and caring for him and even if you feel a little nervous, remember you are not alone.

Upon arrival to the unit, a photograph will be taken for you and thereafter, please bring in your own camera or video recorder. Take plenty of photos to see how he is growing. Please don't photograph or video the other babies or staff in the unit.

Kangaroo Care

Kangaroo care is skin-to-skin contact where your baby is placed next to Mum or Dad's skin on your chest. This has many physical and emotional benefits for you both. It helps to calm your baby, regulate his heart rate and breathing and encourages deeper sleep which all improves weight gain. It helps in establishing an everlasting bond between parent and baby through touch and smell. You feel closer to him and become more confident about caring for him. Another benefit is in establishing milk supply and breastfeeding later on.

Generally baby is naked except for his nappy. He is placed on your chest, next to your skin, inside your clothes. A hat and blanket may be necessary for small babies. Check his head is supported. Now relax and enjoy this special time together. Understandably you may be very apprehensive at first but before long these feelings will pass as you become more comfortable handling him.

Kangaroo care is still possible even when he needs extra help with his breathing. The nurses will advise you when he is strong enough to be taken from his incubator and will help you manage any wires and tubes while you hold him.

Feelings and Reactions

Most people expect their pregnancy to go to full term, to deliver a healthy infant and to be discharged home with their baby a few days later. Your baby's admission to the Neonatal Unit changes those expectations. In addition to your delivery, you have to cope with the very intense and strange environment your baby is in. As a parent you may have very mixed feelings about your baby being premature or sick. Feelings of guilt, anxiety, disappointment and fear can be normal reactions in some parents. You may wonder what you did wrong to cause this to happen. You need to keep in mind that her illness is unlikely to be related to anything that you have done and the staff in the unit can discuss and reassure you about this. Don't be afraid to ask questions, voice your fears or seek our help, that's what we are here for.

As time passes and her condition improves, you become more relaxed and positive and feel ready to take part in her care. Talking to and touching her, and kangaroo care when she is able, will help you to get to know her and develop a bond between you all.

The strain of having an infant in the Neonatal Unit can put tremendous pressure on your relationship. The neonatal journey is a similar experience for everyone but also unique for each person so it is very hard to describe the normal reaction to having an ill or premature baby. Some parents are drawn closer together but even the most loving relationship can come under strain. A lot of parents can feel isolated from each other. It can be difficult to go on caring and thinking about each other while both of you are caught up in your own thoughts and feelings. Families are all different. Each person may have different ways of handling and expressing these feelings. Talking to each other comes easily for some couples but for others it is much harder, yet usually it is the talking that makes things bearable. Tears are sometimes seen as a sign that parents are not coping when in fact they are a reaction to what has happened.

Some parents find it helpful to keep a diary, with just a few lines each day of how your baby is progressing or of little events that happen. It will be lovely to look back on later.

Brothers and Sisters

Brothers and sisters, grandparents and other close family and friends may also be affected by your premature or ill baby. Having a brother or sister in the Neonatal Unit can be very hard on older children in the family. Unfortunately children cannot visit the unit but you can help them stay in touch with the new baby by asking them to make cards or pictures to hang near the baby's incubator. Give your older child a picture of the baby and put one up at home. Talk to them about their new baby and answer any questions truthfully at their level of understanding. Bring in a picture of the older children to put on the baby's incubator.

Finding out how your baby is doing

You may ask us if you wish to know any information or if you have any concerns about your baby at any time. We will always keep you up to date on your baby's progress. Please ask about the treatment she is receiving and why. It is important that you understand what is happening so that we can work together with you to make sure that she receives the best possible care. Please be patient if you have to wait a few minutes until her nurse is free to speak to you.

You are welcome to telephone any time of the day or night. The nurse caring for her will give you an update on how she is doing. But please, ask relatives and friends not to phone us as we can only give information to you, the parents. The neonatal registrar can give you regular updates when you visit. A consultant is available after the ward rounds most days or an appointment can be made for you to speak to the consultant caring for your baby.

Support for Parents

Within the Neonatal Unit we have the Parent Support Group, facilitated by the neonatal staff and the Medical Social Worker. The group meets about once a month and gives parents an opportunity to meet and talk with each other. Speakers are invited to talk on topics such as breast feeding, parent education etc. Sometimes, parents who have had a premature baby in the unit attend the group to speak with the newer parents. Experiences are shared in a relaxed atmosphere with light refreshments. Posters with the details are displayed within the unit.

Talking with other parents in the waiting room or the breast milk expressing room can often be a great source of support and encouragement. Everyone can be at different stages of their baby's care and it can be great to talk to parents who have already been through what you are going through (bearing in mind that each baby's case is individual). Later on, you may also be able to offer encouragement to newer parents.

Facilities for Parents

There is a small sitting room/waiting area where you can take a rest during visits with your baby. We have some limited overnight accommodation available for parents when necessary. We also have parent and baby rooms where you can stay overnight in the days prior to baby's discharge.

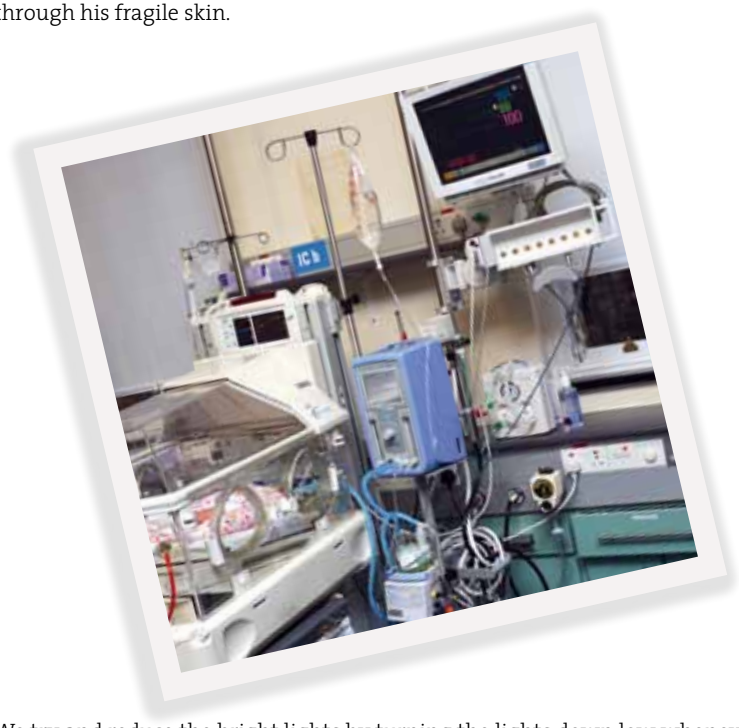
Following Mum's discharge from hospital, we have a dedicated room where mothers who wish to express breast milk while visiting can do so.

Water coolers are available throughout the unit. Canteen and Café Rotunda facilities are available within the hospital. Please ask a member of staff for the opening hours.

Car parking is available for a fee in the hospital grounds during off-peak hours. There is disc parking in the streets and many multi-storey car parks nearby.

The Neonatal Unit Environment

The Neonatal Unit can be a noisy and busy place, with lots of complicated looking equipment and alarms that are confusing and frightening for parents. It can be very distressing being separated from your baby and you may feel very isolated and helpless knowing he is ill. At first it is usual for him to be nursed in an incubator wearing only a nappy. The incubator creates a stable warm environment and allows staff to observe him more closely. A probe may be attached to the skin to record his temperature and assist in adjusting the temperature inside the incubator. In the first week or so humidity may also be added to the incubator. This prevents him from losing too much moisture through his fragile skin.



We try and reduce the bright lights by turning the lights down low whenever we can. We also place a fabric cover over his incubator to shield him from as much light as possible. We constantly try to reduce the noise levels. We have a daily quiet period in the unit between 1pm and 3pm when we lower the lights, reduce the noise levels and try not to disturb the babies unless absolutely necessary.

The type of equipment used for him will depend on his condition. Each piece of equipment has a different alarm, which may ring frequently. These alarms are indicators for his nurse and do not necessarily mean he has a problem. Keep in mind that the alarms can be triggered by something as simple as your baby moving his arms or legs. The staff constantly check the monitors so you can try as much as possible to concentrate on and watch your baby. The nurse caring for him will be happy to explain the different equipment that is in use. As you visit, you will become more accustomed to the equipment and their alarms. Never silence or turn off an alarm please.

Sometimes he may need some help with his breathing, requiring help from a ventilator or CPAP machine and these will be described later in the booklet. He may have a vital signs monitor which records his heart rate and breathing through leads attached to his chest. The amount of oxygen in his blood is recorded through a probe attached to his hand or foot. This probe shines a little light onto his skin. His blood pressure may be recorded through a line in his umbilicus or a cuff on his arm or leg. Frequently babies in the unit will require an intravenous infusion (drip) until they can tolerate milk. These fluids are given through an infusion pump.

For safety reasons all babies are attached to a monitor, either a vital signs monitor or an apnoea monitor which records breathing only.

Some bigger babies may be dressed and nursed in a cot. Smaller babies start being dressed when they are stable even if still in an incubator. You may bring in clothes and blankets for him. Unfortunately, the hospital cannot be held responsible for any lost or mislaid items.

Multiple Births

You may have more than one newborn baby. This brings added joy but also brings added issues. It may be difficult to divide your time between each baby but remember they receive love from each other too. Try to appreciate the unique qualities of each baby and avoid comparisons. Frequently each baby may have different needs so it is important that we individualise the care each baby receives.

The babies may be discharged at different times giving you different feelings and problems to cope with at the same time. It is not easy having one baby at home while another may still be in hospital. You will be given the additional practical support and advice you need. There is a group called the Multiple Births Association for parents of twins, triplets and more. Their number is at the back of the booklet.

Remember to use alcohol gel on your hands before and after touching each baby.

Premature Baby

Premature Infants

A premature baby is one born before 37 completed weeks gestation. He looks and acts differently to a term infant and the more premature the baby, the greater the difference. He may be very small but is perfectly formed with eyelashes, hair and fingernails. His skin can appear very red, thin and fragile and may have a covering of fine protective hair called lanugo, which disappears as he grows. There may be very little fat covering his bones. His head may look as if it is too big for his body. If he is very immature (<26 weeks) his eyes may be fused (closed) at birth but will open in time. His ears are soft, flat and bend easily, but over time as cartilage develops, they will become stiffer. His movements are often jerky or jittery and occur in short bursts of activity. He will spend a lot of time sleeping in the first few weeks.

At first he needs to concentrate on regulating his breathing and heartbeat, his digestive system and other basic functions. He can get cold very easily. All of these things require a lot of energy and growth from him. Over time he will become more alert, active and respond to the sound of your voice so do spend time talking and singing to him. As he matures and puts on weight, his skin, muscle tone and movements will become more like that of an infant born at term.

Corrected Age

Corrected age counts the baby's age from the time he should have been born (40 weeks) and not the time he really was born. For example if he was born 8 weeks early at 32 weeks, and is now 10 weeks old, his corrected age is 2 weeks old.

(10 weeks old – 8 weeks premature = 2 weeks corrected age).

A premature baby who is 10 weeks old is not the same as a term baby who is 10 weeks old. The corrected age is used to assess all his milestones for 2-3 years e.g. a baby born 8 weeks early may smile 8 weeks later than a term baby born on the same day.

Nutrition

Feeding /Nutrition

Premature and/or ill infants are often too weak to suck at the breast or bottle. These babies will need special ways of feeding e.g. intravenous feeding or tube feeding until they are able to suck efficiently.

All babies lose weight after birth and this loss can often be up to 10% of their birth weight. Sometimes babies who are not being fed milk and/or premature babies may lose more weight and be slow to regain their birth weight but this usually resolves with time. Thereafter babies gain weight steadily averaging around 10 –30 grams per day or 150 grams per week.

Intravenous Feeding (IV)

The first issue for premature and/or ill infants is to regulate breathing and heart rate. Therefore digesting milk at this early stage may be too difficult for them and it may take some time before baby's stomach is able to tolerate milk. Glucose and nutrients can be given directly into the bloodstream through a cannula (drip). A vein through the umbilicus or "tummy button" may be used at first and later a vein in his arm or leg or occasionally the scalp. If a scalp vein is used, a small area of hair will need to be shaved but the hair will grow back again. The cannula used is small and does not hurt him once it is inserted. Sucrose (for pain relief) is provided when the cannula is being inserted. Sometimes we insert a line into a deeper vein so that it will last for a longer period of time and this is called a Percutaneously Inserted Central Catheter (PICC) line or Long Line. Some babies will require intravenous feeding with carbohydrates, proteins, fats and essential vitamins, and this fluid is called Parental Nutrition (PN).

Expressing Breast Milk

If you had planned on breast feeding your baby, you can still do so even if your baby is premature. Initially you will have to express the breast milk until he is able to suck efficiently. If you had not planned on breast feeding, we would strongly encourage you to try and express breast milk even if it is only for a short while. Breast milk is the best milk for your baby, because it meets his nutritional needs, is more easily digested, offers protection from infection and encourages growth and development of the gut.

The staff of the Neonatal Unit and the Post Natal Ward will show you how to express your milk. It is important to start expressing as soon as possible following delivery, ideally within the first six hours. By expressing milk regularly, every three hours during the day and once at night, (7 to 8 times a day), you will stimulate your milk supply in the same way as a baby sucking. In this way your milk supply can be established and maintained until your baby is fit to feed from the breast. Hand expressing is encouraged in the days immediately following delivery. Some mums continue to hand express but for the majority electric pumps are quicker and easier to use. It is recommended to massage each breast prior to expressing and always hand express for a couple of minutes at the beginning and the end of each session.

It is important to wash your hands thoroughly before you start. After each use you must wash the pump attachments (the parts that come in contact with milk) in hot soapy water, and then sterilise them. We will give you the pre-sterilised containers to store the milk. We will also give you the identification labels for you to attach to the containers. Please add the date and time to the label.

If the milk will not be used the day you express, it is best to freeze the milk. It is then available for use when it is needed. Please be careful that the milk remains frozen while you are bringing it into the unit. Milk expressed in the unit or just before you leave home to come to the unit, should not be frozen as we can give it fresh to your baby. Please see our information leaflet on the expressing, storage and transport of breast milk for further details.

Following discharge we provide a dedicated room where electric pumps are available for you to use during your visits. Individual pumping kits will be provided for each expressing session. It is important for you to eat a well balanced diet, have regular meals and have plenty of rest. Please let us know if you are taking any medication, either prescribed or otherwise.

A Lactation Consultant is available with help and advice. Please tell us if you would like to meet her. There is a breast feeding information group for mothers with babies in the neonatal unit. This group meets weekly, please check with unit staff for times and dates and see the notices displayed within the unit. The general Breast Feeding Support Group meets each Thursday at 11.30am. No appointment is necessary just ring in the morning to confirm that the session is going ahead before you come in. Please Tel: 8171700 Bleep 471.

Donor Breast Milk

If your baby is very premature or very small it is important that his first feeds are breast milk. If for any reason Mum is unable to express milk we can use breast milk that has been donated by another mum. This donor milk is tested and heat-treated before use and is stored in a milk bank. We will ask you for your consent before we give donor breast milk to your baby.

Probiotics

Probiotics are "friendly" micro-organisms that live in the gut. They help to keep the gut healthy and make it harder for harmful bacteria to grow. However, they are very sensitive and are killed by most antibiotics; so sometimes when antibiotics are given, "friendly" organisms in the gut may be replaced by harmful ones. Also probiotics are less plentiful in the gut of premature babies than in healthy term babies, children and adults. For these reasons we give most premature babies probiotics each day.

Breast Milk Fortifier

Preterm babies need extra protein, minerals and vitamins over and above what they get in breast milk. Because of this we can add Breast Milk Fortifier to the expressed breast milk to provide these extra additives.

Tube Feeding

Even after your baby can manage to digest milk it may be some time before he is strong or mature enough to suck from the breast or bottle. The sucking reflex usually matures at around 33 –35 weeks gestation. In the meantime he will be fed through a soft fine plastic tube passed through his nose or mouth and into his stomach. A syringe is attached to the tube and the milk is placed in the syringe. Gravity gradually pulls the milk down into his stomach. At first we may feed him as little as one or two mls every 3 or 4 hours. Sometimes babies do not tolerate even small amounts of milk so we may have to stop and wait a day or two and try again. As he gets stronger and older, generally after 32 weeks gestation, breast or teat feeds will be introduced until he no longer requires tube feeds. It may take anything from a few days to a few weeks to establish full breast or teat feeds. We may introduce a soother at the early stages to encourage and help him practise his sucking.

Feeding Your Baby

As soon as your baby is well enough you will be able to feed him yourself and staff will give you all the help you need. We encourage all mothers to breast feed but sometimes this is not possible or you may choose not to breast feed. We will respect your choice. Whether breast or bottle, preterm babies need to learn to suck, swallow and breathe so it can take them a while to co-ordinate the feed properly. If he sucks without stopping to breathe take the breast or teat out of his mouth and sit him up so that he can catch his breath. He will be fed every three or four hours. When he is learning to suck he may only have energy to suck for small amounts of time. Therefore he may need the remainder of his feed via the tube. We gradually increase the frequency and length of his feeds as he gets stronger and sucks better.

When you are visiting from home, telephone the Neonatal Unit to confirm the times his feeds are due at on that day, so that you can visit at this time.

Breast Feeding

The best time to give him his first breast feed is when he is wide awake and alert. The nurses will show you how to latch him on and how to recognise feeding cues and when he is feeding well. Sometimes it may take a little while to establish breastfeeding. However if this happens don't worry as you will receive the support and advice on the skills necessary to continue so don't give up. If he is small he may only be able to suck for one breast feed a day at first and you will have to continue expressing as before.

Bottle Feeding

Expressed breast milk can be given from a bottle. Formula milks are available if you do not wish, or are unable to breastfeed. Hospital readymade formula feeds do not need to be heated and are given at room temperature. If he is premature a special formula, which has extra calories and nutrients specifically for a preterm baby, is given.

Respiratory Care

Many babies admitted to the Neonatal Unit have some degree of breathing difficulty. If the respiratory distress is mild, increasing the percentage of oxygen in the air that your baby breathes may be sufficient. Other times this is not enough and he may need extra help to breathe and oxygenate his lungs, for example by either Assisted Ventilation or Continuous Positive Airway Pressure.

Respiratory Distress Syndrome

Respiratory Distress Syndrome (RDS) is the most common condition that affects premature infants. It is due to immature lungs and an insufficient amount of surfactant. Surfactant is produced in the developing lungs from 20 weeks gestation onwards but the greatest production occurs in the last six weeks of pregnancy. Therefore premature babies have less surfactant than term babies. Mothers may have been given steroid injections before delivery to try and help mature baby's lungs.

Surfactant is a substance that coats the small air sacs in the lungs and allows them to open and close more easily. If these sacs do not open and close easily, breathing becomes much harder. Baby breathes quicker, there may be drawing in of the skin and muscles between the ribs or just below the rib cage (retraction) and a grunt or moan may be heard when he breathes out. RDS may worsen over the first 72 hours, stabilise and then begin to improve as the lungs start to produce more surfactant. When needed, we can give him extra Surfactant (Curosurf) through his breathing tube, often within minutes of birth, to add to his own surfactant to make breathing easier.

Mechanical Ventilation

A ventilator is a breathing machine, which can either help, or if necessary take over completely, his breathing. A soft plastic tube (an endotracheal tube) is passed gently through his mouth and into his trachea or windpipe. The other end of the tube is attached to a ventilator that will blow warm moist air and oxygen into and out of his lungs. The doctors and nurses adjust the settings on the ventilator depending on his condition. As he improves and is weaned off the ventilator, he will breathe more on his own in preparation for the removal of the tube. This process of weaning may take anything from a few hours to a few weeks.

Some babies may require a different form of ventilation called High Frequency Oscillatory Ventilation (HFOV). This is a method of mechanical ventilation that delivers very fast small breaths and it will seem as if baby's chest is vibrating.

Continuous Positive Airway Pressure (CPAP)

The CPAP machine continuously blows warmed moist air and oxygen into baby's lungs under a slight positive pressure. The air and oxygen can be delivered by nasal prongs (soft plastic tubes in his nose) or by a mask fitted over his nose. The prongs or mask are then held in place by ties to a cap on his head. He is doing all the breathing himself but the positive pressure from the CPAP machine prevents his lungs from emptying completely, therefore making breathing easier.

CPAP can be used from birth. It is also used to help him go from the ventilator to breathing on his own. It is not uncommon for babies to need CPAP on and off for many weeks as the lungs mature and develop.

Bi-Level Positive Airway Pressure (BiPAP)

BiPAP is similar to CPAP. It works the same way as CPAP but also gives a slightly higher pressure on inspiration, or when the baby takes a breath in. A certain rate is also set. Therefore he gets a little more help than with CPAP alone.

Nasal Oxygen

Some babies need low levels of oxygen when they come off CPAP. This can be given through the incubator or through tiny tubes placed by the nose called nasal prongs. Some babies may need this oxygen for quite a long period of time and some even go home with nasal oxygen.

Nitric Oxide

Nitric Oxide is a gas that is naturally produced by the body and helps relax blood vessels. On some occasions it is needed to help ventilation by relaxing the blood vessels in the lungs. This gas is given directly into the lungs via the breathing circuit of the ventilator.

Chronic Lung Disease (CLD)

Chronic Lung Disease is a lung condition that occurs in some premature infants who have been mechanically ventilated, required CPAP and/or received oxygen for RDS. Some of these babies experience spasms or tightening of their airways similar to those seen in asthma. It is often difficult to wean her from her CPAP and her oxygen and to establish feeds. Sometimes we may have to give her medication called diuretics to help her. As she grows, new undamaged lung tissue will grow, improving her condition.

Apnoea and Bradycardia

All newborns tend to have an irregular breathing pattern with episodes of very quick breathing followed by a pause. Premature babies may also have an immature breathing centre and so 'forget to breathe', which is called apnoea. Apnoea may also be accompanied by a bradycardia, where the heart rate slows down. These episodes can be frightening for parents but are seldom a real risk to your baby. An alarm sounds instantly a problem occurs, and nursing staff help at once by gently patting her back or stroking the soles of the feet to remind her to breathe. Medicine called Caffeine is usually given. Babies grow out of this in time usually at around 34 weeks gestation but some may take longer. All babies will have grown out of it by the time they go home.

Transient Tachypnoea of the Newborn (TTN)

While your baby was in the womb her lungs were filled with fluid. During delivery, much of this fluid is pushed out of the lungs or reabsorbed into the blood stream, so that she can start to breathe. If some of this lung fluid remains, rapid breathing results called Transient Tachypnoea of the Newborn or TTN. Term infants, rather than premature infants, are more at risk of TTN. Treatment may involve providing extra oxygen, or sometimes more assistance to help her breathe. It gradually improves over the first few hours or days of life. Generally she will not be fed until her breathing has slowed.

Pneumothorax (Collapsed Lung)

Air can sometimes leak from damaged air sacs in the lungs, into the space surrounding the lungs, forming a pneumothorax. Breathing becomes harder and she may require extra oxygen or more assistance to help her breathe. It may also be necessary to pass a small tube through the chest wall to let the air escape. She will be given a local anaesthetic and pain relief before this is done.

Some newborns, generally the bigger babies, may have a 'spontaneous pneumothorax' after birth. Usually, allowing these babies to rest, giving intravenous fluids and high percentages of oxygen for a few hours or days will be all that is needed.

Persistent Pulmonary Hypertension of the Newborn (PPHN)

Term or post term babies are most at risk of PPHN. It can occur as a result of a difficult birth, infection, Meconium Aspiration Syndrome or birth asphyxia. It occurs when a newborn's circulatory system does not adapt to breathing outside the womb. The blood pressure in the lungs remains high and so blood bypasses the lungs via a blood vessel called the Ductus Arteriosus. Because the blood doesn't reach the lungs it is not oxygenated. The main aims of treatment are to lower the pressure in the lungs with drugs such as Nitric Oxide and to oxygenate her lungs with mechanical ventilation and high amounts of oxygen.

Meconium Aspiration Syndrome (MAS)

Meconium is the normal first stool passed by all babies. It is thick, sticky and dark green in colour. It is usually passed following delivery but may be passed before the baby is born. Amniotic fluid is the normal fluid around the baby in the womb.

Meconium Aspiration Syndrome is a lung condition caused by aspiration of meconium before birth. The baby inhales meconium and the inhaled meconium irritates her airways and makes it difficult for her to breathe. Mild cases may be treated with some oxygen and the baby allowed to rest. More severe cases may require her to be ventilated.

Neonatal Care

Medical Procedures and Treatments in the Neonatal Unit

Weighing

- Babies are generally weighed every day

Intravenous (I/V) Lines

Intravenous lines are used for infusions and/or drugs. The line may be placed in the umbilicus, arm, leg or scalp. Pain relief, such as Sucrose, can be given for insertion of the line. Once the line is inserted it does not cause her pain. Sometimes we insert a line into a deeper vein so that it will last for a longer period of time and this is called a Percutaneously Inserted Central Catheter (PICC) line or Long Line.

Arterial Lines

An arterial line is a line which is placed in an artery to allow the doctors to take blood samples and monitor blood pressure. An artery in the umbilicus, hand or foot may be used. A infusion is used to prevent the line from blocking.

Blood Tests

Blood tests can tell us a lot about her condition. Blood can be taken from the arterial line or from a vein in the hand or foot. The heel is used when only a few drops of blood are needed.

Newborn Bloodspot Screening (Heel Prick)

This test is done on all newborn babies between 72 and 120 hours of age (day 3 to day 5). The test looks for some inherited metabolic disorders, Cystic Fibrosis and thyroid function problems. All these conditions are very rare but if present, early treatment is very successful in preventing long term problems. All tests are done on the same screening card.

You will be given information about the screening programme and asked to sign a newborn screening card to consent to the test being done. Some of the screening can only be done when the baby is digesting milk therefore the test will be repeated weekly until she is on full milk feeds. Consent will only be sought for the first test.

X-Rays

X-Rays provide important information about baby's lungs and internal organs. They are taken only when necessary and the radiation exposure is very low. Screens protect her when x-rays are being done on other babies nearby.

Scans

Ultrasound Scans can be done on the brain and other parts of the body. Many babies admitted to the Neonatal Unit will have an ultrasound brain scan a day or two after birth. It is completely safe and is done with a machine similar to that which the obstetricians used to scan Mum during pregnancy. The scan works by passing sound waves through the soft spot on the head (known as the fontanelle) and gives a detailed picture of the brain. Further follow up scans are repeated as necessary. When scanning the brain we are looking for any abnormality but in particular any bleeding such as an Intraventricular Haemorrhage.

CT and MRI Scans

CT and MRI scans give a more detailed picture of certain areas of the head and body. These are not performed in the neonatal unit but are done in the Children's University Hospital, Temple Street (CUH). If such a scan is needed, your baby will be transferred in a transport incubator for the scan and will return to the unit when the scan is finished.

Eye Testing

All babies with birth weights under 1,500grms and/or less than 30 weeks gestation need to have their eyes tested. The eye specialist visits the unit each week and does the examinations. The first examination takes place at around 31 weeks corrected age. Follow up examinations are repeated as necessary. The pupils of her eyes will need to be dilated (enlarged) for the examinations by using eye drops. The eye specialist is looking for a condition called Retinopathy of Prematurity (ROP).

Hip Check

All babies will have their hips checked before going home. We need to know if there is a family history of dislocated hips.

Newborn Hearing Screening Test

All newborn babies are offered newborn hearing screening in the first few weeks of life, either before discharge or a few days after going home. The test only takes a few minutes and screens for congenital nerve deafness. A failed test does not necessarily mean your baby has a serious hearing loss, but close follow up and more advanced screening may be necessary.

Blood Transfusions

When babies are ill, they need to have a lot of blood tests taken. Occasionally babies may lose blood around the time of labour and delivery. Newborn babies, and in particular premature babies, may not be able to make enough blood to replace these losses. Therefore anaemia may develop and she may need a blood transfusion. The blood we give is carefully matched with mother's blood and also screened for infections. The blood is given through her vein over several hours. It is usual for premature babies to require one or more blood transfusions during their stay with us. An information leaflet about blood transfusions is available, please take one.

Medical Conditions

Jaundice

Jaundice is the term used to describe the yellowish discolouration of the skin and whites of the eyes caused by the buildup of a natural pigment called bilirubin. Bilirubin is formed when red blood cells are broken down and then processed by the liver. Jaundice is a common condition in newborn infants but not all babies will require treatment. Babies who become jaundiced often become drowsy and sleepy and can be difficult to feed. Bilirubin is very sensitive to light so special phototherapy lights are used. These lights work by shining a particular wavelength of light onto baby's skin. The light breaks down the bilirubin in the skin which can then be excreted through the urine and stool.

There are two types of phototherapy, 'biliblanket' and overhead lights. The biliblanket looks like a flat rectangular pad that glows with a bright yellow or slightly green light and is placed next to the skin. This does not get hot or cause her any discomfort. She can be dressed.

The overhead light, which is blue, is placed over the incubator and she is nursed without clothes so that the lights can act on her skin. She wears eye pads to protect her eyes from the bright lights. Sometimes both methods are used together. Depending on her condition the lights can be stopped, eye pads removed and she can come out for short cuddles, skin to skin contact and for feeding.

Sepsis (Infection)

Newborn babies and in particular premature babies are more prone to infection. This may be because:

- Protective substances (immunoglobulins) normally cross the placenta during the final weeks of pregnancy and babies that are born early may not have had enough time to receive them.
- The normal responses to fight infection may not be fully developed.
- The lines and tubes that are needed for treatment can pose an infection risk.

It is important that the early signs of infection are detected and treated quickly. A sample of blood will be taken for culture (to see if and what organism is causing the infection). A lumbar puncture may be done and a urine sample collected.

Antibiotics are given straight away as the results of these tests may take 36 - 48 hours to return.

One of the aims of the care we provide for your baby is the prevention of infection. As was mentioned earlier, hand hygiene is by far the most effective tool in the prevention of infection. It is vital that you wash and carefully dry your hands on entering and leaving the unit and use the alcohol gel before and after handling your baby. This also applies to all hospital staff.

Visiting is restricted to limit the number of people (and potential infections) these vulnerable infants are exposed to. If you are unwell or other children at home are unwell please check with staff before visiting your baby.

Low Blood Pressure

Premature and/or ill infants can have difficulty maintaining their blood pressure after birth. Treatments may include giving extra fluid, blood and/or medications.

Blood Sugar Problems

The amount of sugar in baby's blood can be too high or too low. Generally it is easily corrected by changing the concentration of sugar (Dextrose) in baby's IV fluids. Sugar levels are monitored frequently until they are stable. A small sample of blood is taken from her heel to perform the measurement. (Blood sugar problems at this stage do not mean that she will have diabetes later.)

Necrotising Enterocolitis (NEC)

Necrotising Enterocolitis (NEC) is an inflammatory bowel condition affecting some newborn and premature infants. The reason why some babies develop NEC is not fully understood but it usually occurs when the blood supply to the infant's bowel has been reduced. Treatment includes withholding feeds for up to 2 weeks or longer and giving antibiotics to allow the bowel to recover and heal. Parental Nutrition, a special drip of proteins, carbohydrates, fats and vitamins is given until baby can tolerate milk again. Although potentially a very serious complication, most infants will recover without any further problems. In a minority of cases surgery may be required.

Breast milk has been shown to reduce the incidence of this condition and for this reason we strongly encourage you to consider expressing breast milk for your baby. Likewise probiotics have been shown to reduce the risk of NEC and therefore we give most premature babies daily probiotics.

Retinopathy of Prematurity (ROP)

Retinopathy of Prematurity (ROP) is a condition where some abnormal blood vessels grow in the back of the developing eye of the premature infant. Most babies require no treatment but must be reviewed regularly. Moderate or severe ROP occasionally requires treatment. During treatment the Ophthalmologist may inject a special substance directly into the eye, or use laser therapy (beams of light) directed into the eye, to destroy the abnormal blood vessels and stop them growing. We will give her pain relief before and during the procedure. Long-term outcome depends on the severity of the disease with severe cases requiring glasses (for short sightedness). After discharge, her eyes may be monitored in CUH, Temple Street, and it is very important that she keeps these appointments.

Intraventricular Haemorrhage (IVH)

Intraventricular Haemorrhage (IVH) refers to bleeding into the natural spaces (ventricles) that exist in the brain. Premature babies are prone to these bleeds as their blood vessels are immature and fragile. Generally a baby with an IVH shows no signs of bleeding and the bleed is detected by the ultrasound scan. When the amount of bleeding is small the body gradually reabsorbs the blood over two to three weeks (just like a bruise). Larger bleeds may leave damaged tissue behind.

An IVH may occur in as many as 60% of infants less than 1,000g (2 lbs 3 ozs) at birth. Most of these haemorrhages are mild (Grade 1 to 2) and usually resolve without further problems. Larger bleeds can result in more significant short and long-term problems.

Patent Ductus Arteriosus (PDA)

In the womb the blood circulating through baby's heart follows a route, 'the foetal circulation', which allows blood to by-pass the lungs. This is because baby does not need to use her lungs as she gets her oxygen supply from Mum through the placenta (after-birth). Following delivery, blood is redirected to her lungs as she needs to breathe in oxygen herself. Sometimes a small connection remains open, called a Patent Ductus Arteriosus, between the blood vessels supplying the lungs and the blood vessels supplying the rest of the body. When this happens her heart has to work harder and she may need more oxygen and ventilation support. A heart murmur can be heard. An ECHO (ultrasound of the heart) is usually performed to see how big the duct is and if treatment is necessary. Medical treatment includes a reduction in the amount of fluid given to her and medication to try and close the duct. Infrequently, surgery may be necessary and if so, is performed in Our Lady's Children's Hospital, Crumlin (OLCHC).

Seizures

When a baby has abnormal movements of her arms, legs or eyes we say she may have had a seizure. Seizures can be caused by infection, brain injury, metabolic or endocrine problems. We use medication to stop the seizure activity. A cranial ultrasound of her brain will be done as soon as possible. She may have Cerebral Function Monitoring (CFM) done also. This involves placing three tiny electrodes on the scalp. The machine then records the overall electro cortical background activity of the brain over a few hours or days. An EEG which measures the electrical impulses of the brain may also be done.

Sometimes an MRI scan may be necessary. This is done in the Children's University Hospital, Temple Street (CUH).

Long-term outcome depends on the cause and severity of the seizures. She will be followed up to check on her progress as she continues to grow and develop.

Neonatal Encephalopathy (NE)

Sometimes during pregnancy, prior to or during birth there may be a reduction in the oxygen supply to baby from the placenta. This can affect all of her organs, but especially the brain resulting in a brain injury, Neonatal Encephalopathy (NE). There are different degrees of NE and the long term outcome depends on the severity of the injury.

Total Body Cooling

Recent evidence has shown that total body cooling can limit the degree of brain injury caused by Neonatal Encephalopathy. Total Body Cooling means that her body temperature is cooled from the normal temperature of 37°C, down to a temperature of 33.5°C. Her temperature is kept this low for three days (72 hours) and then she is rewarmed slowly over 12 hours. The cooling is started as early as possible after birth. She will be nursed on a special mattress or in a wrap that cools her whole body to 33.5°C. The wrap or mattress is filled with fluid that can be either cooled or warmed.

During the treatment she will be monitored closely and given pain relief as necessary. She will not be fed and will need intravenous fluids until she is rewarmed. Sometimes she may also need to be ventilated. The period of cooling gives the brain a chance to recover from the injury. Not all babies are cooled as we have certain guidelines that we must follow.

Transfer of your baby

Occasionally babies need to be transferred to the paediatric hospitals from the Rotunda for additional specialised medical or surgical treatment. Babies also come from smaller hospitals to the Rotunda. For parents this is always an anxious and worrying time. We will ask for your permission before she is transferred and you will be kept fully informed at all times. She will be transferred in a special transport incubator with a neonatal nurse and sometimes a doctor. There is also a dedicated National Neonatal Transport Team which transfers sick babies between hospitals.

When the initial problems have been sorted, she may be transferred back to the Rotunda Hospital from the paediatric hospitals. For babies born elsewhere, we try to transfer them back to their local hospital as soon as they are well enough to travel.

If we have to give you some bad news....

Unfortunately sometimes we may have to tell you some bad news about your baby. She may have problems that will cause her long term disabilities. She may be too premature or too ill to survive. It can be very difficult to accept, with advanced medical knowledge and modern technology that sometimes babies don't do well or have conditions which cannot be cured. We try to talk to both parents together, in private and to talk to you as soon as we realise there are problems. The first discussion will be short as parents are often too upset to remember all that is being said. When you are ready we will speak to you again and as often as you need to explain everything in more detail and answer any questions. Please be reassured that we will always have your baby's best interests at heart. We understand that your hopes and dreams for your baby have been taken away in that instant.

Passing on the news to your family and friends may be very difficult. We will do our utmost to provide you with all the support you need.

Common Medications used in the Neonatal Unit

Nearly all babies admitted to the Neonatal Unit need medicines or drugs of some kind. All drugs used will be discussed with you. These are some of the more common medications used in the unit.

Surfactant

Surfactant (Curosurf) is given into the lungs through the breathing tube to make breathing easier.

Antibiotics

These are used to treat infections. Antibiotics and indeed most other medicines are given in liquid form through her drip (intravenously) and are not painful.

Caffeine

Caffeine is given intravenously or through her feeding tube to help stimulate breathing.

Vitamin K

Vitamin K is necessary in the production of blood clotting factors, which prevent bleeding. All babies are given Vitamin K at birth. It is given by injection into the muscle in the thigh or rarely can be given orally.

Diuretics

Diuretics are drugs that help get rid of any extra fluid. Examples of diuretics are Lasix (Frusemide), Chlorothiazide and Spironolactone.

Analgesia (Painkillers)

As every medicine has risks as well as benefits we try as much as possible to use comfort techniques to help soothe baby's pain or anxiety. These include comfort holding, swaddling, using a soother and talking in a gentle voice. Sucrose can be placed in her cheek or on her tongue for procedures that are a little painful or upsetting. If she has a medical procedure that could be more than mildly painful or uncomfortable, she will be given pain medication. Morphine and Paracetamol are the drugs most often used.

Other Medication

She may be given vitamins, minerals and iron to ensure that she has essential nutrients needed during this period of rapid growth and development.

Discharge Planning

Preparing for Home

There's no place like home. Throughout her stay in the unit, we will be preparing you for the day you take your baby home. She will be ready to go home when she is feeding well, either from the breast or bottle, is keeping warm in a cot and is gaining weight. She must also be bradycardia free. If she is very premature, this usually will be around the date she was due to be born. Some babies go home earlier and some need to stay a little longer. We will teach you, her parents, about bathing, feeding, and all the things you need to know to look after her at home. We have a checklist that we use for each baby, so as far as possible, everything will be covered with you prior to discharge. The Discharge Planning Co-coordinator, and the nurse taking care of her on a daily basis, will help you get organised for taking her home. Discharge time is around noon.

Sometimes it helps if you stay overnight in one of our parent and baby rooms. This will give you an opportunity to become familiar with all her specific needs knowing that staff are close by should you have any questions or problems. You may feel excited but also apprehensive at this time. Many parents are nervous taking their baby home, whether premature or full term. Remember that we will not let her home unless you and your baby are ready. At this stage the best place for your baby is at home with you. Once home, your public health nurse, your GP and of course the hospital are only a phone call away.

Immunisations/Vaccinations

Preterm babies need immunisations like all other babies to protect them against certain diseases that can cause serious illness or death. Immunisation is a safe and effective way to protect your baby and works by causing the baby's immune system to produce antibodies to fight these diseases. All immunisations are voluntary and your permission must be obtained. They are then carried out free of charge by your G.P or public health nurse. You will be given a booklet on Childhood Immunisation which explains each vaccine and the timing schedule.

For vaccination purposes the actual age of the baby is used, not the corrected age. The first vaccines are generally given at two months of age. If he is still in hospital his first vaccinations will be given here.

During the Winter/Spring months many premature babies are at risk of getting bronchiolitis caused by the Respiratory Syncytial Virus (RSV). To help protect them we may give Synagis. This is an artificial anti RSV antibody which is given monthly.

Best Sleeping Position

The best sleeping position for your baby is on his back. In the incubator, he may be placed on his tummy to help him with his breathing and digestion. Once he is moved from his incubator to a cot he is always placed on his back except in exceptional circumstances. Even if he vomits, he will not choke when lying on his back.

He should be placed on his back with his feet near the foot of the cot, basket or pram. The covers should be tucked

below his shoulders so that they cannot slip over his head. When sleeping he can become too hot from too many blankets, clothes or because the room is hot. To check his temperature, place your hand on his tummy or the back of his neck, which should feel warm, not hot. His hands and feet normally feel cool but not cold.

It is best not to share a bed with him particularly if you smoke, have taken alcohol or drugs. It is fine to take him into your bed for feeding or playing but he should be put back into his cot to sleep. There is a leaflet available in the unit for you to keep.

Follow Up

When your baby goes home you will be given appointments to return to the hospital at regular intervals. Some appointments such as weight checks and some examinations can be done by your public health nurse or GP. You may be given appointments for CUH, Temple Street for eye examinations and hearing tests and it is very important that you keep these appointments. If all is well you will be reassured, however if there are any problems, early detection and treatment is vital.

If you are back at the Outpatients' clinic here you are welcome to come and visit us. We are always glad to see you and hear how you and your baby are progressing.

Additional Information

Extra Services

Chaplains/ Ministers of Religion

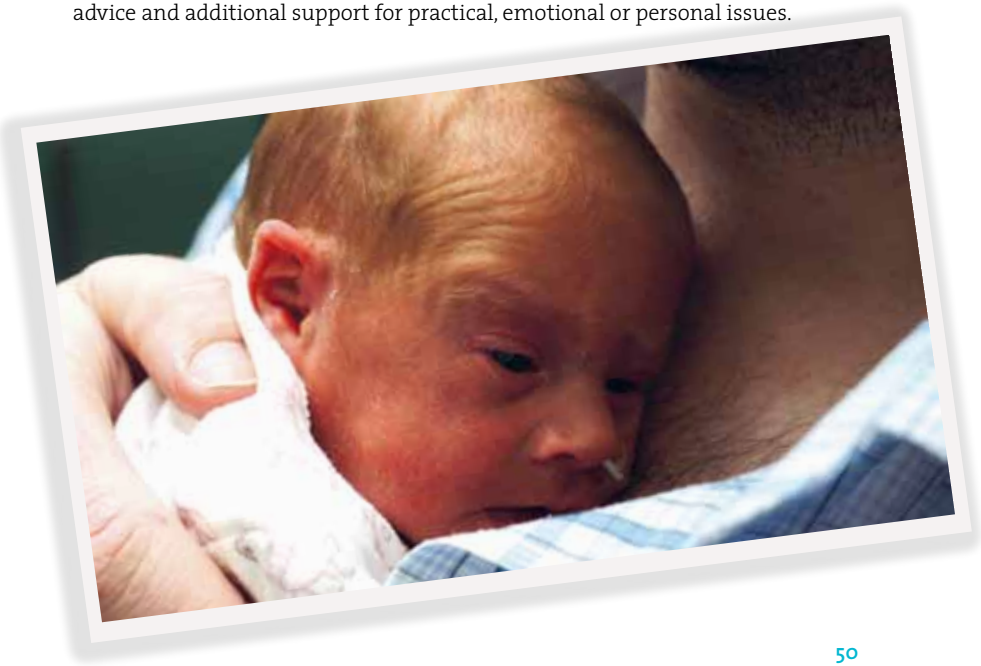
We have a lay Roman Catholic chaplain on site Monday to Friday who is available to people of all faiths and of no specific faith. Chaplains or ministers from a range of different faiths are available to parents, please just ask. All are available to provide Baptisms or to perform blessings.

Interpreters

An interpreter can be contacted to help you if you need assistance speaking or understanding English.

Medical Social Work Department

A medical social worker is available during office hours with information, advice and additional support for practical, emotional or personal issues.



Mental Health Support Midwife

There is a designated midwife available in the hospital to talk to you if you are feeling low. The staff on the unit can ask her to visit you.

Lactation Consultant

A lactation consultant is available with help and advice regarding breastfeeding or expressing breast milk. She will see you while you are an inpatient and will continue with advice when you go home.

Physiotherapist

A physiotherapist is available should your baby require physiotherapy for any reason.

Common Terms Heard in the Neonatal Unit

Anaemia	occurs when there are abnormally low levels of red blood cells or haemoglobin in the blood.
Apnoea	occurs when a baby stops breathing for a period of 10-20 seconds or more.
Bilirubin	is formed when red blood cells are broken down and then processed by the liver. Excess bilirubin causes jaundice.
BiPAP or Bi-Level Positive Airway Pressure	delivers oxygen and air at a positive pressure into the lungs to support breathing. The pressures are slightly higher on inspiration and a specific rate is set.
Blood Culture	is a blood test taken to see if and what organism may be causing an infection in the blood stream.
Blood Gas	is a measurement of oxygen and carbon dioxide in the blood. It is used to regulate the amount of ventilation and oxygen baby needs.
Bradycardia	refers to a temporary decrease in heart rate.
Breast Milk Fortifier	is a powder which provides extra calories and nutrients and is added to expressed breast milk.
Cannula	is used to administer fluids into a vein
Cerebral Function Monitoring (CFM)	represents the overall electro cortical background activity of the brain.

Chronic Lung Disease (CLD)	is a lung condition that occurs in some premature infants who have been mechanically ventilated, required CPAP and/or received oxygen for RDS.
Continuous Naso Gastric Feeding (CNGF)	is a method of feeding small babies small amounts of milk slowly, through their naso-gastric tube.
Continuous Positive Airways Pressure (CPAP)	delivers oxygen and air at a positive pressure into the lungs to support breathing.
CT scan	is a detailed scan of the brain or other parts of the body.
Cyanosis	is a bluish colour of baby's lips and skin caused by not enough oxygen.
Donor EBM	is breast milk donated from another mother. It is tested and pasturised before use.
EBM	is expressed breast milk.
ECHO	is a special ultrasound of the heart.
ECG	measures the electrical activity of the heart.
EEG	measures the electrical impulses of the brain.
Endotracheal Tube (ET)	is a soft plastic tube that is passed through baby's mouth or nose and into the windpipe to allow the use of a ventilator to help with breathing.
Extubation	is the removal of the ET tube.
Gestational Age	is the maturity of the baby, which is the number of weeks of pregnancy.

Gram	is a unit of weight. A kilogram equals 1,000 grams which is 2.3 pounds.
Heel Prick	is a method of getting a tiny blood sample for testing.
Incubator	creates a stable warm environment and allows close observation of each baby.
Intravenous (IV)	means into a vein. This can be either drugs or fluids.
Intraventricular Haemorrhage (IVH)	is a bleed into the ventricles and/or the surrounding tissue of the brain.
Jaundice	is the yellowish discolouration of the skin and eyes caused by excess bilirubin
Kangaroo Care	is skin-to-skin contact between baby and parent.
Low Birth Weight Formula	is a special formula with extra calories and nutrients for premature babies.
Lumbar Puncture	is the procedure whereby a small sample of cerebro-spinal fluid is taken through the spine to check for infection.
Meconium	is the normal first stool passed by all babies. It is thick, sticky and dark green in colour. It is usually passed following delivery but may be passed before the baby is born.
Meconium Aspiration Syndrome	is a lung condition caused by aspiration of meconium before birth.
Monitors	are machines that record vital signs including heart rate, respirations, oxygen saturation, blood pressure and temperature etc.

MRI	is a scan which gives a very detailed picture of the brain and other areas of the body.
Naso-gastric tube (NG)	is a tube passed through the nose and into the stomach. It can be used for feeding and/or for giving medications.
Necrotising Enterocolitis (NEC)	is an inflammatory bowel condition affecting some newborn and premature infants.
Neonatal Encephalopathy (NE)	is a brain injury that occurs as a result of reduced oxygen supply to the brain from the placenta.
Newborn Bloodspot Screening (Heel Prick Test)	is a test for some inherited metabolic disorders, Cystic Fibrosis and thyroid function problems. It is done between day three and day five.
Oro-gastric tube (OG)	is a tube passed through the mouth and into the stomach. It can be used for feeding and/or for giving medications. Babies on CPAP have an oro-gastric tube passed.
Oxygen	is a gas we breathe. In room air the concentration of oxygen is 21%. Babies can receive additional oxygen up to 100%.
Parental Nutrition (PN)	is an intravenous fluid which contains carbohydrates, proteins, fats and the essential nutrients for growth and development.
Patent Ductus Arteriosus (PDA)	occurs when a small opening between the blood vessels supplying the lungs and the blood vessels supplying the rest of the body remains open.
Percutaneously Inserted Central Catheter (PICC)	is an intravenous line inserted into a deep vein and may be used for many weeks.

Persistent Pulmonary Hypertension of the Newborn (PPHN)	occurs when a newborn's circulation system does not adapt to breathing outside the womb.
Phototherapy	is the use of special lights to treat jaundice.
Pneumothorax (collapsed lung)	occurs when air leaks into the space surrounding the lung.
Premature Baby	means a baby born before 37 completed weeks of pregnancy.
Probotics	are microorganisms or 'friendly bacteria' that live in the gut.
Respiratory Distress	is difficulty in breathing.
Respiratory Distress Syndrome	is a lung disease common to premature babies due to immature lungs and a lack of surfactant.
Respiratory Syncytial Virus (RSV)	is a virus that may cause bronchiolitis.
Retinopathy of Prematurity (ROP)	is a disease that may occur in the eyes of premature infants.
Room Air	is the air we breathe and of which 21% is oxygen.
Term Baby	is a baby born between 38 and 42 weeks of pregnancy.
Total Body Cooling	is where baby's temperature is lowered to 33.5°C

Trachea (windpipe)	connects the lungs with the mouth and nose.
Ultrasound Scan	uses sound waves to scan baby's head and other internal organs.
Umbilical Arterial Catheter (UAC)	is a line inserted into baby's umbilical artery through the 'belly button'. It is used for taking blood samples and monitoring blood pressure.
Umbilical Venous Catheter (UVC)	is a line placed into baby's umbilical vein through the 'belly button'. It is used for drips and drugs.
Ventilator	is the machine used to help breathing.

Useful Contacts

Rotunda Hospital
Parnell Square
Dublin 1
Tel: 01- 8171700
www.rotunda.ie

Neonatal Unit
Tel ---------- 01-8733377
Intensive Care ---- 01-8176805
13 Bed ---------- 01- 8176814
5 Bed ---------- 01- 8176804
Wing ---------- 01- 8176815

Children's University Hospital
Temple Street
Dublin 1
Tel: 01-8784200
www.cuh.ie

National Children's Hospital
Tallaght
Dublin 24
Tel: 01-4142000
www.thenationalchildrenshospital.ie

Our Lady's Children's Hospital
Crumlin
Dublin 12
Tel: 01-4096100
www.olchc.ie

Irish Premature Babies
Carmichael Centre
North Brunswick Street
Dublin 7
Tel: 01-8880882
www.irishprematurebabies.com
www.prematurebaby.ie

Bliss
www.bliss.org.uk

Parentline
Carmichael House
North Brunswick Street
Dublin 7
Tel: 1890-927277/01-8733500
www.parentline.ie

Cuidiú -Irish Childbirth Trust
Carmichael House
North Brunswick Street
Dublin 7
Tel: 01-8724501
www.cuidiu.ie

HSE breastfeeding support network
www.breastfeeding.ie

La Leche League Ireland
www.lalecheleagueireland.com

The Breast Way
www.thebreastway.ie

Irish Multiple Birth Association (IMBA)
Carmichael Centre
North Brunswick Street
Dublin 7
Tel: 01-8749056
www.imba.ie

Car Seat Safety
Tel: 1890-406040
www.rsa.ie

Childhood Immunisation Programme
www.immunisation.ie

Central Remedial Clinic
Vernon Avenue
Clontarf
Dublin 3
Tel: 01-8542200
www.crc.ie

Enable Ireland
32F Rosemount Park Drive
Rosemount Business Park
Ballycoolin Road
Dublin 11
Tel: 01-2695355
www.enableireland.ie

A Little Lifetime Foundation
Carmichael House
North Brunswick Street
Dublin 7
Tel: 01-8726996
www.alittlelifetime.ie

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We hope that the booklet will be of help to you during your baby's stay with us.

Many thanks from Helen, Masri, Orla, Christine and Edna.

Weight Conversion Chart

kg	lb oz	kg	lb oz	kg	lb oz	kg	1b oz	kg	lb oz
0.45	1 0	1.36	3 0	2.27	5 0	3.18	7 0	4.08	9 0
0.48	1 1	1.39	3 1	2.3	5 1	3.2	7 1	4.11	9 1
0.51	1 2	1.42	3 2	2.33	5 2	3.23	7 2	4.14	9 2
0.54	1 3	1.45	3 3	2.35	5 3	3.26	7 3	4.17	9 3
0.57	1 4	1.47	3 4	2.38	5 4	3.29	7 4	4.2	9 4
0.60	1 5	1.50	3 5	2.41	5 5	3.32	7 5	4.22	9 5
0.62	1 6	1.53	3 6	2.44	5 6	3.35	7 6	4.25	9 6
0.65	1 7	1.56	3 7	2.47	5 7	3.37	7 7	4.28	9 7
0.68	1 8	1.59	3 8	2.5	5 8	3.4	7 8	4.31	9 8
0.71	1 9	1.62	3 9	2.52	5 9	3.43	7 9	4.34	9 9
0.74	1 10	1.64	3 10	2.55	5 10	3.46	7 10	4.37	9 10
0.77	1 11	1.67	3 11	2.58	5 11	3.49	7 11	4.39	9 11
0.79	1 12	1.7	3 12	2.61	5 12	3.52	7 12	4.42	9 12
0.82	1 13	1.73	3 13	2.64	5 13	3.54	7 13	4.45	9 13
0.85	1 14	1.76	3 14	2.67	5 14	3.57	7 14	4.48	9 14
0.88	1 15	1.79	3 15	2.69	5 15	3.6	7 15	4.51	9 15
0.91	2 0	1.81	4 0	2.72	6 0	3.63	8 0	4.54	10 0
0.94	2 1	1.84	4 1	2.75	6 1	3.66	8 1	4.56	10 1
0.96	2 2	1.87	4 2	2.78	6 2	3.69	8 2	4.59	10 2
0.99	2 3	1.9	4 3	2.81	6 3	3.71	8 3	4.62	10 3
1.02	2 4	1.93	4 4	2.84	6 4	3.74	8 4	4.65	10 4
1.05	2 5	1.96	4 5	2.86	6 5	3.77	8 5	4.68	10 5
1.08	2 6	1.98	4 6	2.89	6 6	3.8	8 6	4.71	10 6
1.11	2 7	2.01	4 7	2.92	6 7	3.83	8 7	4.73	10 7
1.13	2 8	2.04	4 8	2.95	6 8	3.86	8 8	4.76	10 8
1.16	2 9	2.07	4 9	2.98	6 9	3.88	8 9	4.79	10 9
1.19	2 10	2.10	4 10	3.01	6 10	3.91	8 10	4.82	10 10
1.22	2 11	2.13	4 11	3.03	6 11	3.94	8 11	4.85	10 11
1.25	2 12	2.16	4 12	3.06	6 12	3.97	8 12	4.88	10 12
1.28	2 13	2.18	4 13	3.09	6 13	4.0	8 13	4.9	10 13
1.30	2 14	2.21	4 14	3.12	6 14	4.03	8 14	4.93	10 14
1.33	2 15	2.24	4 15	3.15	6 15	4.05	8 15	4.96	10 15

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