This book belongs to:

Levine Children's Hospital

Our world revolves around children.

Levine Children's Hospital
Our world revolves around children.

Family Notebook Index

Dear Parents,

Congratulations on the birth of your baby. The staff of the Neonatal Intensive Care Nursery (NICN) and the Neonatal Progressive Care Nursery (NPCN) would like to welcome you. We realize this is an exciting and scary time for your family. We are here to help you through this time of change. We are committed to giving you and your baby *excellent care.* You should ask questions and share any concerns you have about the nursery and your baby's care.

We recognize that you and your family are the most important people in your baby's life. We encourage you to be with your baby as much as you can. Our top priority is providing you and your baby with *excellent care.* Our staff strives to keep you and your family informed about your baby's plan of care each day. Please feel free to call the nursery at anytime **704-355-3000** (for the NICN) or **704-381-7100** (for the NPCN) for updates and to ask questions. Our staff wants to be *understanding* and *caring* about your needs while your baby is with us. We hope to exceed your expectations. Our staff will strive to be *courteous* and *friendly* to you and your family. We want to *respect your privacy* as well as the privacy of others. If we do not meet your needs, please let your baby's nurse, the charge nurse, or someone from the management team know.

There are many things you can do to prepare for your infant's *discharge day*. We want your baby's *discharge day* to be one of the happiest days of your family's life together. This notebook is for you and your family to use. You may write in it. You may organize it. You may use it as you wish. When your baby is *discharged*, you will take this notebook home and have a record of your child's stay with us.

Again, if you have any questions or concerns, please ask any member of the staff working with you and your baby. Remember that *an excellent experience* is our goal for you. We are here to help you and your family transition from the birth of your baby to your baby's homecoming.

Thank you,
The Neonatal Staff

Dear Parents,

Thank you for allowing us to care for your infant. We will provide the best care possible for you and your infant while he or she is a patient at The Children's Hospital. We will be happy to answer questions and talk about your concerns.

Many parents are concerned their infant may have discomfort or pain. Most infants do not feel pain when we handle, turn or place them on a heart rate monitor. However, there are some things that we may have to do for your infant that are thought to be painful. Such things include surgeries or procedures like placing an IV or getting blood by sticking a heel or a vein.

The nurses who care for your infant are trained to know signs of pain or discomfort. For example, an infant in pain may cry, become restless or tighten face muscles. An infant may also have an increase in heart rate, breathing and/or blood pressure. The nurses will teach you how to recognize these signs too.

If your infant does show signs of being uncomfortable or in pain, we will use comforting measures. Your nurses may try to nestle, swaddle, hold or rock your infant. They may also try using a soothing voice, soft music, pacifiers or dim lights to comfort your infant. They may ask you to provide skin-to-skin contact whenever possible. The nurses will teach you how to comfort your infant in these ways too.

If these comforting measures are not able to give pain relief, medications will be used. Medications will also be given to your infant before a known painful Procedure is done. Your infant's doctor or the nurse practitioner will order the best medicine to give to your infant.

Please feel free to talk with the nurses, nurse practitioners or doctors about any questions or concerns you have regarding your infant's care and pain management.

Thank you,
Neonatal Pain Committee
and Children's Hospital Staff

Visitation – Neonatal Intensive Care (NICN) and Neonatal Progressive Care (NPCN) Nurseries

We know you are the most important person in your baby's life. We encourage you to be involved with your baby as much as you can. To provide a safe and comforting environment, we have set up the following guidelines for visiting the NICN and NPCN:

Everyone must wear a Levine Children's Hospital badge, fill out a screening tool, wash their hands for 2 minutes, and put on a gown before entering the nursery.

Anyone who is sick cannot visit in the neonatal nurseries for the protection of our babies.

The Levine Children's Hospital staff reserves the right to limit visitation in the best interest of the infants, families, visitors or staff.

Parents (or parental designee) are welcome in the nursery anytime ***(with the exception of shift change).***

- Please continue to **wear** your parent **identification bracelet** until your baby is discharged to identify you as your baby's parents. We will ask for your bracelet number before giving out any information.
- The nursery staff will give information to parents or parental designee only.
- **Parents** will decide who is able to visit their baby.
- A **parent** must accompany all visitors. Only two people are allowed at the bedside at a time.
- **Parents** can designate in writing up to 4 people, like grandparents or other significant person(s), who are allowed to visit without a parent present.
- Encourage family members and friends to contact you, the parents, for updates.
- To protect everyone's privacy, please stay at your baby's bedside and avoid asking about another infant's condition.

Sibling Visitation *(Brothers and Sisters of the Infant in the Neonatal Unit):*

- When the unit is open for sibling visitation, **Sibling Visitation** will be by appointment at the discretion of the bedside nurse, preferably between the hours of 10 a.m. and 4 p.m. Brothers and sisters 2 years old and older may visit.
- Please call your infant's nurse before you come to the hospital to arrange time for sibling visits.
- During sibling visits, 2 adults and the sibling will be allowed at the bedside of the infant. It is the responsibility of one of the adults to supervise the sibling during the visit. If at anytime the visiting child's behavior becomes inappropriate for the Neonatal Unit, the second adult will be expected to take the sibling out of the unit.
- No children under 12 years old are to be left by themselves or caring for younger siblings in the waiting areas.
- Other children of the family (nieces, nephews, cousins, and friends) who are 10 years old and under will not be allowed in the nursery.

Grandparents and Other Visitors:

- Visitors are encouraged to visit during the hours of 12 - 9 p.m. ***(with the exception of shift change)***.
- Grandparents or another designated person may visit without parents if the parents have given written consent to the baby's nurse. Grandparents or other designated person can not bring in other visitors.
- Only general information about the infant's condition will be shared with the grandparents or designated person.

Nursery Closings *(everyone is asked to leave the nursery):*

- Change of shift (6:30 – 7:30, morning and evening)
- During ANY emergency, stressful activity, critical admission or surgical procedure.

Please wait in the Family Area located just outside the nursery if the Nursery is closed. A staff member will update you and bring you back into the nursery as soon as possible.

The entire Neonatal staff is here to help in caring for you and your baby. If you have questions or concerns, please ask to speak with the Charge Nurse, Assistant Nurse Manager or Nurse Manager.

Breastfeeding in the NICN

Breastfeeding is a precious gift a mother can give her baby. Breastmilk has numerous advantages for both mother and infant. Expressing your breastmilk by pumping is often required when your infant is in the Neonatal Intensive Care Nursery (NICN). You can ask your baby's nurse for help in determining the best way to ensure a good milk supply for your baby.

Advantages of Breastfeeding

1. Breastmilk is the perfect food for your baby and the easiest to digest. The amount of protein, carbohydrates and fats found in your breastmilk is exactly what is needed for your baby to grow. Premature infants may need a supplement added to the breastmilk to increase the calorie content to help the infant grow.
2. Breastmilk has over 100 nutrients and other ingredients. Each one meets an important need of your baby.
3. Breastmilk has antibodies to help protect your baby from infection.
4. Breastmilk reduces the effect of certain bacteria and viruses. It often decreases allergies.
5. Nursing or pumping causes your body to release the hormone oxytocin, which helps your uterus contract and return to normal size.

Special Bonding

1. While your baby is in the NICN, you are feeding your baby with the perfect food. Your love and milk are very important to help your baby grow.
2. You are the only person who can give this special gift to your baby.

Getting Started

1. You need to start pumping as soon as possible after your baby is born.
2. If you are an inpatient at Carolinas Medical Center you can pump in your room until discharge. Your nurse can get you an electric pump and breastmilk collection kit for your room. You may also obtain this kit in the NICN if you need one.
3. The first milk received is colostrum, which comes in small quantities but has a lot of good nutrients for the baby. Colostrum is followed by mature milk. You may pump several times before your body starts to produce any colostrum.
4. When you visit the NICN, locate the breastfeeding room and become familiar with the freezers and pumps. You can use this room whenever you visit if you bring your kit. You need to make sure you have all the parts of your kit before you leave the breastfeeding room.
5. Please ask your baby's nurse for containers and labels to store the breastmilk that you have pumped and collected. Write the date and time on the label every time you collect the milk.
6. Give the collected milk to your baby's nurse as soon as possible. Breastmilk is good for four hours at room temperature, 24 hours when refrigerated, and six months when frozen. Fresh breastmilk is better than refrigerated or frozen, so please check with your baby's nurse to see if she can use your fresh milk.
7. During the day, you need to pump your breasts every three hours for 10-15 minutes. At night we suggest at least every four hours. Gentle breast massage prior to pumping is often helpful to increase and maintain your supply.

Pumping after discharge

1. For long-term pumping you need a hospital grade pump to maintain your milk supply. Talk to your nurse or our Lactation Consultants about how to get one. We can recommend appropriate ones to rent or purchase.
2. Insurance may pay for the rental of a breast pump. You need to contact your insurance company for approval before you rent a machine.
3. If you have Medicaid and WIC, call your Health Department to set up arrangements for a pump.
4. MOST IMPORTANT: Take care of yourself! Eat well. Drink plenty of water. Rest as much as possible. Having a picture of your baby in view may help you relax while you pump.

In a very few cases, there can be medical reasons not to breastfeed. Discuss any questions or concerns with your doctor and a lactation consultant.

Contact Numbers:

Carolinas Medical Center Breastfeeding Hotline	1-888-456-7491
Carolinas Lactation Outpatient Services	704-541-2943
Carolinas Medical Center – Union Lactation Center	704-226-2028
Watauga Lactation Center	828-266-1165

Health Departments

North Carolina:

Mecklenburg WIC Office	704-336-6464
Cabarrus County	704-920-1252
Cleveland County	704-484-5179
Gaston County	704-853-5123
Iredell County	704-871-3476
Lincoln County	704-736-8637
Stanley County	704-986-3040
Union County WIC Office	704-296-4899

South Carolina:

York County	803-909-7355
Lancaster County	803-268-9948

Feeding Log and Daily Diary

This log is for you to use however you want to use it. If you are breastfeeding, it may be a record of pumping and nursing. You could write questions to ask the doctor or a note about something happening in your baby's life such as starting feedings or coming off the ventilator. The following calendar is for your use as well. You can record your baby's daily weights, first feeding, a change or any special event. You can ask your baby's nurse for more sheets or a new calendar when you need them.

Date/Time	Event	Your Words

Date/Time	Event	Your Words

Feeding Log and Daily Diary

Date/Time	Event	Your Words

Date/Time	Event	Your Words

Welcome to the World!

Born On:

Gestational Age:

Weight:

Head Circumference:

Length:

Apgars:

Congratulations from the staff of: Levine Children's Hospital

Insurance Information

We need information about your baby's medical insurance coverage. Fill out the following information and **give this completed sheet to someone at the nursing desk** or to your baby's nurse.

Name of baby as admitted: _____

Baby's full name (including last name as it will appear on the birth certificate):

_____

Discharge address (Where will the baby be living at discharge?)

_____

_____

1. Do you have a telephone? _____ No, go to next question.
   _____ Yes. The number is (_____)
   Is this a cell phone? ____Yes _____ No

2. Emergency contact: Name: _____ Phone: _____

3. Do you have private insurance? _____ No, go to next question.
   _____ Yes

   Name of insurance company: _____

   Policy #: _____ Group #: _____

   Phone #: _____

   Name of insured (policyholder): _____

   Date of birth of insured: _____

   For whom does this person work? _____

   Have you added the baby to your policy? _____ Yes
   _____ No. You need to do this before your baby is 30 days old by calling the company for whom you work.

4. Have you applied for Medicaid? _____ No, go to next question.
   _____Yes, which state? _____

   Are you signed up for an HMO?_____Yes _____No _____ Unsure

5. Please bring your insurance or Medicaid card to the unit so we can make a copy.

We need this information so we can call these companies before your baby is two to three days old to ensure payment by them. We will continue to update your insurance companies while your baby is in the hospital and let them know of any discharge needs your family may have. Please contact us at any time with insurance questions or concerns, discharge plans or help of any kind.

Thank you, *Your Clinical Care Management Team*

People You May Meet

While in the Neonatal Intensive Care and Neonatal Progressive Care Nurseries, your baby is being followed medically by teams of Residents or Neonatal Nurse Practitioners led by our Neonatologists:

Michelle Chiu, MD
Charles Engstrom, MD
David Fisher, MD
Drew Herman, MD
Docia Hickey, MD
Thomas Kueser, MD
Karen Lessaris, MD
Tim Mitchell, MD
Patricia Neal, MD
Thomas Payne, MD
MaryAnne Rathbun, MD
Carmen Villaveces, MD

Depending upon the particular needs of your baby, the following specialists may also be involved with the medical care of your child:

Cardiac Surgery _____

Cardiology _____

Ear, Nose & Throat _____

Endocrinology _____

Gastroenterology _____

Genetics _____

Nephrology _____

Neurology _____

Neurosurgery _____

Ophthalmology _____

Orthopedics _____

Pulmonology _____

Surgery _____

Urology _____

On the back of this page there is space to write the names of other people who are working with your family.

Other people you have met:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Clinical Case Management Team

We are here to help you with any needs you may have while your baby is here. As the Clinical Case Management Team for Levine Children's Hospital, we assist you from admission to discharge.

Clinical Care Coordinators/Outcome Managers

As clinical care coordinators/outcome manager, we help you with the following:

- List of area pediatricians
- List of insurance-approved providers
- Talking with doctors, nurses or other medical professionals
- Scheduling classes or education
- Insurance questions and problems
- Sending updates to insurance companies
- Scheduling home health nurse or therapist visits if needed
- Arranging for special equipment if needed
- Family support— a listening ear

Clinical Social Work Services

As clinical social workers, we can help you with the following:

- Support during this stressful time
- Education about our units
- Information on follow-up resources including Early Intervention & Child Service Coordination
- Applying for SSI for premature infants
- Counseling for depression, grief or adjustment issues
- Referrals to community agencies
- Talking with doctors, nurses or other medical professionals
- Providing written educational materials if you ask
- Crisis assistance
- Support group information

A primary clinical care coordinator and social worker will be assigned to follow you and your family, but any one of us can help you if needed. Please call to set up a time for us to meet.

Contact us by calling **704-355-3189**.

We look forward to talking with you throughout your baby's stay at Levine Children's Hospital.

Physical Environment

In the physical environment of the NICN, there is a lot of equipment being used on and around your baby. There are a lot of people and machines making noise. Lighting is often kept very bright so that the doctors and nurses can see well as they care for your baby. The isolette or radiant warmer your baby is kept in does not make it easy for the baby to stay in a relaxed, curled up position. There may be treatments that are stressful or painful for the baby such as suctioning, heel sticks for blood tests, having IVs placed, having X-rays or an ultrasound. These treatments may mean that your baby is disturbed many times over the course of the day, disrupting sleep. For the very small preemie, just being handled for daily care (diapering, feeding) can be stressful.

Your baby's physical environment can be changed to increase comfort by:

- Reducing the amount of sound
- Reducing the amount of light
- Providing rhythms in light levels
- Providing some support for the baby's position
- Making treatments less stressful
- Reducing the number of times the baby is disturbed

Sound

Why are loud sounds a concern?

- It may damage the baby's ears and lead to loss of hearing
- The baby feels it as stressful

The sound of the isolette motor is at a level that is comfortable for adults. If the baby has respiratory equipment such as a ventilator or CPAP, the baby's environment becomes noisier. Other sounds like talking or music can raise the noise levels to what an adult would find uncomfortable. In addition, loud, sharp sounds can raise noise levels so high it can lead to damaged cells in the ear. This is more likely to happen when the baby is on certain medicines that make the ear sensitive.

Loud or sharp sounds can cause physiological changes (high heart rate, fast breathing, apnea, and a drop in blood oxygen levels). They also may startle the baby and disturb sleep.

How can the level of sound be reduced?

Sound levels can be reduced by talking quietly, closing doors and portholes gently, not dropping things on top of the incubator, turning down machine alarms and phone ring levels and turning off radios.

Are some sounds helpful?

The sound that seems to impress preemies the most is the sound of your own voice. Providing a tape recording of you talking and reading to your infant may be one way to provide sound that will calm your baby. Keep in mind, however, that for the very small preemie, extra sound when other things are going on may be disturbing. It is important, therefore, to watch your baby when you turn on the tape to be sure that he or she likes it.

Light

Why is light a concern?

- Bright light may cause injury to the eye
- Constant light may disturb body rhythms
- Bright light may keep your baby from opening his or her eyes

Studies done with animals show that bright light can damage the cells in the eye. Preemies are at risk for getting Retinopathy of Prematurity (ROP), changes in the eye that can lead to loss of vision, if severe. Although not yet proven, constant bright lighting may increase this risk by slowing the normal development of sleep-wake cycles. Preemies that have been in nurseries where lighting is dimmed at night advance more quickly in their sleep-wake patterns. This means that they begin to spend more time during each sleep period in deep sleep and less time in light sleep sooner than babies kept in constant light. Light can affect the level of arousal of your baby. In bright light the baby is less likely to open his or her eyes when awake, therefore missing chances to explore the world and to interact with you and others.

How can the amount of light be reduced for my baby?

Isolettes can be covered to block the amount of light reaching your baby. Laying a blanket over the top of the isolette is the easiest thing to do. Letting the blanket drape over the sides or using a specially fitted cover (now available commercially) can block light from the sides as well as the top of the isolette. With current monitors displaying heart rate, breathing, and oxygen levels, the staff knows how your baby is doing even with the isolette covered. When lights are dimmed, procedures requiring the use of extra light can be done with an additional light at your baby's bedside such as a lamp or ceiling spotlight. The staff also will try to be as quick as possible when the use of bright light is necessary.

If overhead phototherapy lights are being used, a special mask will be used to cover your baby's eyes. The staff also will try to reduce the amount of light other babies are exposed to during the treatment.

In many nurseries, a quiet time is held during the day, when lights are dimmed for several hours and your baby is not disturbed unless a procedure is really needed. In some nurseries, lights are dimmed at night. This helps in starting a day/night sleep schedule and supports daily change in hormone and temperature levels. The dimmed light also gives some extra protection from the higher light levels needed for daylight activities.

Positioning

Why is positioning a concern?

- The preemie cannot get into a comfortable position on his or her own
- Over time, positioning affects your baby's motor development

What is important to know about positioning?

The preemie does not have the muscle strength to control movements of arms, legs or head that full-term infants have. It is hard for them to move against the force of gravity. Therefore they tend to lie with their arms and legs straight, or extended, rather than tucked in, or flexed. Being in an extended position for long periods of time can lead to stiffness or abnormal tone in the shoulders and hips and this can delay the baby's motor development. It probably is not very comfortable for the preemie to be on its back out straight, or extended. If left this way, some preemies may try hard to get into a more relaxed, curled up position, using up energy that could be used for growing.

Small preemies maintain better oxygen levels, normal temperature and better sleep patterns when on their tummies or sides than when on their backs. (However, when the baby goes home, he or she should be put on their tummy only when awake, not for sleep.)

How can the baby be kept in positions that are comfortable and help motor development?

Sometimes it is hard to place the preemie in a curled up, flexed position because of necessary equipment, such as IVs, or mechanical ventilation, but usually it can be done.

Guidelines for positioning while in the NICN include:

1. Place baby on stomach or side when in the NICN and on monitors with arms and legs flexed.
2. Cover, clothe, wrap or swaddle the baby, to help keep the fixed position; this also gives him/her the feeling of being cuddled.
3. Make a "nest" around the baby to hold him or her in a flexed position. Nurseries use different ways to do this. Some use blanket rolls. The inserts made for car seats make good nests—the baby lies on the insert, therefore it stays in place better than blanket rolls.
4. To keep the baby in a flexed position, we use the "Snuggle UP."
5. Leave the baby's hands free so that he or she can get them to their face. Sucking his or her fingers or hands, and even just touching his or her own face is one way babies calm themselves.
6. Give the baby something to push against with his or her feet, allowing the baby to feel more stable.
7. Encourage the baby to hold on to or grasp something like your finger, the edge of the blanket or a small rolled-up cloth. This helps the baby feel more stable.

Handling

Why is handling preemies a concern?

- It may lead to physiologic and behavioral stress

When handled for medical care, preemies often show signs of physiological stress by a rising heart rate or a dip in heart rate (bradycardia), rising respiration rates or periods of breath holding (apnea), falling levels of blood oxygen (desaturations), color changes to dusky or flushed, and other responses such as hiccups or yawning. Even pulling adhesive tape off can cause a response.

During daily care, such as diapering and feeding, preemies may react in the same ways. When handled, preemies also may show in their behavior that the movement is stressful, for example, by more moving, more jerks, startles and tremors or fussing/crying.

What is important to know about the effects of handling?

When a baby's blood oxygen level drops (desaturation) for a prolonged period of time, this could directly affect the brain. Therefore, it is important to prevent desaturation during activities that happen over and over again, such as taking temperature and blood pressure, diapering or feeding, as well as during treatments that are especially stressful or painful. Preemies learn. They learn that certain things are not comfortable or pleasant. When this happens over and over, they may learn to dislike being touched.

How can the baby be handled to make it less stressful?
Handling can be made less stressful to the preemie by using a developmental approach.

This means:

1. Position the baby comfortably and securely, and provide special supports to hold the baby in a flexed position during the handling. This includes containing or holding in the baby's arms and legs to keep him or her flexed and to prevent jerky movements.
2. Pace the care according to how the baby reacts. For example, stop (give the baby a break) and gently contain the baby when he or she starts to get upset, and don't start again until the baby is calm.
3. Give the baby ways to keep him or herself calm. This would include a pacifier, something to hold onto, something against which to brace his or her feet, and helping him or her to keep hands up near their face to allow sucking on fingers.
4. Keep other stimulation at a minimum. This would include not talking or trying to make eye contact if the baby shows signs of stress, and keeping general noise levels low.
5. Most of all, adjust to the preemie's behavior as much as possible, letting him or her tell you what feels okay and what doesn't, when to keep going, when to stop and when to start again.

Touch

Handling is touching. A sense of touch develops very early in fetal life. For very small preemies, the skin is so fragile that touching has to be done with great care. For preemies younger than about 30 weeks gestational age (GA), studies show that touch may be more stressful than soothing. For older preemies, however, gentle touching can be helpful. Preemies react in different ways to different kinds of touch. A light, feathery touch may be upsetting. A firm, steady touch is more likely to calm the baby. Giving the stable preemie gentle human touch or massage for a short period every day has been shown to be helpful. It may help babies gain weight faster. As with everything, how and how often the preemie is touched needs to be based on his or her responses.

Feeding and Nutrition

How will my preemie baby get nutrition when he or she is so small?

If your baby is sick or very tiny, your baby will receive nourishment by vein. At first your baby will receive mainly sugar water for calories. However if it appears that your baby will not tolerate feedings within a few days, he or she may be started on hyperalimentation (TPN). With TPN, protein, fat, sugar, vitamins and minerals are added to the fluids that the baby receives by vein. Your baby can receive complete nutrition and grow on TPN alone. As your baby tolerates other feedings, the TPN will be decreased.

Your baby may be started on tube feedings. A tube is passed through the mouth or the nose into your baby's stomach. Milk is put through the tube. This may be as a constant slow drip, called continuous infusion or drip feeds, or as prescribed amounts given every few hours, called gavage feeding. Either way, the amounts will be very small at first and gradually increase. There is often a transition period between TPN and tube feedings where the amount of nutrition from TPN slowly decreases as the amount from tube feeding increases. Occasionally drip feedings are given into the intestine instead of the stomach. In this case the end of the tube is passed beyond the stomach into the intestine.

Can I breastfeed my baby?

Yes. Just because you delivered a premature baby does not mean you must formula feed your baby. At first a small baby will not be able to suckle at the breast, but you can provide breastmilk for him or her. Additional nutrients may need to be added to the breastmilk. Formula specially made for premature infants may be used to supplement your breastmilk until your milk supply is large enough to ensure the infant's growth.

How do I provide breast milk for my baby?

If you plan to provide breast milk for your baby, you must start pumping your breasts regularly within two days of delivery. You should discuss breast pumping and milk storage with your baby's nurse or doctor.

When will my baby gain weight?

Almost all babies lose weight before they begin to gain weight. This weight loss typically is 5-15 percent of the baby's birth weight. Much of the weight loss is loss of water because the baby is no longer surrounded by fluid. Sometimes very sick babies gain weight the first few days. This is not real weight gain, it is retention of water. As the baby's condition improves, the baby will lose weight. Usually a baby does not regain his or her birth weight until two or more weeks of age.

When can my baby nipple or breastfeed?

When babies are born prematurely their sucking is not well coordinated with their breathing. This suck/swallow/breathe pattern usually becomes coordinated enough to safely breast or bottlefeed at about 34 weeks of gestation. However, there are big differences among babies. Some are ready at 32 weeks, others are not ready at 36 weeks. Nurses can often tell when a baby is getting close to this time by how a baby acts during a tube feeding. Your baby's doctors and nurses will determine when to start. At first your baby will have only one or two bottle/breastfeeds a day. This will gradually increase as the baby gets used to the extra work of feeding. Because bottle and breastfeeding requires more work, babies who have had severe respiratory problems may be slower to start and slower to advance on feedings.

Respiratory Distress Syndrome

What is Respiratory Distress Syndrome (RDS)?

Respiratory Distress Syndrome (RDS) is a breathing problem that is often seen in premature babies.

What causes it?

The earlier a baby is born, the greater the chance he or she will have trouble breathing. During the last months before birth, a baby's lungs are growing and getting ready for the job of breathing after birth. In the last weeks of pregnancy, a special fluid called surfactant is made. This liquid covers the inside of the tiny air sacs in the lungs. It helps to make it easy to breathe. Without this liquid, the tiny air sacs can stick together and block the air from coming in and out.

What happens to my baby?

The baby may be able to take their first breath without much work. When the lungs begin to stick together, the baby has to work harder to open the lungs each time they breathe. This is a lot of work for a new baby so they get tired very quickly. Just as you do when you work really hard, they startto breathe faster (tachypnea) and harder. The baby's chest sucks in (retractions) as they work to get air into their lungs. You may hear a noise (grunting) when they breathe out as they try to close off the back of their throat to keep all the air from leaving the lungs. Usually the baby gets worse over the first 72 hours of life before they start to slowly improve.

What can be done?

RDS may be mild or severe. Replacement surfactant may be given. The drug is given into the baby's lung through a tube placed into the baby's windpipe. Surfactant drains into the baby's tiny air sacs, coating the surfaces and taking the place of the baby's own surfactant. Dosing will be dependent on how your babyresponds. The team of doctors, nurses and respiratory therapists caring for your baby can give the baby breathing support until he or she is able to produce enough surfactant on his or her own.

Babies usually need extra oxygen and in some cases, they will also need help with breathing. There are three major ways of helping babies breathe easier:

- Oxygen only (with a plastic box placed over the head [hood] or under the nose [cannula]).
- Air or oxygen through the nose: In this case, the baby breathes on his or her own but is given pressurized air into the lungs to keep them partially inflated at all times. This is called continuous positive airway pressure or CPAP.
- Air or oxygen given by the ventilator (breathing machine): In this case, an endotracheal tube is inserted through the baby's mouth into the trachea (windpipe) to provide a way of giving oxygen and breaths (mechanical ventilation). The amount of oxygen and number of breaths varies from baby to baby. The ventilator can be set to breathe as many times per minute as the baby needs (intermittent mandatory ventilation or IMV). The oxygen can be varied from 21% (room air) to 100%. It also provides pressure to keep the air sacs open in the lungs as needed by the baby.

Each baby is treated differently because each baby has different needs. Based on your baby's response to the treatments, a plan is made day by day (and sometimes minute by minute) to give your baby what he or she needs to breathe as easily as possible. Please ask your baby's caregivers to explain any equipment you don't know about.

When will my baby get better?

Some babies get better quicker than others and the team is able to decrease the amount of treatment the baby may need (weaning). It is very common for a baby to have ups and downs with their oxygen needs. It is also common for a baby to wean off some of the special equipment but need it again when they get tired. If you have older children, you might compare it to an older child learning to ride a bike—some get right on and can ride right away while others just have to keep trying for a while.

What can I do as a parent?

Keep up with your baby's progress each time you visit or call. An important part of the baby getting better is the parents' love and concern. We encourage you to talk and sing to your baby, gently touch and rub your baby and hold your baby close to you if possible. Your love and attention will go a long way in helping your little one on the road to recovery.

Methicillin-Resistant Staphylococcus Aureus (MRSA) What Every Parent Needs To Know...

What is MRSA?

Staphylococcus aureus, commonly known as staph, is a bacteria found on the skin. Sometimes these bacteria can cause a minor infection such as a rash or pimples or a more serious infection such as pneumonia. Methicillin is the antibiotic usually used to treat these staph infections; however, some bacteria have changed so the antibiotic methicillin will no longer kill the bacteria. These bacteria are called methicillin-resistant Staphylococcus aureus or MRSA.

Who gets MRSA?

MRSA infection can develop in the young, the old, the sick, anyone who has an open wound or if their immune system is not working as well. You can get MRSA in the community or from being in the hospital. You may also get MRSA from taking too many antibiotics or not finishing all your antibiotics as directed by your doctor.

What is the difference between MRSA colonization and infection?

Colonization means MRSA is present on or in the body without causing illness. Infection means MRSA is making the person sick. Often, colonized patients will never become infected or sick from the MRSA, but some colonized patients will get sick and have infection.

How is MRSA spread?

MRSA, as with most bacteria, is spread most commonly on the hands through touch or contact. This is why we isolate, or separate, patients with MRSA. This includes all the patient's personal items such as blankets, clothing, charts and stethoscope.

What should I do at home after discharge to help my child?

As with any infant, keep your baby clean with sponge baths and bathe as indicated. Make sure everyone washes his or her hands before and after contact with infant.

Good handwashing means:

1. Wet your hands with warm water.
2. Wash your hands using soap for 20 seconds, rubbing gently.
3. Rinse all the soap off the hands.
4. Completely dry hands with paper towel and throw towel away. (Cloth towels may have germs left by the last person who did not wash correctly).

Healthcare workers visiting your home may continue to need to wear gowns and gloves while working with your child. Please help remind them of this safety practice.

Do not share clothing, blankets, or toys until after the items are washed.

Can my child attend daycare with MRSA?

MRSA will not prevent your baby from attending daycare; however, there may be other health concerns that may not allow you to put your infant in daycare. We suggest you talk to your infant's doctor about childcare.

Don't Forget...A Few Reminders From Our Staff

Family Resource Library

The Family Resource Library is open Monday through Friday from 8:30 a.m.–5 p.m. Check out a book, look up information on the internet, send an email to family and friends or just have a cup of coffee and read the newspaper. Our librarian would be happy to assist you in finding the information you want.

Family Focus

Family Focus is held every Monday and Thursday evening at 6:30 p.m. in the Family Education Room (7008) on the 7th floor near the LCH elevators. Monday nights the focus is on Breastfeeding; while Thursday nights the focus is general information about infant care in the hospital and at home. We invite you to join us for these informal gatherings around pizza and drinks.

CaringBridge

CaringBridge makes it easy for you to create your own website about your baby that your friends and family can access to get information. You will no longer need to make several phone calls to let family and friends know how your infant is doing and they can send you messages as well. Ask our librarian or a Child Life specialist to help set up your website.

Smoking Cessation Program

STEP: The Stop Tobacco Education Program

As dedicated healthcare professionals, we would like to encourage you to quit tobacco use. We want to support you in taking such an important step toward better health by providing the following information.

What are the dangers of using tobacco?

Tobacco use causes disease all over the body and shortens life on average by 14 years.

- It is the number one preventable cause of cardiovascular disease.
- It is a major cause of heart attack and stroke ("brain attack").
- It causes cancers of the:

  Lungs, Mouth, Lips, Throat, Larynx ("voicebox"), Esophagus, Stomach, Pancreas, Kidneys, Bladder, Cervix
- Acute myeloid leukemia
- It causes emphysema and bronchitis, and worsens asthma symptoms.
- When used during pregnancy, there is an increased risk for complications, miscarriage and premature delivery as well as reduced fetal growth leading to low birth weight.
- It increases the risk for:

  Pneumonia, Cataracts, Hip fractures, Peptic ulcers, Congestive heart failure, Abdominal aortic aneurysm
- It causes complications from diabetes, particularly insulin dependent diabetes.
- It interferes with healing and increases wound infections following surgery.
- There is growing evidence that exposure to secondhand smoke leads to disease.

Are you ready to quit?

Quitting tobacco can be challenging, however, there are resources available to help. Most individuals will try several times to quit before breaking free of their tobacco addiction and it is important not to be discouraged if you have tried and relapsed. Each quit attempt that you make puts you closer to better health. And, it is never too late to quit either; even those individuals who quit after their 65th birthday will reduce their chance of dying from a tobacco related illness by 50 percent.

You can request additional material on the most current and effective quit strategies. If interested, ask your baby's nurse or call a free quit-line: the National Cancer Institute's (1-877-448-7848) or the American Lung Association's (1-866-784-8937). These quit-lines have trained staff that will provide one-to-one counseling to help you break free of tobacco.

QUITTING TOBACCO IS ONE OF THE MOST IMPORTANT THINGS YOU CAN DO FOR YOU AND YOUR BABY'S HEALTH

Cord Care

Follow the guidelines below to ensure proper healing:

1. Usually the premature baby's cord has dried and fallen off by the time he or she goes home.
2. Try to keep the diaper below the belly button until the cord has fallen off and completely healed. This lets air get to the cord and dry it.
3. Call the doctor if the belly button becomes red, bleeds or smells bad.
4. Sponge bathe rather than tub bathe the baby until the cord has fallen off and the belly buttonhas completely healed.

Using a Bulb Syringe

When to use the bulb syringe

A bulb syringe is used to clean your baby's nose and mouth of formula or mucus. You may use it when your baby spits up, has a stuffy nose or sneezes (this is how he clears his nose). We suggest you keep a bulb syringe close to your baby especially during feedings. It is important to clear the mouth first and then the nose so if your baby spits up he or she will not choke. Babies breathe mainly through their nose during the first few months of life so it is also important to keep it clean.

Using the bulb syringe

1. To use, first squeeze the bulb until it is collapsed. Place it in one nostril and quickly release the bulb. This will bring the formula or mucus into the bulb.
2. Remove the bulb syringe from the nose and squeeze the bulb quickly into a tissue to get rid of this material. Repeat for the other nostril (and mouth if necessary).

You may use the bulb syringe as often as needed.

Cleaning the bulb syringe

Clean the bulb syringe daily with warm, soapy water and rinse in hot water. Be sure to clean the inside of the bulb by squeezing it while the tip is in the soapy water. Rinse by repeating the procedure with clean, hot water. A dirty bulb syringe can be a cause of infection.

Taking a Temperature

If your baby appears sick, you may want to take his or her temperature. Fever is a sign of illness. However, sometimes a small baby's temperature will drop rather than rise when they are sick. There are three ways to take a temperature:

- Axillary (armpit) — This method may be used in babies under six months or children up to four years.
- Rectal (in the bottom) — This method may be used in children over six months and less than six years.
- Oral (mouth) — Child should be cooperative and over four years old to use this method.

Thermometers

A digital thermometer is recommended for taking your baby's temperature. You can purchase one at your local drug store. You should use a disposable sleeve (throwaway cover) when taking a temperature. If the thermometer will not turn on or takes a long time to give a reading, you may need to change the battery or buy a new one. Please follow the manufacturer's recommendations.

Taking a temperature

Take the temperature when your baby is quiet. Body temperature varies depending on the amount of activity, emotional stress, type of clothing worn and temperature of the environment. When reporting fever, always tell the doctor the exact thermometer reading and where the temperature was taken like "99.7ºF under the arm." We recommend using the axillary (armpit) temperature on babies less than six months of age.

Definition of a fever

Generally, a fever is a temperature over 99ºF if taken in the armpit or over 100ºF if taken rectally.
Ask your doctor when he or she would like to be notified if your child has a fever.

Taking an axillary temperature (under arm)

1. When using a digital thermometer, press power button and wait until display appears. This indicates the unit is operational and in good condition.
2. Put sleeve or cover on thermometer.
3. Hold the thermometer snugly in the armpit, making sure the bulb is completely covered, between your baby's arm and side.
4. Hold the thermometer there until the thermometer beeps (about 10-20 seconds).
5. Remove from under the arm and read the digital window.
6. When reporting your baby's temperature, tell the nurse or doctor that it was an axillary temperature. Axillary temperatures are slightly lower than rectal or oral temperatures.

Taking a rectal temperature (in the bottom)

1. Press power button and wait until display appears.
2. Put sleeve or cover on thermometer.
3. Moisten lower portion of thermometer with Vaseline® or K-Y™ jelly.
4. Place infant on his or her stomach and across your lap.
5. Spread the buttocks with one hand to expose the anal opening and lay that arm along your baby's back to prevent him or her from moving.
6. Insert thermometer with your other hand, slowly and gently, just far enough for the bulb to pass the anal sphincter (muscle). This is about one inch.

7. Hold thermometer in place until it beeps; approximately 10-20 seconds.
8. Remove gently in a straight line and read it.
9. When reporting your baby's temperature, tell the nurse or doctor that is was a rectal temperature. Rectal temperatures are slightly higher than oral or axillary temperatures.

Care of thermometer

1. Draw thermometer through soapy cotton ball or tissue after each use.
2. Rinse in cool water.
3. Store in safe place, out of the reach of children.

Call the doctor if:

1. Baby has fever over 100ºF axillary (under arm) or 101ºF rectal, and/or vague symptoms including:
   - Irritability (crying or fussy)
   - Poor feeding
   - Floppy or listless
   - Breathing is difficult
   - Coughing
   - Does not look good
2. Temperature is less than 97ºF
3. If your baby feels hot to touch and you are unable to read a thermometer
4. Fever is present for more than three days
5. Fever with abnormal movements

REMEMBER: A NORMAL TEMPERATURE IS AROUND 98.6ºF

Treating fever

1. If your baby is less than six months of age and has a fever, call your baby's doctor before giving acetaminophen (Tylenol®, Tempera®, Liquiprin®, Panadol®, or Ibuprofen/Advil®).
2. Get the correct dosage from your baby's doctor.
3. Do not use medicine for more than three days without talking with the doctor.
4. **KEEP ALL MEDICINE OUT OF THE REACH OF CHILDREN.**
5. Children should not be given aspirin. Several studies link aspirin use in children with Reye's Syndrome—a severe illness that often is fatal.

Play

Newborn to One Month

Things baby likes:

- Voices—Baby will shift his or her eyes or may turn his or her head toward the sound.
- Soothing music—Play a music box, radio or tape recordings to the baby.
- Visual stimulation—Watching your face move from side to side. Stay within 8-20 inches of the baby's face. You can adjust this distance depending on your baby's reaction. He or she will follow it briefly. He or she may also begin to look in an upward direction.
- Being held and cuddled – Baby cannot be spoiled at this age!
- Movement – Rock baby in your arms or use a rocking chair.
- Warmth
- Massaging touch

Good toys:

- Music boxes
- Mobiles, especially bright or contrasting colors. Hang 8-20 inches above the baby.

Remember: You are the best stimulation for your baby. Talk to your baby and wait for him or her to focus on your face.

One to Three Months

Things baby likes:

- Use of shiny and bright mobiles or toys above baby's bed, but out of reach of baby.
- Watching bright colors (red and orange) or black and white; baby will turn his or her head to follow toys moved in front of them.
- Listening to musical toys or animals.
- Shaking bells or rattles, encouraging your baby to watch them.
- Talking—Speak to baby in a lovely voice. Baby starts to coo, and "talk" back to you.
- Being on his or her tummy on the floor. He or she will lift their head and rolls from his or her front to back or side.
- Smiling—Smile at the baby; Baby smiles back at you.
- Dangling a toy in front of the baby when he or she is on their back or sitting in your lap. Baby gets excited and may be able to reach for it.
- Putting toys in his or her mouth.
- Being held, cuddled, rocked or placed in an infant seat so he or she can see from a different view.

Good Toys:

- Rattles—different sizes and shapes, made out of different materials.
- Crib gym—a toy with several toys on a rod that is hung across the crib or stroller. Baby looks, starts to reach and touch, then pulls and plays with toys.
- Stuffed toys—Baby may hug and hold this toy. Remember to remove the stuffed toys when the infant is asleep. Stuffed toys should only be played with when the infant is awake. Many make noises or play music.

- Busy boxes
- Comfort pillows
- Infant instruments

Four to Six Months

Things baby likes:

- Playing with his or her feet, bright and noisy toys or squeaky rubber toys.
- "Peek-a-boo"
- Laying on a blanket on the floor—Baby will practice rolling from his or her back to his or her stomach.
- Seeing him or herself in a mirror – Baby will smile and pat the mirror.
- Dangling a toy in front of the baby when he or she is on his or her back or sitting in your lap. He or she reaches for the toy with both hands.
- Rolling on his or her belly and rocking on his or her hands and knees.
- Holding toys in each hand—Baby will begin to bang them on other things.
- Talking to your baby. Wait for a response, then mimic the response. This will encourage language development and the bond between you!
- Singing to your baby and playing different types of music.

Good Toys:

- Bowls that fit into each other.
- Mirrors (non–breakable) — Baby likes to see him or herself.
- Bath toys, sponges cut into different shapes, toy boats, funnels, plastic scoops or cups to empty and fill; baby likes to splash.
- Toys that baby can hold.
- Soft books, blocks, dolls/animals
- Squeeze toys
- Exersaucer
- Balls (wooly or soft)

Choosing Toys

TOYS SHOULD BE SAFE.

1. Toys should not have small, loose parts or sharp edges.
2. Remember the baby's age when you buy or make toys. Baby likes big, colorful toys that do lots of things.
3. Make sure baby can not choke on or swallow toys he or she places in his or her mouth.
4. Baby walkers are not safe and actually do not help babies walk sooner. One option would be an "Exersaucer."

Dear Parents,

Congratulations on the transfer of your baby to our Neonatal Progressive Care Nursery (NPCN). We welcome your family on this next step of your journey. We encourage you to ask questions and share any concerns you may have about the nursery and your baby.

We are aware that you are the most important person in your baby's life and encourage you to be with your baby as much as you can. Your infant's discharge day is getting closer. We urge you to spend as much time with your infant as possible to get to know everything about your infant. Write suggestions and ideas for caring for your baby in your notebook to refer to when you get home. When your infant is discharged, you will be able to take this notebook home and have a record of your baby's stay. All your information will be in one place.

You may call the nursery at **704-381-7100** (NPCN) for updates when you are not here. Please ask other family members to call you for updates. For privacy, we give information only to parents. You still need to wear your bracelet. As the new staff gets to know you, they will ask for the bracelet number less.

The Hospitality House located behind the hospital provides rooms for families that may need to stay the night. Please have your baby's nurse call the Patient Representative for you if you wish to use this option.

Please feel free to bring in small, firm-surface, washable toys for your baby. No plush toys, such as teddy bears or beanie babies are allowed in your baby's bed. You can also bring in blankets or clothing. Outfits that open down the front with snaps or gowns are the easiest to dress your baby in with all the wires.

Again, if you have any questions please ask any of the staff working with you and your baby. We are here to help you as you transition from the birth of your baby to your baby's homecoming.

Thank you,
The Neonatal Staff

Are You Ready for Your Baby to Go Home?

We want to be ready too! Fill out this sheet and **give it to the front desk or your baby's nurse.**

Name of baby as admitted: _____

Baby's full name (including last name as it will appear on the birth certificate):

_____

To what address will you be taking the baby home? Has it changed since you last told us?

_____

_____

_____

1. Do you have a telephone? _____ No, go to next question.
   _____ Yes. The number is (_____)_____
   Is this a cell phone? ____Yes _____ No

2. Which doctor have you chosen for your baby?_____
   We can provide a list of doctors your insurance prefers.

3. Have you added your baby to your insurance or Medicaid? _____ Yes _____ No (Do it now!)

4. Has any insurance or Medicaid information changed? _____ No, go to next question.
   _____ Yes, the new information is:

_____

_____

5. Do you want us to contact a certain home health agency if the doctor orders home health care visits for your baby? _____
   We can provide a list of agencies your insurance prefers.

6. Is your baby's sleeping area ready? _____Yes _____No (Do it now!)

7. Do you have your baby's car seat installed correctly in your car? _____Yes _____No. Please follow the directions from the manufacturer or stop at a local police station or fire station for help installing your car seat now.

Thank you for giving us this information to help you and your family plan for your baby's discharge. Please contact us with any questions or concerns about discharge plans for your baby.

Thank you, *Your Clinical Care Management Team*

Start Planning To Bring Your Baby Home

What can you do?

Bring in the car seat your baby will be using. (If you haven't gotten one yet, now is the time!) We will test your baby in the car seat prior to discharge to make sure baby's first ride is a safe one. Please see additional information about picking out car seats and putting them in your car on page 40.

CPR

Sign up for CPR. Ask your bedside nurse or call the nurse's station in NPCN at 704-381-7100 to sign up. All parents should know cardiopulmonary resuscitation (CPR) for emergency situations. If your child goes home on oxygen or monitors, or both, two caregivers must be certified in CPR before your baby can be discharged.

Basic Baby II

Have questions about caring for your infant such as bathing your baby, immunizations, safety in your home, visitors, or when your baby is sick? Sign up for Basic Baby II. This class will address your questions about caring for your baby at home. Ask your bedside nurse or call the nurse's station in NPCN at 704-381-7100 to sign up.

Car Seat Basics

- Always use a car seat, starting with your baby's first ride home from the hospital. Help your child form a lifelong habit of buckling up.
- Read the car seat manufacturer's instructions and keep them with the car seat.
- Read your vehicle owner's manual for more information on how to install the car seat correctly in your vehicle.
- Never place a child in a rear-facing car seat in the front seat of a vehicle that has a passenger airbag.
- The safest place for all children to ride is in the back seat.
- The harness system holds your child in the car seat and the seat belt holds the seat in the car. Attach both snugly to protect your child.

Which is the "best" car seat?

- No one seat is "safest" or "best." **The "best" car seat is one that fits your child's size and weight, and can be installed correctly in your car**.
- Price does not always make a difference. Higher prices usually mean added features that may or may not make the seat easier to use.
- When you find a seat you like, try it out! Put your child in the seat and adjust the harnesses and buckles. ***Make sure it fits in your car.***
- If your baby is less than five pounds at time of discharge, be sure to purchase a car seat that will fit your baby. ***Some car seats state a specific lower weight limit of five pounds—if your baby weighs less than five pounds, then this car seat will not properly fit your baby***.

Most new cars have air bags. When used with seat belts, air bags work very well to protect older children and adults. However, air bags are very dangerous when used with rear-facing car seats. ***If your car has a passenger air bag, infants in rear-facing seats must ride in the back seat.*** Even in a low-speed crash, the air bag can inflate, strike the car seat and cause serious brain injury and death. Toddlers who ride in forward-facing car seats also are at risk from air bag injuries. All children, even through school age, are safest in the back seat.

Has the car seat been recalled?

You can find out by calling the manufacturer or the Auto Safety Hot Line at 888-DASH-2-DOT (888-327-4236), from 8 a.m. to 10 p.m. ET, Monday through Friday. This information is also available online at the National Highway Traffic Safety Administration website. If the seat has been recalled, be sure to follow instructions to fix it. You also may get a registration card for future recall notices from the hot line.

Infant-only seats

- Only can be used rear-facing
- For babies who weigh up to 20 pounds (or more, depending on model)
- Small and portable and fit newborns best
- Available with a 3-point harness or a 5-point harness

Infant-only seat features

Detachable Base: Several infant seat models come with detachable bases. The base stays in the car so you do not need to install it every time you put your baby in the car. After buckling your baby into the seat, you simply lock the seat into the base. Some bases are adjustable to make it easier to correctly recline newborns. These seats can be used without the base or you can buy additional bases for other cars. However, this feature is only helpful if the base fits tightly into your car. In some cases, the seat may fit better without the base.

Higher Weight Limits: Several infant-only seats are available for use up to 22 pounds and at least one is available for use up to 35 pounds. This may make it easier to keep your baby rear-facing for a full year. However, if your infant's weight exceeds the weight limit of the seat before a year, use an infant-only seat or rear-facing convertible seat that has a higher weight limit. (Many now go up to 30 pounds or higher in the rear-facing position for heavier babies.)

Harness Slots: Infant-only seats that come with more than one harness slot give more room for growing babies. On rear-facing seats, the harness slots should always be at or below your baby's shoulders. Check the car seat manufacturer's instructions to be sure.

Handles: Carrying handles on car seats vary greatly in style and ease of use. Check the instructions for how to adjust the handle during travel. Angle indicators, built-in angle adjusters, harness adjusters and head support systems are required.

Convertible seats

- Bigger and heavier than infant-only seats, but can be used longer.
- Some do not fit newborns as well as infant seats. **WE DO NOT RECOMMENDED CONVERTIBLE SEATS FOR NEWBORN BABIES UNDER SEVEN POUNDS.** Make sure that your baby can recline comfortably in the seat. Check the car seat manufacturer's instructions to be sure that harnesses can be adjusted properly.
- Are used rear-facing for infants until they have reached at least one year of age **and** weigh at least 20 pounds (or more depending on model). **The American Academy of Pediatrics recommends that babies be kept in rear-facing seats for as long as possible.**
- If using a convertible seat for a small infant, the best choice for a more secure fit is the 5-point harness. A shield could contact a small baby's face directly in a crash.

Installing and using car seats correctly

Read the car seat manufacturer's instructions and the child restraint section of your vehicle owner's manual carefully to be sure you are installing and using the car seat correctly. When you install the seat in your car, check the following:

Is your child buckled into the car seat correctly?

- Be sure to use the correct harness slots for the child.
- Keep the harnesses snug. Place the plastic harness clip, if provided, at armpit level to hold shoulder straps in place.
- Make sure the straps lie flat and are not twisted.
- Dress your baby in clothes that allow the straps to go between the legs. Adjust the straps to allow for the thickness of your child's clothes, making sure that the harness remains secure

- In cold weather, tuck blankets around your baby after adjusting the harness straps snugly.
- To keep your newborn from slouching, pad the sides of the seat and between the crotch with rolled up diapers or receiving blankets.

Is the car seat buckled into your vehicle correctly?

- Place the seat facing the correct direction for the size and age of your child. Route the seat belt through the correct path on the car seat (check your instructions to make sure) and pull it tight. Before each trip, check to make sure the car seat is installed tightly enough by pushing on the car seat where the seat belt passes through. It should not move easily side to side or toward the front of the car.
- If your infant's head flops forward, the seat may not be reclined enough. Tilt the seat back until it is reclined as close as possible to a 45-degree angle (according to manufacturer's instructions). Your seat may have a built-in recline adjuster for this purpose. If not, you may wedge firm padding, such as a rolled towel, under the front of the base of the seat.
- Check the seat belt buckle. Make sure it does not lie just at the point where the belt bends around the car seat. If it does, you will not be able to get the belt tight enough. If you cannot get the belt tight, look for another set of belts in the car that can be tightened properly.
- Many lap/shoulder belts allow passengers to move freely even when they are buckled. Read your car owner's manual to see if your seat belts can be locked into position or if you will need to use a locking clip. Locking clips come with all new car seats (some have them built in). Read your instructions for information on how to use the locking clip.
- Some lap belts need a special, heavy-duty locking clip, available from the vehicle manufacturer. Check your car owner's manual for more information.

What is LATCH?

A new child safety seat attachment system has been developed to make child safety seat use easier and to improve the safety of the seat. The system is called , which stands for Lower Anchors and Tethers for Children. This new anchor system will make correct installation much easier because you will no longer need to use seat belts to secure the car seat.

Most new car seats that can be used facing forward are required to be equipped with top tethers. A tether is a strap that hooks the top of the car seat to a special permanent anchor in the vehicle. Most anchors are located on the rear window ledge, the back of the vehicle seat, or the floor or ceiling of the vehicle. Tethers give extra protection by keeping the car seat from being thrown forward in a crash.

Tether kits are available for most older car seats. Check with the manufacturer to find out how to get a top tether for your seat. Be sure to install it according to instructions. The tether strap may help make some seats that are difficult to install fit more tightly.

As of September 2000, all new cars, minivans and light trucks are required to have upper tether anchors for securing the tops of car seats.

Some new vehicles and car seats now have lower anchors and anchor points to secure the car seat. Starting in model year 2002, all new vehicles and new child seats will be equipped with these lower anchors and attachments. Unless both the vehicle and the car seat have this new anchor system, seat belts will still be needed to secure the car seats.

Information taken from the 2007 Family Shopping Guide to Car Seats–Safety and Product Information from the American Academy of Pediatrics

Bottle-feeding

Feeding the premature baby

Feeding a premature baby may be different from feeding a full-term baby. A premature infant may behave in one of several ways. He or she may wake up hungry and want to eat every two to three hours. He or she may be sleepy and not wake for feedings in four hours—and fall asleep during the feeding. Or he or she may set their own schedule, waking 30 minutes to an hour before feeding.

If your baby is not awake when a feeding is due, wake him or her up by changing their position, talking to him or her, removing blankets or loosening the covers. This will bring your baby to a more alert state and make for a better feeding.

What to feed baby

1. Babies need breastmilk or infant formula with iron for the first year of life. Most formula-fed babies go home on a formula based on cow's milk that has lactose (a form of sugar). A few babies need a nonlactose formula. This formula is often a soybean based formula. It is used temporarily if your baby has intolerance to the regular infant formula (rare) or following an illness with diarrhea. Soy formula should be used only when suggested by your doctor. If your baby is on any other special formula, we will help you make arrangements for obtaining the formula.

2. Babies should remain on breastmilk or an infant formula through the first year of life. Babies do not need cereal, juice or other baby foods until they are six months old. All of their nutritional needs are met in the infant formula or breastmilk.
   Exceptions:
   - Some infants are placed on feedings thickened with cereal by their doctor because of problems associated with reflux (spitting up when feedings come up from the stomach into the esophagus—the tube connecting the throat to the stomach). Reflux also may cause your baby to feed poorly because the esophagus becomes irritated.
   - Some babies may take the largest amount of formula they should have and still be hungry. Try to wait until your baby is four to six months old before adding cereal. Again, discuss this with your doctor.

3. Formula comes in three forms, some of which has iron added: ready–to–feed liquid, concentrated liquid and powdered. Baby formula in all of these forms has 20 calories per fluid ounce when prepared " according to label directions.

Ready-to-Feed Liquid (with iron)

- Available in 32-ounce and 8-ounce cans or disposable bottles in several sizes
- Requires no addition of water and little preparation time
- Requires refrigeration after opening can or bottles
- Once opened, refrigerate and use within 48 hours
- Most expensive of the three forms of formulas

Concentrated Liquid (with iron)

- Available in 13-ounce cans
- 13 ounces of formula are mixed with 13 ounces of water
- Important to correctly dilute formula with water as label directs
- Must be refrigerated after opening can and diluting
- Mix, refrigerate and use within 48 hours
- Average cost of the three forms of formula

Powdered (with iron)

- Available in one-pound cans
- Mix one scoop of powder to two ounces of water
- Easy storage before and after can has been opened
- Convenient for travel or home use
- Important to correctly dilute formula with water as label directs
- Opened powder can be used for up to one month
- Mix, refrigerate and use within 48 hours
- Least expensive form of the three formulas

All three types of formula will give the same nutritional value to the baby. Check with your baby's doctor about boiling your water (usually not necessary if you are on city or county water supplies) and sterilizing bottles.

NEVER ADD MORE WATER TO MAKE THE FORMULA LAST LONGER
OR LESS WATER to MAKE IT STRONGER.
THIS COULD BE **VERY DANGEROUS** TO YOUR BABY'S HEALTH.

With refrigeration, an opened can of liquid formula or a prepared bottle can be stored for 48 hours. Wash the top of the can with hot soapy water, rinse and air-dry before opening.

If your baby drinks part of a bottle, you can leave it out at room temperature and offer the remainder up to one hour later. Then throw out the remaining formula. DO NOT add formula to a partially finished bottle. Give your baby a fresh bottle each feeding. DO NOT use prepared formula that has been out of the refrigerator longer than four hours.

Special formula

Babies with heart or breathing problems (Bronchopulmonary dysplasia—BPD), or who have growth problems sometimes go home on higher calorie formula (24 calories per ounce). It may be available to be purchased, like regular baby formula, in a grocery or drug store in your community, or it may be available through the WIC program.

Special formulas should only be used at the direction of your baby's doctor. The health team will help you get the special formula if needed.

How much to feed

The amount of formula your infant takes will vary. While in the hospital your baby was probably fed very specific amounts of formula and increases were made in small amounts. Start with the amount your baby was fed in the hospital (or a little more) when you fill your bottles at home.

Your baby is ready to feed on demand. This means he or she can have as much as he or she wants as often as he or she wants (unless your baby's doctor tells you otherwise). Babies tend to eat what they want and need, then stop sucking. They fall asleep, thrust the nipple from their mouth and stop sucking when finished. Sometimes your baby will eat more than other times. Do not be concerned about small variations in amounts.

Most babies feed for about 20 minutes. Feedings should not last longer than 30 minutes. Babies with heart or breathing problems can take as long as 45 minutes to feed. Many premature infants go home on a three- to four-hour feeding schedule and change back to a two- to three-hour schedule during a rapid period of catch-up growth. If your baby is taking more than 32-ounces of formula in a 24-hour period, ask your pediatrician if supplements like cereal should be started.

Sleeping through feedings

It often takes several months after going home before your baby sleeps through the night. If he or she sleeps through the night, enjoy your rest and do not wake him or her unless instructed otherwise. During the daytime you should not let him or her go longer than four to five hours without feeding.

When to feed baby

We favor a demand feeding schedule of frequent, small feedings. Feed baby when he or she is hungry (he or she will cry, open his or her mouth and turn his or her head toward you, wiggle, lay quietly awake and then become vigorously active or fussy or suck on his or her hand when he or she is hungry). Babies do not usually go more than five hours between feedings and some eat as often as every two hours. Most premature babies eat six to eight times a day for several months after going home.

Feed your baby the amount he or she wants. Babies are mostly self–limiting. They stop sucking when they have had enough. If your baby cries and changing diapers and holding your baby does not calm him or her, feeding may. Try it.

Offering the baby water

All the fluids and calories a baby needs, including water, are provided in the formula or breastmilk. Formula is the best source of calories and fluid to the growing premature unless he or she is already taking 32 ounces of formula. Follow the advice of your baby's doctor about offering water to your baby.

Increasing the feedings

As your baby grows and gains weight, he or she will need more formula. When he or she takes an entire bottle regularly and sometimes cries for more or continues to suck strongly, it may be time to increase his or her feeding. Place an extra half ounce of formula in the bottles if you are concerned. If your baby begins to spit, he or she may be overfed. Decrease the amount of the feeding.

Warming the formula

Most babies are used to room-temperature formula when they go home, although many babies will be happy to take their formula directly from the refrigerator. Others may enjoy it warmed. No one way is better—nor does one way cause crying and stomach upsets more than the other. Babies are creatures of habit and often like things done the same way.

Using tap water

Some formulas need to be diluted one-to-one with water before feeding. If you make one bottle at a time, you can use warm tap water from the faucet. City water supplies are safe. If you have a question about your water, call the health department.

If you have well water, boil it for 15 minutes or use distilled water until your baby is six months old. If your water comes from a well, it needs to be tested by the health department for bacteria and contaminants. Do not use it for drinking unless it is safe.

Sterilizing bottles and nipples

Sterilization of bottles and formula is not routinely recommended if you:

- Have reliable city water
- Wash the bottles and nipples in hot soapy water, rinse in hot water and air dry
- Clean any dried formula out of the nipple and its opening
- Prepare one bottle at a time
- Refrigerate opened formula no longer than 48 hours
- Clean bottles in the dishwasher

Holding baby for feeding

Hold your baby in the crook of your arm watching his or her face. Some babies may fall asleep this way. Premature infants often get comfortable and sleepy during the feeding. You may need to hold the still sleepy, smaller premature infant on your lap directly facing you. Use one of your hands to support your baby's head, neck and upper back. Talk to him as he or she is fed, except during late night feedings.

If the head rests forward on the chest, your baby may have trouble breathing. He or she may try to straighten his or her head by throwing it backwards to help in breathing. If his or her head is held too far back this can cause difficulty in swallowing as well as breathing.

Make sure formula fills the nipple during the entire feeding or your baby will swallow air. Swallowing air may lead to spitting, crying and stomach upsets in your baby.

NEVER PROP THE BOTTLE and do not leave baby alone to drink it. Your baby could choke. Always hold your baby during feedings.

Burping the baby

Your baby needs his or her back rubbed or patted during the middle of the feeding and again at the end, so he or she can burp any air that has been swallowed. Sit the baby in your lap so he or she leans slightly forward, supported with one hand. Rub or pat his or her back with the other hand. Traditional over-the-shoulder burping works well, but a "wet" burp may leave you with formula down your back.

Pacifiers

Babies have a strong need and desire to suck. Some babies are satisfied by the amount of sucking done at feeding time, while others require more. Most premature infants enjoy sucking on pacifiers. Pacifiers may be used to help calm your baby as well as for your baby's own pleasure.

Pacifiers should never be tied around your baby's neck because it could choke him or her. Pacifiers should not be dipped in honey. Cases of infant botulism, a serious type of poisoning, have happened in babies because of honey infected with the "bug."

Only use a commercial pacifier—never use a homemade pacifier. Homemade pacifiers are dangerous. Never make a pacifier from a nipple and plastic collar or ring. Some babies can separate the nipple from the collar and choke on it.

A pacifier should fit your baby's mouth. If it is too long it might gag your baby. It should be flat enough to fit the palate and mouth comfortably. Small pacifiers are available in stores.

Using a pacifier is not bad. Babies enjoy the sucking activity and outgrow the need for it later.

Other types of milk

Cow's milk

- Nutritionally unbalanced for babies under 12 months
- Contains too much protein for your baby's developing kidneys
- Contains a higher level of minerals such as phosphorus, calcium and sodium than breastmilk or commercial formulas
- Does not contain adequate amounts of Vitamins C and E, copper or iron
- Blood loss in stools due to cow's milk is believed to be responsible for much of the iron deficiency anemia in infancy

Skim and 2% milk

- Have no place in the diet of infants under two years of age
- Supply too much protein and salt
- Do not provide enough fat, which carries the essential fatty acids and fat soluble vitamins
- Do not provide baby's caloric needs

Raw milk

- Does not contain adequate amounts of Vitamins A, C and D and iron
- If not home-pasteurized, may contain harmful bacteria
- Inspection does not guarantee safe raw milk

Evaporated milk

- Low in Vitamin C, iron and fluoride
- Not recommended for infants under 12 months

Condensed milk

- High in sugar
- Not recommended for infants of any age

Solids

For the first 12 months of life the best diet is breastmilk or infant formula. Use the "corrected" age for premature infants. After the first six months formula should still remain the major source of nutrition. If your baby takes more than 32 ounces of formula in 24 hours for more than a week, your baby's doctor may begin solids early.

Solid foods may be started around six months of age. Given too early, solid food may contribute to obesity, provide more salt than a baby's system can easily handle and/or cause an early food allergy. Solid foods do not help your baby sleep through the night.

General guide for feeding baby throughout the first year
(Full-term newborn)

Birth to four to six months

- Breastmilk or formula
- Amount will increase from two to three ounces to six to eight ounces per feeding
- Feedings will decrease from six to eight to four to five per day as baby begins to sleep through the night

Four to six months through nine months

- Breast milk or formula should be the primary source of nutrition
- The amount will remain at six to eight ounces per feeding
- The number of feedings will decrease to four to five a day
- Baby should start to drink some liquids from a cup
- Solid foods may be added to baby's diet as recommended by your baby's doctor
- Individual foods should be introduced one at a time to determine tolerance of each food
- Cereal should be spoon fed and not placed in the bottle

10 months through 12 months

- Breastmilk or formula should continue to be the primary source of nutrition
- The amount of formula will be about six to eight ounces three to four times a day
- Solid foods introduced earlier should continue to be fed
- Additional foods such as cottage cheese, toast, soups and other soft table foods may be introduced

Weight gain and growth

Generally, babies gain approximately a half to one ounce of weight daily. There may be some days when your baby does not gain weight at all, but will gain more the next day. A healthy, premature baby whose intake is good and who was the right size for the time he or she was born can be expected to grow at the same rate as a full-term baby of the same "corrected age." Normal size for age is usually reached at about 10 months after the time your baby should have been born.

The preschool child who was a very low birth weight baby (less than 1500 grams or three and a half pounds) may tend to be slender although normal height. The baby born small for his gestational age may tend to remain small during childhood.

The very ill premature baby born with the appropriate weight may have very rapid catch-up growth at six to nine months corrected age. If the growth continues, his or her size will continue to increase. If the growth slows, the child may remain small.

Feeding problems

Spitting

- Premature infants tend to spit more than full-term newborns. The "valve" or opening between the esophagus (tube that connects the mouth and the stomach) and the stomach is not tight, so he or she tends to spit up small amounts with feeding and burping. If spitting becomes a serious problem, your baby may be tested for gastro-esophageal reflux (called G-E reflux or reflux).

Reflux (gastro-esophageal reflux or G-E reflux)

- Reflux means formula comes up from the stomach into a part of the esophagus (tube that connects the mouth and stomach). Reflux may cause vomiting, apnea (short periods when your baby does not breathe) or result in failure of your baby to gain weight. If your baby has reflux, the doctor may recommend placing him on their stomach or right side after feeding, raising the head of the bed slightly or thickening the formula with cereal. Reflux usually slowly improves and finally disappears at three to four months corrected age in some babies and not until nine to 12 months in others.

Colic

- Colic is unexplained bouts of crying, often with stomach fullness or stomach spasms. It does not mean that your child is ill. Your baby may stiffen his or her legs, scream loudly, pass gas or vomit. Colic frequently occurs at the same time of the day, typically during the evening hours.It generally lasts for up to three months corrected age. Constant crying is one of the most trying of the symptoms of colic.
- Colic is not caused by incorrect feeding methods and changing your baby's formula usually has no effect.
  Often no cause can be found. Some experts feel this crying is a way for baby to "let off steam" after a lot of stimulation throughout the day.
- Suggestions that may help your baby include frequent burping, putting a warm towel or blanket under your baby's stomach (be careful not to burn the baby), walking or rocking the baby, wrapping the baby warmly and snugly, laying him or her on his or her stomach and keeping him or her in a quiet place (dim lights and low noise).
- There are no drugs that cure colic. Drugs often prescribed for colic are supposed to relieve spasms of the intestinal muscles and/or are sedatives. Often they do not work. We do not recommend using drugs with babies unless there is evidence they are safe and effective. If there were a miracle drug, we would use it.
- Call the doctor if...
  - baby's appetite suddenly decreases for several feedings and your baby seems uninterested in the breast or bottle.
  - vomiting continues.
  - vomiting is forceful.
  - vomit is green.

Vitamins

If your baby weighs less than 2500 grams or five and a half pounds and is taking less than 16 ounces of formula in 24 hours, the doctor may order extra vitamins. Formula provides enough vitamins once your baby takes a quart (32 ounces) every day. Premature babies usually drink a quart of formula around the time they are six to eight months of age. The usual dose of multiple vitamins is one dropperful daily. Mix vitamins in a little formula so they do not taste so strong.

Iron

Babies grow very fast during their first year and need iron to grow. All babies need iron for proper brain growth and development. Without enough iron, babies may develop iron deficiency anemia (low blood count). Premature infants who are bottlefed are usually discharged from the hospital on formula with iron (iron fortified). Iron in the formula is not the cause of colic, constipation or spitting up. Some babies will be sent home on additional iron drops if they are feeding less than 16 ounces of formula a day.

Fluoride

When it is close to the time for your baby to go home, the doctor may start your baby on fluoride drops.
If the local water supply has less than 0.3 parts fluoride per million parts water (ppm), your baby needs fluoride supplement (0.7-1.2 ppm is considered best). Your local doctor or health department will have this information.

If you use bottled water or well water, your baby needs fluoride drops. The American Dental Association suggests fluoride supplementation until 13 years of age. Breastfed babies may be discharged on fluoride drops.

My Baby

FORMULA:

ADDITIVES:

AMOUNT OF FEEDING:

FEEDING TIMES:

BIRTH WEIGHT:

DISCHARGE WEIGHT:

VITAMINS/FLUORIDE:

IRON:

How to Make Formula

My baby drinks _____brand of formula.

I buy: *(circle the type)*

Concentrate	**Powder**	**Ready-to-Feed**
Mix with water	Mix with water	DO NOT add water

This is what I do when I make formula:

- ✔ Check the expiration date on the formula can.
- ✔ Wash my hands, bottles and nipples with warm, soapy water and rinse thoroughly.
- ✔ Boil water for five minutes if water is not from a city system and let cool before mixing with formula.
- ✔ Mix 13 ounces of concentrate with 13 ounces of water = 26 ounces of prepared formula.
  For standard infant formula, 13+13=26 oz. prepared formula
- ✔ For Neocare formula, mix three level scoops of powder with five ounces of water = 5.5 ounces of prepared formula.
- ✔ Pour 32 ounces of ready-to-feed (no water) into clean bottles = 32 ounces of prepared formula
- ✔ Store formula in a clean, covered container or in bottles.
- ✔ Refrigerate formula after making it.

Tips to remember

- Formula left out of the refrigerator grows germs. Using formula which has been left at room temperature for more than two hours may make your baby sick.
- Infant formula or breastmilk has everything your baby needs to grow and be healthy.
- Using a microwave oven to warm a bottle of formula is dangerous. The bottle may feel warm but the formula may be hot enough to burn your baby.

How do I know my baby is getting enough?

Babies cry sometimes because they are hungry and sometimes for other reasons. Not all crying means your baby is hungry. Your baby is probably hungry when he or she:

- Puts his or her hand to his or her mouth to suck
- Makes sucking noises or movements
- Holds a tight fist over his or her stomach and cries

_____ I have noticed my baby doing these things.

Your baby is probably full when he or she:

- Refuses and/or lacks interest in the bottle or breast
- Relaxes arms alongside body or falls asleep

_____ I have realized my baby was full by noticing these signs.

Check the signs you see in your baby:

- My baby is gaining weight.
- My baby is having at least six wet diapers in 24 hours.

These are signs that your baby is getting enough.

Feeding Schedule for Newborn to Four Months Old

Age	Breastmilk	or	Formula
less than one month	every 1 1/2 -3 hours	or	2-3 ounces every 2-3 hours
one to three months	every 2-3 hours	or	4-5 ounces every 3-4 hours
four months	every 3-4 hours	or	6-8 ounces every feeding

Reminders

- Infant formula or breastmilk has everything your baby needs to grow and be healthy until four to six months of age.
- When your baby turns four months, begin watching for signs that he or she is ready for rice cereal.

State of North Carolina, Department of Environment, Health, and Natural Resources

Bathing the Baby

When to bathe the baby

You do not need to bathe your baby every day as long as the diaper area and skin folds are kept clean. Bathing may also be used as a comfort measure. Babies often cry and act startled when placed in the water for their bath. Premature infants who startle easily and have tremors seem to fuss more when their clothes are removed and they are placed in the water. This will improve as your baby matures and becomes older.

Bathe your baby anytime that is convenient for you. Before feedings is usually a good time since most babies fall asleep shortly after eating. If your baby has trouble feeding, it may be better to wait and bathe him between his feedings.

Bath supplies

- Washcloth
- Towel for drying
- Large towel to place baby on
- Mild soap and shampoo
- Clothes
- Diaper
- Basin or tub

How to bathe the baby

There are two ways to bathe your baby: sponge bath or tub bath. Gather all the items you need for the bath and place them so you can reach them. Make sure the room you are bathing your baby in is warm—at least 75°F. You may want to turn up the heat in the room! **Do not leave baby unattended at any time.**

Sponge Bathing

- You may give a sponge bath on a bed, a counter or on a table. If using a hard surface, you will want to place something waterproof and padded under the infant.
- Wash your baby's face and scalp with a washcloth and clear warm water. (The scalp and hair can be shampooed every other day. More frequent shampooing may increase the chance of developing cradle cap.)
- Lightly soap the rest of your baby when and where needed with the washcloth or your hand. You may want to wash, rinse, and dry small areas at a time. This helps keep baby warm.
- Wipe the soap off by gently going over the body several times with the rinsed washcloth, paying attention to creases.

Tub Bathing

- Before starting the bath gather everything you will need. Bath can be given in a washbowl, dishpan, kitchen sink or baby tub placed on a table. It is more comfortable if you can bathe your baby at your level.
- The water should be comfortably warm, not too hot or cold. First test the water with your elbow or wrist.
- Use a couple of inches of water in the tub until you get used to handling your baby. A tub is less slippery if you line it with a towel or diaper.
- Hold your baby so his or her head is supported on your wrist with the fingers of the same hand holding him or her in the armpit.

- Wash the baby's face with a washcloth without soap, then his or her scalp. The scalp needs to be shampooed only once or twice a week. Rinse the scalp with a damp washcloth several times. Take care not to get soapy water in your baby's eyes.
- Soap the rest of your baby's body, arms and legs using the washcloth or your hand. If the skin becomes dry, don't use the soap except once or twice a week.
- Wash only the outer ear and the entrance to the ear, not inside. Wax is formed in the ear to protect and clean it. Do not clean nostrils or ear canals with cotton-tipped swabs.
- If you are afraid of dropping your baby, soap him or her on the table and rinse them off in the tub.
- Use a towel to pat dry.

NEVER TAKE YOUR HANDS OFF THE BABY DURING THE BATH.
NEVER LEAVE THE BABY UNATTENDED.

Lotions and powders

Babies do not need additional lotion, oil, cream or powders on their skin. Often these products result in rashes. Oil should not be placed on the hair because it frequently leads to seborrhea—a condition like dandruff. Powders should be avoided as well because they can get into your baby's breathing passages. Skin and urinary tract infections have been linked to use of powder.

Other bathing hints

- If your baby has cradle cap (flaky scalp—especially over the soft spot), use a soft toothbrush or baby brush to clean the scalp and brush scalp daily with a baby brush.
- Use a mild soap.
- The circumcision area should be healed before a tub bath is given.
- Sponge baths are usually given until the umbilical cord falls off and heals.

Care of your Newborn's Penis

Circumcision

Circumcision is the removal of the foreskin from the tip of the penis so the head of the penis is exposed. Complications of circumcision include excessive bleeding, infection, pain and surgical injury to the penis. You can request local anesthesia for your baby to prevent pain. Parents should discuss their options and reasons for having a circumcision performed on their baby.

Circumcision care

- Little special care of the circumcised penis is necessary. Rinse the circumcision area at each diaper change by squeezing warm water over the tip of the penis. You may use Vaseline® on the tip of the penis with each diaper change for the first few days after the circumcision. This may prevent the circumcision site from sticking to the diaper. After the circumcision is healed you can bathe your baby in a tub without fear of harming the circumcision or penis.
- There should be no bleeding. The head of the penis may show signs of irritation and appear whitish or yellowish in places as it heals.
- If used, the plastibell will fall off in 3-5 days. The rim of skin in front of the string will turn black and come off with the bell. Do not pull the plastibell even if it is barely on—the plastibell will come off by itself. You will probably find it loose in your baby's diaper. Do not use Vaseline® with the plastibell.
- If Gelfoam is used, it also should be allowed to fall off by itself.
- Call the doctor if the penis becomes excessively red or swollen, or has unusual drainage that is green or smelly, or if your baby does not pass urine for longer than eight hours.

Care of the uncircumcised baby

Care of the uncircumcised boy is quite easy. Washing and rinsing your baby's genitals (private parts) daily is all that is needed. Do not pull back the foreskin (skin covering the tip of the penis) in an infant. Forcing the foreskin back may harm the penis, causing pain, bleeding and possibly scar tissue. The natural separation of the foreskin from the tip of the penis may take several years. When the boy is older, he can learn to pull back the foreskin and clean under it daily.

Dirty Diapers

Voiding (making urine)

Babies wet their diapers almost hourly. However, most of the time they are changed around feeding times, when they wake in the morning and when you put them down at night. Your baby's diaper should be very wet six to eight times in 24 hours. If the urine is dark and your baby has not wet his or her diapers six to eight times a day, he or she may not be getting enough formula or breastmilk. Notify the doctor. Babies become dehydrated (lose water and fluid) quickly. Babies who are sick do not eat well and do not wet their diapers as often.

Stools or Bowel Movements

Babies' bowel movements (BMs) are usually either yellow or dark brown in color by the time they go home. Frequency and color are related to individual differences and type of milk. Some babies have a BM with every feeding and some have a BM every day or two. Do not worry about the time between BMs unless the stool is like small hard pebbles and/or the time since the last BM has been three to four days. It is normal for babies to grunt, strain and turn red when having a BM. This does not mean they are constipated!

Constipation

If your baby's stools are like little pebbles, he is constipated. The formula is not the cause of constipation. Iron in the formula is not the cause of constipation. Call the doctor if your baby is having frequent problems with his BMs and check with your baby's doctor before using Karo® syrup, Maltsupex® or any suppositories. If the problem continues for several days or your baby cries for a long period when having a BM, call your doctor. If your baby has infrequent BMs but is eating well and does not seem uncomfortable, do not worry.

Diarrhea

Diarrhea is a large increase in the number of BMs your baby usually has, or stools that become looser in consistency. Normal BMs are soft with some form or are mushy/pasty. Diarrhea is watery stools or stools with a water ring around them. Diarrhea can be a symptom of illness or food intolerance. Babies dehydrate (lose fluid and water) easily and quickly with diarrhea. If your baby has frequent watery stools in a short time (six to eight hours), call your baby's doctor. He may stop the formula and have you feed your baby a special clear liquid that gives your baby minerals. You can buy it in most grocery stores.

Signs of dehydration

- Dry mouth or thick saliva
- Small amounts of dark urine in diaper
- Soft spot (fontanel) on head sinks in when baby is held upright or in sitting position
- Skin forms a "tent" when pinched and stays pinched up
- Dark circles around baby's eyes
- Baby may be fussy, sleepy, not hungry or difficult to wake up

CALL YOUR BABY'S DOCTOR IF THE BABY HAS ANY OF THESE SIGNS.

Outings

When to take baby out

Your baby can be treated mostly like a regular newborn. The following guidelines may be helpful in knowing where you may take your baby, especially during the first few months:

- Avoid outings when the weather is rainy, windy or exceptionally cold or hot. Try to keep your baby away from adults and children with colds or other illnesses.
- Dress your baby according to the weather. As a guideline, dress your baby with about the same type of clothing that you are wearing. Be careful not to overdress your baby. On days with the temperature above 80ºF a blanket is usually not necessary. Avoid direct sunlight.

Places to take the baby

- You can take your baby "out" but limit your trips to around your house/block, the porch, homes of close friends and relatives and doctors' visits.
- Avoid places with large crowds (grocery stores, church, shopping malls, etc.) during the first months. It is difficult to control well-meaning people who want to look and touch your "cute little baby."

Visitors at Home

Visitors

Many friends and relatives want to visit you when your baby is finally home. They will want to hold, coo and shower him or her with love and affection. These friends and relatives are well-meaning but may bombard you and your baby with too much help. Ask friends and relatives with any illness in their family not to visit and ask them to look but not to touch, wake or handle your sleeping baby.

Handling the baby

- Wash hands before touching baby.
- Only parents and immediate family (or very close friends) should handle your baby the first few weeks at home. After all, you have been separated from your baby for long enough. You need to get to know each other.
- Handling by a lot of people tends to affect your baby's feeding and sleeping schedule—especially after everyone has gone home. Babies may also become fussy after being handled excessively or passed between different people. They are very aware of the changes
- Use the statement "Dr. ___ said only a few people should handle the baby the first month." It helps make you not look overprotective or feel badly.

Smoking

For your infant's health, there should be no smoking in the house or around the baby. If you or a family member smokes, this may be a good time to try to quit or cut down. Smoking cessation programs are available through the hospital or health department (check with your baby's nurse).

Temperature of Your Home

Your baby has been able to stay warm without help from an incubator or special beds for some time. Babies do not sweat or shiver to help maintain their normal temperature. There is no need to keep your house as warm as the intensive care nursery! Below are some guidelines that may help until your baby is six to eight pounds and more robust.

- Keep the house temperature in low-to-mid 70ºF range.
- Keep baby out of drafts, away from windows, fans and air conditioners.
- Look and touch baby to tell if he or she is hot or cold.
- Signs of temperature problems may be: cool hands and feet or pale, mottled-blue color.
- Do not leave your baby unprotected in the direct sun. Keep your baby covered and check with your doctor before using sun block lotion on your baby's skin when outside.
- On particularly warm days your baby may need extra breastmilk or formula.

Dressing the baby

- Dress your baby the way you feel comfortable.
- When less than seven pounds, dress baby with a knit cap and booties when the air is cool (babies lose heat from their heads).
- Clothes that fit close to the skin are more warming than loose clothing.
- Do not overdress your baby!

Fussy Babies

What can I do if my baby has increased fussiness, increased activity or trembling/shaking?

Try one or more of the following:

- Turn down the lights
- Reduce the noise around the baby (radios, TV, loud talking)
- Hold infant close
- Rock infant slowly (most babies like to be held straight up and down)
- Use a “snuggle” or front pack to secure the baby close to you
- Give baby a pacifier
- Provide background noise (fan, hair dryer, vacuum cleaner, etc.)
- Provide firm, calm touch to the mid-chest, back or feet of the baby
- Give infant a warm, soothing bath
- Touch trembling body part firmly and calmly—this will help the trembling stop
- Watch for signs of baby tiring and decrease stimulation

My baby has difficulty going to sleep—has irregular sleeping patterns - What can I do?

Try one of the following:

- Darken the room
- Keep noise level low (radios, telephones, TV, conversation)
- Keep baby’s bed away from noisy areas
- Give your baby a pacifier
- Avoid bouncing or jiggling your infant before bedtime
- Speak in a soft voice
- Play soft, soothing music, hum or turn on a vacuum
- Rock baby gently and slowly
- Swaddle baby in a soft blanket
- Avoid waking up sleeping infant unless for feeding
- Give your baby a warm bath prior to bedtime
- Take your baby for a stroller ride or car ride
- Don’t talk to infant when feeding especially during nighttime feedings

How can I help my baby when he or she becomes stiff or rigid in the arms and legs?

Your baby needs to be relaxed so he can move his arms and legs to explore the environment.
Try one or more of the following:

- Bathe baby in warm water
- Try gentle, calming massage
- Don’t place your baby on his or her back (except when sleeping), as this often causes arching. Instead put baby on his or her tummy to encourage development of flexion (muscle movement that helps your baby bend).
- Don’t use a walker, as this increases the stiffness of the legs
- Discourage standing baby on your lap
- Carry or hold the baby in a semi-reclining position with shoulders forward
- Use an infant carrier to support your baby in a semi-curled position that will allow him or her to get his or her arms to midline (center of body). This is important so baby will be able to learn to bring his or her hands together or to the mouth.

What can I do when my baby avoids eye contact with me or has difficulty focusing and doesn’t enjoy playing with me?

Your baby is more likely to respond to you when he or she is awake with eyes open, not actively moving and quietly alert. While adults can talk, listen, see and move all at the same time, your baby may not be able to handle all this. Swaddling your baby in a blanket may help him or her to become quiet. Your baby will be more likely to watch your face or listen to you when you hold him or her upright (12-18" from your face).

There is a wide range of “normal” development. You need to encourage your baby to develop head control and to develop balance between muscle groups. This will allow your baby to learn to roll, sit up, crawl and walk. Play with your baby in a variety of positions. It is important for your baby to spend time on his or her tummy developing muscle strength and coordination. Placing your baby in a standing position too early may make the muscles which straighten the legs too strong. This may slow down his or her ability to sit by him or herself and to creep. Constant wiggling in jump seats and walkers may distract your baby from using emerging hand and eye-hand skills.

What can I do for my baby—he or she is a poor feeder, often spitting up or vomiting? My baby also has a poor suck.

- Hold baby in a sitting position, slightly curved during the feeding
- Keep infant’s chin tucked downward so head and neck are not tilted back
- If sucking is difficult for baby, support the infant’s chin and both cheeks with your hand to increase the baby’s sucking ability.
- Play soft, rhythmic music. Rhythmic music may help your baby get into a steady suck swallow pattern.
- Offer frequent, small feedings
- Feed your baby in a quiet, dimly lit room
- Feed slowly and burp frequently
- Hold bottle upright to avoid air bubbles

Acknowledgments: Operation PAR. St. Petersburg Florida, Dan Griffith, PhD. Developmental Psychologist, NAPARE, Chicago Illinois, Therapy Skill Builders POSITION STICKERS, Tim Healy, MS. RT. Infant and Child, Developmental Specialist, Santa Anna California, Texas Children’s Hospital Helen Harrison, The Premature Baby Book

Illness

Signs of Illness

All babies get ill. This does not mean that you did something wrong! You should become aware of any signs that may alert you that your baby is sick. Some signs that may indicate illness include:

- Your baby does not feed as well as normal. The baby may not seem hungry and may not take as much of the feeding as normal.
- Your baby vomits, with force, all or most of the feedings.
- Your baby has frequent, watery stools (has more stools than usual and they are very watery) that are green, bloody, foul smelling or have mucus in them.
- Your baby does not pass as much urine as usual (fewer wet diapers)—no wet diaper in eight hours. He or she should have at least six to eight wet diapers in a 24-hour period.
- Your baby cries more than usual or appears more irritable. The baby cannot be calmed and comforted easily by your usual means. Your baby may refuse to sleep.
- Your baby does not seem as active as usual. He may sleep more or may be difficult to wake.
- Your baby may have trouble breathing (breathes faster and harder and may draw in chest muscles with each breath or may have noisy breathing).
- Your baby may have fever. Contact the doctor if your baby's temperature is over 101ºF (rectal) or 100ºF axillary (under arm) in a 24-hour period and there are other signs of illness.
- Your baby's color may appear pale, bluish or marbled-looking.
- Unusual rash or skin irritation.

CALL THE DOCTOR IF: your baby appears sick or starts to act differently to you. It is best to have your baby checked or to receive the advice of the doctor.

The Choking Baby

Preventing choking

Choking can be prevented most of the time. Follow these guidelines to prevent choking:

- Do not prop the baby's bottle.
- Do not give children under four years of age peanuts, popcorn or foods on which they may choke.
- Baby's toys should not have small parts that can break off.
- Baby should not be able to get to small objects like marbles, jacks, etc.
- Jewelry should not be placed on babies or children under four years of age.

How the choking baby acts

- The baby may make gasping movements but not make any sounds.
- The baby may turn blue.
- The baby may cough and gag.
- The baby may recover from choking, but continue to wheeze or cough.

What to do if baby chokes

1. Look inside the baby's mouth to see if there is an object.
2. Remove the object; do not try to find it with your finger if you can not see the object. This may push it in farther.
3. If the baby cannot breath, cough or is turning blue, turn him or her face down with his or her head lower than the body. Be sure to support his or her head.
4. Give the baby five back blows with the heel of your hand between the shoulder blades.
5. Turn the baby over and give five chest compressions. Place your index and ring fingers one finger below the nipple line on the breastbone. Press 1/2 – 1/3 of the depth of the chest—same as you do for CPR.
6. Repeat the back blows and chest presses until the object comes out or the baby becomes unconscious (passes out).
7. If the baby loses consciousness (passes out), position the baby on a hard, flat surface with the tip of the nose straight up and holding his or her jaw forward. Give the baby two slow puffs with the air in your mouth.
8. If the chest does not move with the puffs, turn the baby over and give five back blows. Then turn the baby over and give five chest compressions.
9. Look in the baby's mouth and if you can see the object and remove it.
10. Repeat steps seven through nine until the baby's airway is clear and he or she is breathing. You need to call for medical help if the baby does not recover in several minutes or becomes worse.

Call the doctor...

- If the choking episode has been serious and lasted a long time.
- If the baby continues to cough or wheeze (the object is probably still blocking airway). Get medical help quickly for the baby!

Safety

Jewelry

Each year, many infants and toddlers die due to suffocation from breathing small objects into their breathing passages and lungs. Infants and toddlers should not wear jewelry of any kind. Necklaces, baby rings, bracelets, religious pins and pacifiers on strings are dangerous to the child's safety. Pierced ears are not recommended for children until they are at least four years of age. Earrings can cause:

- Infections
- Pressure sores on the head and ears because the baby is unable to turn and lift his or her head
- Scar formation on the ears from the earring backs
- Suffocation due to the baby breathing parts of the earrings into his or her lungs

Cribs

Your crib and other baby furniture should meet the standards of the Consumer Product Safety Commission. Cribs should have:

- Slats not more than two inches apart
- No crossbars on the sides
- Corner posts less than 5/8 inches high
- Sides, when at their lowest point, are not more than four inches above the mattress
- No cutouts in the head or footboards where the baby could trap his or her head
- Rail height at least 22 inches from top of railing to mattress at its lowest level
- A firm mattress the same size as the crib so there are no gaps to catch arms or legs
- A locking, hand-operated latch on sides that is secure from accidental release
- Wood surfaces free of splinters and cracks, and have lead-free paint

Please refer to the section on safe sleeping for additional tips to keep your baby safe.

Car Seats

All infants MUST ride in approved car seats when traveling according to North Carolina law. Infants should ride facing the rear of the car until they weigh over 20 pounds and are at least one year old. Please contact the Highway Patrol or Police Department in your area for specific information.

Toys

Toy size should be at least 11/4 inches by 2 1/2 inches and should not have buttons, beads or objects on them that can be pulled off and swallowed.

Bathing

Please refer to the section on bathing your baby for tips. It is important to remember to never leave the baby alone in the bathtub or around any water, keep the water level in the tub less than three inches, always check the temperature of the bath water before placing the baby in the tub (set the water heater lower than 120ºF to prevent accidentally burning the baby) and hold the baby with one hand and wash him with the other. **Never let go of the baby.**

Humidifiers

Your doctor may recommend using a cool mist vaporizer/humidifier for your baby's stuffy nose. For safety, you should always use cool mist.

Kitchen

- Do not pour hot liquids when holding a baby or when a baby is close to you.
- Do not hold a baby when working at the stove.
- Do not heat bottles in the microwave. The formula may become too hot and burn the baby, even when the bottle feels cool to touch. Also, steam may form inside the bottle and cause it to explode.
- Use the back burners on the stove.
- Pot and pan handles should be turned toward the back of the stove.
- Cover the controls if they are on the front of the stove.
- Do not use tablecloths. Infants and toddlers can pull at them.
- Have a fire extinguisher in the kitchen.
- Avoid the following foods for the first four years: peanuts, popcorn, round pieces of hot dog, hard candy, gum and whole grapes.

General Safety

- Keep toilet seats and tops of aquariums closed securely.
- Keep infants away from buckets of water.
- Do not ever leave a baby in the direct sun.
- Do not leave the baby in a parked car.
- Wash flame-retardant clothing according to the labels directions.
- Place the baby on his or her back or side after feeding.
- Do not make pacifiers from nipples or rings. Use store-bought pacifiers so the baby will not be in danger of choking.
- Use safety straps on infant seats, high chairs, strollers and infant carriers every time.
- Use safety gates at the top and bottom of stairs.
- Cover all unused electrical outlets.
- Do not let a baby chew on electrical cords. Check regularly and repair any cord that is broken.
- Keep all medicine and cleaning supplies out of baby's reach, locked up and in its original container.
- Do not leave children under the age of six alone with the baby.
- Be careful when walking with a baby in your arms. Avoid rugs and mats on slippery floors.
- Use safety catches on cabinet doors when the baby begins to crawl.
- Do not use plastic bags on the baby's mattress or pillow and store plastic bags away from the baby.
- Install smoke detectors on every level of your home. Test batteries monthly; replace yearly.
- In case of fire or emergency, plan an escape route and decide on a place to meet.
- Post Poison Control telephone number (1-800-222-1222) near the telephone and keep a one-ounce bottle of Syrup of Ipecac with your other medicines.

Infant Abduction Prevention

In the Hospital

- Be aware of hospital security measures.
- Wear your bracelet until your infant is discharged. If unable to wear your bracelet, keep it with you at all times.
- Infants are transported in isolettes or bassinets.
- All hospital employees have name badges and should be wearing them.
- Never leave an infant unattended, even for a few minutes or to use the bathroom.
- Never give your infant to anyone without proper identification.
- Know the hospital's visitation and telephone policies for obtaining information about your infant.
- Know the hospital staff and ask questions if something does not feel right.
- Report any unusual behavior, like someone asking questions about the infant or hanging around the nursery for no apparent reason, to hospital employees.

At Home

- Never leave your infant unattended.
- Never leave your infant or child in a car alone for any reason.
- Know who is caring for your child:
  - Get background information.
  - Require references.
  - Interview candidates/childcare settings. Do not leave your infant alone with the childcare provider During the interview.
- Be careful about public birth announcements (newspapers, yard art, Internet, etc.) for giving too much personal information.
- Keep your eyes on your infant when in public.
- Only allow people who you know very well into your home.

Home Safety Checklist

Using this checklist, go through your home and make it a safe place for your child to live!

Child's Room	**Safe**	**Unsafe**
Does the crib mattress fit so there is no more than two fingers distance between the crib and the mattress?		
Are the slats on the crib less than two inches apart?		
Is the crib far enough away from a window, curtains or blinds?		
Are screens secured on the windows and are curtain pull cords out of the reach of your child?		
Do you keep small objects, such as safety pins, buttons or scissors out of the reach of a child?		
Do you avoid hanging toys across the crib or on the crib post?		
Do you buy only children's flame-resistant sleepwear?		

General Safety	**Safe**	**Unsafe**
Are the exits from your house unobstructed (not blocked)?		
Are all space heaters, kerosene stoves or wood-burning stoves in good working condition and out of reach to your child?		
Are all plants kept out of child's reach?		
Are all unused electrical outlets covered?		
Are all electrical cords in good condition and beyond the child's reach?		
Do you have a working smoke detector in a hallway outside sleeping areas and test the batteries once a month?		
Do you have Poison Control Center's phone number by your phone?		
Do you have Ipecac at your home?		
Are matches, cigarettes and lighters kept out of a child's reach?		
Do safety gates at the top and bottom protect all stairways?		

Kitchen	Safe	Unsafe
Are hot foods and/or hot liquids kept out of a child's reach?		
Are cleaning supplies/household products kept in original containers?		
Are cleaning supplies kept out of a child's reach or locked?		
Are foods stored separately from cleaning supplies?		
Are all knives and sharp objects kept out of a child's reach or locked up?		
Are electric appliance cords out of reach?		

Child's Room	Safe	Unsafe
Are all medicines and vitamins properly capped with "child-proof" caps and kept out of child's reach or locked?		
Are cleaning supplies/household products kept in original containers and kept out of reach or locked?		
Are all perfumes, shaving cream and/or cosmetics stored out of reach?		
Is your home's hot water heater temperature adjusted to 120ºF or below?		

Comments/concerns:

Questions about your home safety?

Adapted from information provided by the Office for Prevention, N.C. Department of Environment, Health and Natural Resources

Safe Sleeping

While your infant is in the NICN he or she will be positioned so that it benefits their development. During your infant's stay in the hospital, your nurse will be transitioning your infant to a back-lying position. At discharge the goal is to have your infant comfortable sleeping on his or her back.

To prevent infant deaths due to soft bedding, the U.S. Consumer Product Safety Commission, the American Academy of Pediatrics, and the National Institute of Child Health and Human Development are revising their recommendations on safe bedding practices when putting infants down to sleep. Here are the revised recommendations to follow for infants under 12 months:

- Place baby on his or her back on a firm tight-fitting mattress in a crib that meets current safety standards.
- Remove pillows, quilts, comforters, sheepskins, pillow-like stuffed toys and other soft products from the crib.
- Consider using a sleeper or other sleep clothing as an alternative to blankets, with no other covering.
- If using a blanket, put baby with feet at the foot of the crib. Tuck a thin blanket around the crib mattress, reaching only as far as the baby's chest.
- Make sure your baby's head remains uncovered during sleep.
- Do not place baby on a waterbed, sofa, soft mattress, pillow or other soft surface to sleep.

Placing babies to sleep on their backs instead of their stomachs has been associated with a dramatic decrease in deaths from Sudden Infant Death Syndrome (SIDS). Babies have been found dead on their stomachs with their faces, noses, and mouths covered by soft bedding, such as pillows, quilts, comforters and sheepskins. However, some babies have been found dead with their heads covered by soft bedding even while sleeping on their backs.

Acknowledgments:
U.S. Consumer Product Safety Commission
www.cpsc.gov
1-800-638-2772

American Academy of Pediatrics
http://www.aap.org/

National Institute of Child Health and
Human Development
"Back to Sleep" Campaign
1-800-505-CRIB

Dictionary

A

A & Bs: apnea and bradycardia

Ambu Bag: a piece of respiratory equipment; used with a face mask and placed over baby's nose and mouth, or attached to ET tube or trach tube; squeezed to give the baby oxygen and inflate the lungs.

Anomaly: malformed body part

Anoxia: lack of oxygen

Apnea: lack of breathing for 15 to 20 seconds

Areola: dark area of the breast around the nipple

Asphyxia: lack of oxygen and blood flow to the body

Aspiration: breathing fluid (formula, stomach contents, meconium—baby's first stool) or objects into the lung

B

Bacteria: germs which make you sick; treated with antibiotics

Bagging: squeezing the ambu bag covering the baby's nose and mouth to give him or her oxygen and inflate his or her lungs; also used with a breathing tube in the baby's throat (endotracheal tube) or a tracheotomy (special airway placed by surgeon)

Bilirubin (bili): breakdown product of red blood cells; too much in the blood causes jaundice, a yellow color of the skin

Blood Gas: a lab test to determine how much oxygen and carbon dioxide the baby has in his/her blood

ABG: arterial blood gas; drawn from a UAC or arterial line

CBG: capillary blood gas; baby's finger or toe is poked to draw blood for test

BP: blood pressure

Bradycardia: slow heart rate; usually less than 100 in a newborn or premature baby

Breech Delivery: baby is born bottom, feet or arm first

Bronchopulmonary Dysplasia (BPD): lung problem caused by oxygen, ventilators and prematurity

C

Candida Albicans (monilia or yeast infection): infection that causes thrush and other "yeast" infections; seen most often in baby's mouth or diaper area

Caffeine: medication given by IV or mouth to help stimulate breathing in premature infants

Carbon Dioxide (CO_2): gas breathed out when the baby exhales

Cardiologist: doctor who specializes in the heart and circulation of blood

Cardiopulmonary Resuscitation (CPR): method to revive a person whose heartbeat and breathing have stopped

Central Nervous System (CNS): the brain and spinal cord

Community Transition Coordinator (CTC): hospital employee trained to screen inpatient admissions for children under five years of age who have a congenital defect, known developmental delays or are at risk for developmental delays. This person refers these children and their families to community agencies for developmental follow-up and other needed services.

Computerized Axial Tomography (CAT Scan or CT Scan): computerized x-ray that takes special pictures of the baby

Complete Blood Count (CBC): blood test that looks at the types and number of cells in the blood; used to see if the baby has anemia (low blood) or an infection

Continuous Positive Airway Pressure (CPAP): air or oxygen delivered under a small amount of pressure to help an infant breath easier

Circumcision: removal of the foreskin from the penis
Cytomegalovirus (CMV): a virus the baby can get before birth that causes birth defects and illness; can also develop after birth and cause illness
Colostomy: surgical opening made in the large intestine which is connected to the outside of the belly to permit elimination of stool (BM)
Colostrum: thin yellow or clear breastmilk that is present before the true breastmilk comes in; high in calories
Congenital Abnormality: birth defect; malformation or abnormality present at birth
Congestive Heart Failure (CHF): heart is not able to pump blood well because of malformed heart, illness or infection
Corrected Age: length of pregnancy (gestational age) plus the baby's calendar age
Chest Physiotherapy (CPT): vibrating, tapping or clapping on the baby's chest with a hand or soft pad to loosen secretions or mucus in the lungs
Cerebrospinal Fluid (CSF): fluid made and stored in the ventricles of the brain; same as spinal fluid
Cyanosis: blue color of baby's skin, fingernails or inside of mouth and tongue; caused by a lack of oxygen

D

Diuretic: drug used to get rid of extra body water
Doppler: special blood pressure machine
Down Syndrome: chromosome abnormality (Trisomy 21) where the baby has varying physical problems and varying degrees of mental retardation
Diphtheria, Pertussis, Tetanus (DPT): one of the baby shots or immunizations
Dyspnea: difficult breathing

E

Early Intervention (EI): trained early childhood specialists working with parents of children with special needs to help these children to reach their full potential
Echocardiogram (echo): picture of the heart taken using a similar process as an ultrasound of your tummy (uses sound waves instead of x-rays)
Edema: swelling or puffiness
Electrocardiogram (EKG): tracing of the electrical impulses of the heart
Electroencephalogram (EEG): tracing of the electrical impulses of the brain
Electrolytes: chemicals in the body that make it function well; can be checked by drawing blood for lab work
Endotracheal Tube (ET tube): small plastic tube placed in the nose or throat and connected to a ventilator or breathing machine. The tube is in the baby's breathing passage (trachea) and delivers oxygen and pressure to the lungs.
ER: emergency room
Exchange Transfusion: removing most of the baby's blood in small amounts and replacing it with fresh blood in small amounts; most often used for a very high bilirubin level
Extra Corporeal Membrane Oxygenation (ECMO): process used to circulate a baby's blood in a special machine while the lungs rest. It is like a type of heart pump used on adults having heart surgery. Babies may stay on the pump for more than a week and will also be on a breathing machine.
Extubation: take out the endotracheal (breathing) tube (ET tube)

F

Family and Developmental Specialist (FDS): hospital employee, usually a nurse, social worker or early childhood interventionist, who works with families of children who qualify for early intervention while in the hospital. This person will develop with the family an Individualized Family Service Plan (IFSP).
Fontanel: soft spot on the top of the baby's head; another soft spot is toward the back of the baby's head
Fraternal Twins: twins formed from two fertilized eggs; they do not look alike. There can be a boy and a girl or two girls or two boys.
Full Term: baby born between the 38th and 42nd week of pregnancy or gestation

G

Gastrostomy: surgical hole on the tummy into the stomach; a tube is placed in the stomach to feed babies unable to eat by mouth
Gavage Feeding: feeding by a tube placed in the baby's nose or mouth into the stomach
Gestation: length of time from first day of mother's last menstrual period to the time of birth; full-term is 40-weeks gestation
Gram (gm, G, GM): weight in metric system; one ounce = 28 grams

H

Heel Stick: method to prick heel (finger stick is used also) to get blood for lab tests
Hematocrit (hct or "crit"): percent of red blood cells in the blood. Your baby may receive a transfusion based on the hemocrit.
Hematologist: a doctor who specializes in blood problems
Hernia:
inguinal hernia: lump under the skin in the groin or scrotum caused by the intestines pushing through a weak place in the belly wall; a common preemie problem; may be fixed by surgery before the baby leaves the hospital; may occur at home after discharge, if so, notify the baby's doctor
umbilical hernia: a pushing out of the navel or belly button caused by the intestines pushing through a weak place in the belly wall; usually goes away by the age of two; fixed by surgery after two to three years of age if still present
High-Risk Baby: baby at risk for developmental problems; includes babys with intracranial hemorrhages, birth weight less than 1200 grams, long term breathing machine (ventilators), less than 30 weeks gestation, small for gestational age babies, congenital infections, meningitis, birth defects, etc.
High Frequency Oscillatory Ventilator (HFOV): breathing machine that uses fast breathing rates for infants with special lung problems
House Officer or House Staff: doctors who are finishing their training; a resident or fellow
Hydrocephalus: extra spinal fluid in the spaces of the brain due to a blockage in circulation or absorption; head may become large
Hyperbilirubinemia: high bilirubin level (yellow jaundice); common in newborns. Some babies are placed under a special light (bili light) or blanket to help the body breakdown the bilirubin. The baby gets rid of the bilirubin in his stools (bowel movements).
Hypoxia: lack of oxygen

I

Identical Twins: twins that occur from the division of a single fertilized egg; they are the same sex and look alike
IDM: Infant of a diabetic mother
Ileostomy: surgical opening made in belly and the small intestine is brought to the outside to allow elimination of stool
Immunization: medicines given to protect the child against harmful childhood diseases; given by mouth or by shot
Inborn: baby born in the same hospital with a neonatal intensive care unit
Indomethacin: medicine given to close the patent ductus arteriosus (vessel outside of the heart that can make the baby's breathing and heart problems worse)
Intermittent Mandatory Ventilation (IMV): number of breaths per minute given by the ventilator
Intracranial Hemorrhage (ICH): bleeding in or around the brain
Intravenous (IV): tube or needle placed in the vein to give fluids, medications or blood
Intraventricular hemorrhage (IVH): bleeding into the ventricles in the brain
Intubation: placing a small tube in the baby's windpipe (trachea) to give oxygen and pressure by an ambu bag or breathing machine
In Utero: inside the womb or uterus
Isolette: an incubator (plastic box) the baby is placed in to keep him warm while he grows

J

Jaundice: skin and whites of the eyes become yellow; caused by a high bilirubin
Jet Ventilator: special breathing machine that uses fast rates to breathe for babies who have special lung problems

K

Kilogram: unit of weight in the metric system; 1kg = 2.2 pounds; 1kg = 1000 grams

L

Lactation: making milk in the breast
Lactose: sugar in breastmilk or formula
Lasix: medicine that helps get rid of extra body water; a diuretic
Letdown Reflex: flow of milk into the nipple
LPN: licensed practical nurse
Low Birthweight Infant (LBW): baby who weighs less than five pounds at birth; can be premature or full-term
Lumbar Puncture (LP, spinal tap): procedure where a hollow needle is inserted between the bones in the back to withdraw spinal fluid

M

Meconium: baby's first bowel movement; green-black color and sticky; sometimes baby has a stool while in the uterus before birth
Meconium Aspiration: breathing the meconium and amniotic fluid into the lungs
Meningitis: infection of the lining of the brain and spinal cord
Meningocele: birth defect where the tissue lining the brain and spinal cord come out through an opening in the skull or spinal column
Milliliter (ml): unit of volume; 5ml = 1 teaspoon; 30ml = 1 ounce
Mucus: sticky material made in the nose and throat
Murmur: swishing sound made by blood flowing through the heart; many heart murmurs are not associated with problems

N

NPO: nothing by mouth
Navel: belly button; umbilicus
NBICU or NICU or NICN: Newborn or Neonatal Intensive Care Unit
Necrotizing Enterocolitis (NEC): an infection of the intestines which sometimes results in part of the intestines dying; the dying part is removed by surgery
Neonatal Period: first 28 days of life
Neonatal Nurse Practitioner (NNP): a RN who has special training in the care of critically ill babies; performs special procedures. A NNP may give medical care, discharge teaching and other types of care under the supervision of a doctor.
Neonate: baby during the first month of life
Neonatologist: baby doctor (pediatrician) who has specialized training in the care of newborns who are premature, critically ill and have various problems in the first month of life
Neurologist: a doctor who specializes in problems of the brain and nervous system
Naso-gastric Tube (NG tube): small plastic tube placed through the baby's nose into his/her stomach used for feeding; sometimes the tube is placed in the stomach to keep it empty when the baby is sick and not feeding
Nippling: sucking on a bottle filled with formula or breastmilk

O

Oxygen (O_2): gas in the air that we inhale; normal amount is 21%
Occupational Therapist (OT): person who treats problems involving the use of muscles; also may work with babies who have trouble eating
Ophthalmologist: doctor who specializes in eye problems
Oral-gastric Tube (OG tube): small plastic tube placed through the baby's mouth into his/her stomach used for feeding; sometimes the tube is placed in the stomach to keep it empty when the baby is sick and not feeding
Orthopedist: doctor who specializes in bone problems
Outborn: baby transported from another hospital for care after his birth

P

PCVC: tiny catheter or tube place into a vein to give fluids or nutrition for a long time
Patent Ductus Arteriosus (PDA): small vessel outside of the heart that sometimes fails to close after birth; sometimes it is closed with medicine or by surgery; can cause the baby to have breathing and heart problems
Peripheral Arterial Line (PAL): catheter is inserted into artery for measuring blood pressure and drawing lab work; usually inserted into radial artery (RAL)
Periodic Breathing: a type of breathing pattern; the baby will stop breathing for a few seconds then breathe quickly
Persistent Pulmonary Hypertension of the Newborn (PPHN): circulation and breathing changes at birth. In PPHN the baby's blood flow does not change and continues to bypass the lungs and when this happens, the body and brain do not get enough oxygen.
Phenobarbital: drug used to treat seizures
Phototherapy: treatment of yellow jaundice or high bilirubin by placing the baby under bright light (bili light) or on a blanket (bili blanket)
Physical Therapist (PT): person who treats feeding problems and problems of the muscles

Placenta Abruptio: placenta pulls away from the wall of the uterus (womb); there is often bleeding. A caesarean (C-section) delivery is often needed.
Placenta Previa: placenta is located in an abnormal place (over the opening of the womb); bleeding during the pregnancy can occur. A Caesarean (C-section) delivery is often needed.
Pneumogram (sleep study): 12- or 24-hour recording of the baby's breathing and heart rate patterns to see if there are unusual patterns during sleep or feeding
Postpartum: time lasting six weeks after mom delivers a baby
Postural Drainage: method of positioning a baby so mucus can drain from the lungs
Premature Baby (preterm baby): baby born before the end of the 37th week of pregnancy
Premature Rupture of the Membranes (PROM): the bag of water (amniotic fluid) the baby floats in leaks or breaks before labor
Prenatal: before birth
Primary Nurse: nurse who is responsible for providing care and coordinating care of a specific baby for entire time baby is in the unit
Pulse Oximeter (sat. monitor): machine that reads the oxygen saturation of blood. The pulse oximeter is taped to baby's hand, finger or toe.

R

RN: registered nurse
RT: respiratory therapist
Resident: doctor in training after medical school
Residual: formula still in the stomach before the next feeding
Respirator: machine used to breath for the baby; also called a ventilator
Respiratory Distress Syndrome (RDS): a breathing problem of prematurity caused by lack of a fluid called surfactant that keeps small air sacs in the lungs open; also known as Hyaline Membrane Disease (HMD)
Retina: the back of the eye
Retinopathy of Prematurity (ROP): eye disease in babies; causes include use of oxygen, ventilators, and prematurity. The mild form may heal on its own, but severe ROP may lead to the retina becoming detached (loose) and blindness.
Rubella: virus that causes German measles.

S

SIDS: Sudden Infant Death Syndrome
Seizure: abnormal electrical activity in the brain which causes unusual muscle twitches
Shunt (VP): tube that drains spinal fluid from a ventricle in the brain to the belly
Strabismus: eyes that cross or turn outward due to muscle weakness
Subarachnoid Hemorrhage: bleeding in the area around the outside of the brain
Synchronized Intermittent Mandatory Ventilation (SIMV): ventilator breaths are timed to the baby's breaths

T

TTN: transient tachypnea of the newborn
Tachycardia: rapid heart rate (above 160 beats per minute in a newborn or premature)
Tachypnea: rapid breathing
Term Baby: baby born between the 38th and 42nd week of pregnancy (gestation)
Theophylline: drug used to stimulate the baby's breathing
Thrush: fungal (yeast) infection of the mouth; baby has white patches on the tongue and insides of the mouth

TORCH titers: test for viral infections toxoplasmosis, rubella, cytomegalovirus, and herpes
Total Parenteral Nutrition (TPN) or Triple Mix: nutrition given by fluids through a vein
Trachea: windpipe or breathing tube
Tracheotomy: surgical opening made through the skin and into the breathing tube (trachea) so air can get to the lungs when there is a blockage; also done to babies requiring long-term ventilation management

U

UAC: umbilical artery catheter
UVC: umbilical venous catheter
Ultrasound: method of taking pictures inside the body using sound waves
Umbilicus: belly button; navel
Upper Respiratory Infection (URI): a cold; infection above the lungs
Urinary Tract Infection (UTI): infection of the bladder

V

VS: vital signs (temperature, pulse, respiration, and blood pressure)
Ventilator: machine used to breathe for the baby; also call a respirator
Ventricle: chamber in the heart; also the name of a sack in the brain where spinal fluid is made and stored

W

Wheeze: whistling, humming, raspy sound made during breathing

Y

Yeast Infection (Candida albicans, thrush): fungus that causes an infection; common after antibiotic therapy; seen most often in the mouth and diaper area; treated with mycostatin oral suspension and mycostatin cream

Resources – 2008

Support Groups

Alexis Foundation
PO Box 1126
Birmingham, MI 48012-1126
Phone: 248-543-4169 or toll-free (877) ALEXIS-0 (zero)
E-mail: ***thealexisfoundation@prodigy.net***
http://www.preemieparenting.com/supportgroups.htm

Parents of Premies Incorporated: a non-profit organization supporting families with infants born 6 weeks or more premature (includes a listserve for parents to communicate via email with other parents): ***http://www.preemie-l.org/***

Family Support Network
http://www.fsnnc.org/home.htm

Parent to Parent Support Network
http://www.p2pusa.org/

Breastfeeding Resources:

LACTNET is a discussion group for breastfeeding and lactation issues.
To subscribe, do the following:

Send to: ***listserv@library.ummed.edu***
in the body of the message type:

SUBSCRIBE LACTNET [your name and title] but without the "[ ]"

http://www.breastfeeding.com/

http://www.lalecheleague.org/Web/NorthCarolina.html

Developmental Care Resources:

http://www.geocities.com/roopage/developmentalcare.html

http://www.prematurity.org/baby/kangaroo.html

http://www.kangaroomothercare.com

Lists of Resources:

Premature Babies Resource Websites
http://www.prematurity.org/preemiepgs.html

March of Dimes
http://www.marchofdimes.com/

Exeptional Parent Magazine and Website
1-877-372-7368
http://www.eparent.com/

Neonatology on the Web
http://www.neonatology.org/neo.links.parents.html

Other Internet Resources:

Often, you can find other parents of preemies on the newsgroup misc.kids and misc.kids.pregnancy.

On America Online, you can usually find preemie folders under Keyword: PIN, parent-to-parent and Keyword TNPC.

Books for Parents of Preemies:

We have several of these books in our Family Resource Library where you can check them out to read. You may also be able to find these at your local library, bookstore or online supplier.

Acredolo, Linda; Abrams, Douglas and Goodwyn, Susan. *Baby Signs.* McGraw-Hill, 2002.

Baby Talk and Special Beginnings, can be found at www.CenteringCorp.com, 2006.

Barsuhn, Rochelle. *Growing Sophia: The Story of a Premature Birth*. A Place to Remember (subsidiary of deRuyter Nelson Publications), St. Paul, Minnesota, 1996.

Bradford, Nikki. *Your Premature Baby: The First Five Years.* Firefly Books, 2003.

Cantrell, Dail R. *Equal to the Task: One Family's Journey Through Premature Birth.* InSync C ommunications, 2002.

Davis, Deborah L. *Loving and letting go: for parents who decide to turn away from aggressive medical intervention for their critically ill newborn.* Centering Corporation, 1993.

Davis, Deborah L and Stein, Mara Tesler. *Parenting Your Premature Baby and Child: The Emotional Journey.* Fulcrum Publishing, 2004.

Garcia-Prats, Joseph. A. and Hornfischer, Sharon Simmons. *What to Do When Your Baby is Premature: A Parent's Handbook for Coping with High-Risk Pregnancy and Caring for the Preterm Infant.* Three Rivers Press, 2000.

Gotsch, Gwen. *Breastfeeding Your Premature Baby*. LaLeche League, 2002.

Heim, Susan. *It's Twins!: Parent-to-Parent Advice from Infancy Through Adolescence.* Hampton Roads Publishing Company, 2007.

Kennedy, Nancy. *Baby Hands and Baby Feet: Poems and Sketches from the NICU*. California: NICU Ink, 1995.

Klein, Alan H., and Ganon, Jill Alison. *Caring for Your Premature Baby: A Complete Resource for Parents*. HarperPerennial, 1998.

Linden D. W.; Paroli, E. T., and Doron, M. W. *Preemies: The Essential Guide for Parents of Premature Babies*. Pocket Books, 2000.

Ludington-Hoe, Susan and Susan K. Golant. *Kangaroo Care: The Best You Can Do To Help Your Preterm Infant.* New York: Bantam Books, 1993.

Luke, Barbara and Eberlein, Tamara. *When You're Expecting Twins, Triplets, or Quads, Revised Edition: Proven Guidelines for a Healthy Multiple Pregnancy.* Collins, 2004.

Madden, Susan L. *The Preemie Parents' Companion: The Essential Guide to Caring for Your Premature Baby in the Hospital, at Home, and Through the First Years*. Harvard Common Press, 2000.

Manginello, Frank and Digeronimo, Theresa Foy . *Your Premature Baby*. New York: John Wiley and Sons, 1998.

Merenstein, Gerald B. and Gardner, Sandra, L. *Handbook of Neonatal Intensive Care*. Mosby, 2006.

Noble, Elizabeth; Sorger, Leo and Keith, Louis G. *Having Twins And More: A Parent's Guide to Multiple Pregnancy, Birth, and Early Childhood.* Houghton Mifflin, 2003.

Sears, William and Sears, Martha. *The Fussy Baby Book : Parenting Your High-Need Child From Birth to Age Five.* Little, Brown and Company, 1996.

Sears, William. *The Premature Baby Book : Everything You Need to Know About Your Premature Baby from Birth to Age One.* Little, Brown and Company, 2004.

Segal, Marilyn; Leiderman, Roni and Masi, Wendy. *In Time and With Love: Caring for the Special Needs Infant and Toddler*. Second Edition Newmarket Press, 2001.

Smith, Timothy. *Miracle Birth Stories of Very Premature Babies: Little Thumbs Up!.* Bergin & Garvey Trade, 1999.

Stimpson, Jeff. *Alex: The Fathering Of A Preemie.* Academy Chicago Publishers, 2004.

Taylor, Daniel and Hoekstra, Ronald R. *Before their time: lessons in living from those born too soon.* Inter-Varsity Press, August 2000.

Tracy, Amy E. and Maroney, Dianne I. *Your Premature Baby and Child : Helpful Answers and Advice for Parent.* Berkley Books, 1999.

Wiggins, Pamela K., IBCLC. *Why Should I Nurse My Baby? And Other Questions Mothers Ask About Breastfeeding*. Parentbooks; [201 Harbord St., Toronto, Ontario, Canada M5S 1H6 (800)209-9182 or (416)537-8334, fax: (416)537-9499], 2001.

Woodfield, Julia and Cardwell, Anna. *Healing Massage for Babies And Toddlers.* Steiner Books, 2005.

Woodwell, William H., Jr. *Coming to Term: A Father's Story of Birth, Loss, and Survival*. University Press of Mississippi, 2001.

Zaichkin, Jeanette. *Newborn Intensive Care: What Every Parent Needs to Know*. Petaluma CA: NICU Ink Book Publishers, 2002. **Also available in Spanish:** *Cuidado Intensiveo Neonatal: Lo Que Todo Padre Necesita Saber.* 2000 edition.

Children's Books

Dawkins-Walsh, Elizabeth. *Katie's Premature Brother.* Centering Corporation, 1990.
Reading Level: ages 9-12

Pankow, Valerie. *No Bigger than My Teddy Bear.* Family Books, 2004.
Reading Level: ages 3-8

Wojahn, Rebecca Hogue. *Evan Early.* Woodbine House, 2006.
Reading Level: ages 4-8

The Family Resource Library has many of these books that can be borrowed as well as computers for web research that can be utilized during your stay.

Special Needs and Other Information

Parents: Sheets on the following topics are found in our file cabinet. Please ask your baby's nurse for a copy of any items you would like to read for further information. You or the nurse can initial that you received a copy.

Topic:	Date added to Baby Book	Initials
Ambu Bag		
Anemia		
Apnea of prematurity		
Blood Sugar		
Blood transfusions		
Bronchopulmonary Dysplasia (BPD)		
Button Gastrostomy		
Car Seat Laws, NC or SC		
Cardiovascular Resusitation (CPR)		
Chest Therapy (CPT)		
Colostomy/Ileostomy		
Congenital Diaphragmatic Hernia (CDH)		
Developmental Follow-up		
Extracorapeal Membrane Oxygenation (ECMO)		
Gastro-esophageal reflux		
Gastrostomy Tube Feeding		
Gavage Feeding		
Group B Strep		
Growth and Development		
Heart Defect		
Hernias and Hydroceles		
Home Oxygen		
Hydrocephalus		
Hypoglycemia		
Immunizations		
Intraventricular Hemorrhage (IVH)		
Jaundice		
Meconium Aspiration		
Necretizing Enterocolitis (NEC)		
Nose Drops		
Patent Ductus Arteriosus (PDA)		
More PDA information		
Periventricular Leukomalacia (PVL)		
Persistent Pulmonary Hypertension (PPHN)		
Pierre Robin Sequence		
Respiratory Syncytial Virus (RSV)		
Retinopathy of Prematurity (ROP)		
Seizure		
Sepsis		
Spina Bifida		
Suctioning		
Tracheostomy		
Transient Tachypnea of the Newborn (TTN)		
Who is this preterm baby?		