

TALLAHASSEE MEMORIAL  
NEONATAL INTENSIVE CARE UNIT

# WELCOME GUIDE



TALLAHASSEE  
MEMORIAL  
HEALTHCARE

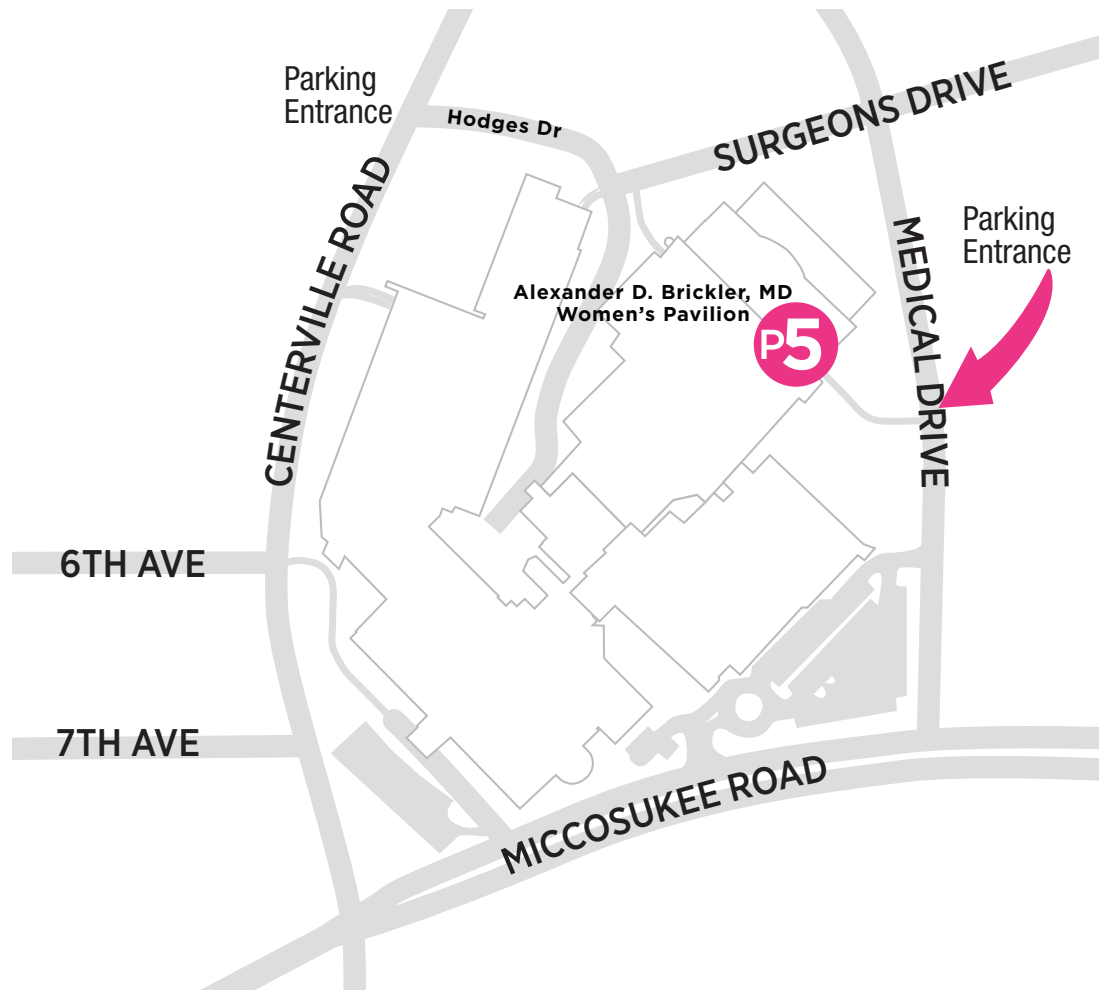


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DIRECTIONS TO THE

# Tallahassee Memorial Neonatal Intensive Care Unit



**Neonatal Intensive Care Unit  
Alexander D. Brickler, MD Women's Pavilion  
Tallahassee Memorial HealthCare  
1300 Miccosukee Drive  
Tallahassee, FL 32308**

1. For access to the Women's Pavilion, please use the **P5** Parking Garage, located on Medical Drive.
2. Once in **P5**, follow the Women's Pavilion signs.
3. Once parked, if you are not already on the First Floor, take Elevator I or Elevator J to the First Floor.
4. Enter the Women's Pavilion via the main entrance on the First Floor, located across from the entrance to the Emergency Center. The Women's Pavilion entrance faces the uncovered portion of the garage.
5. Once in the Women's Pavilion, you will check in at the security desk and take Elevator K to the Second Floor to access the NICU.

# Welcome

## TO THE TALLAHASSEE MEMORIAL NEONATAL INTENSIVE CARE UNIT

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We know a hospital admission can be a scary experience for both you and your new little one. We thank you for placing your trust in Tallahassee Memorial HealthCare. We are committed to providing your baby the best possible care and making your family as comfortable as possible during your baby's stay.

### **We believe our families deserve:**

- Quality care
- To feel welcome
- To be treated ethically with dignity, courtesy and respect
- To participate in individualized treatment and care decisions
- Personal privacy and confidential management of information
- Safety and security

### **We believe our families' responsibilities are:**

- To ask questions
- To tell us when there is a problem
- To respect other patients' rights and privacy

We've assembled this welcome guide to provide you all of the most important information regarding the Neonatal Intensive Care Unit (NICU) and your baby's care, including:

- What to Expect
- Your Baby's Development
- Parenting in the NICU
- Breastmilk in the NICU
- Going Home
- Glossary of NICU Terms

We know you will have many questions about your baby's care. We are here to help! If you are uncertain about any aspect of your baby's treatment, please ask any member of your healthcare team for assistance or information.

Thank you again for allowing us to care for you and your baby. When you receive your patient satisfaction survey in the mail, we ask that you please take the time to complete and return it, as we are interested to hear your feedback and suggestions.

Thank you,

Your NICU Team



# Visitor Guidelines

## AND FREQUENTLY ASKED QUESTIONS

You are always welcome to spend time at your baby's bedside; your little one already knows your voice and will need the love and support only you can provide. To protect our NICU families' health, safety and privacy while visiting our NICU units, we have the following guidelines in place.

### Visitor Guidelines

#### **PIN Number:**

Patient information will be given to parents only, as we want you to receive all updates and details about your little one first. We will provide you with a PIN number to use to obtain information about your baby over the phone. Please do not share this number with anyone.

#### **Permitted Visitors:**

Parents may designate two visitors of your choice who may visit your baby with or without you. These visitors must be over age 18 and have a valid photo ID, and will be listed on the enclosed guideline form. This list cannot be changed during your baby's stay, so be sure to take your time filling it out. Only those listed can visit the NICU. Minors are not permitted to visit and must wait in the Women's Pavilion waiting room.

Only two visitors per family may visit at a time in both the Level III and Level II NICUs. Consideration of special circumstances will be at the discretion of the management team.

#### **Safety:**

To keep your baby safe, the NICU is a limited-access area, meaning only authorized persons can be here. Visitors must wear the ID badge provided at the Women's Pavilion security desk each time they visit. Moms still admitted to the hospital may use their ID wristbands as identification.

#### **Preventing Infection:**

Hand hygiene is very important in the NICU to prevent infection. Every time you visit your baby you must "scrub in." You'll find detailed instructions on how to effectively wash your hands near the sinks outside of each NICU. If you have any questions or need assistance, we're here to help – just pick up the phone near the unit door and ask!

Parents also need to think carefully before allowing someone who may be sick to visit your baby. If you or someone else has a cold, cough, skin infection, fever blister, diarrhea or other contagious disease, please do not visit the NICU until you are completely recovered. Any visitor who shows signs of illness or is deemed unfit to visit will not be allowed inside the unit.

#### **Access:**

While the care team wants you to spend as much time as possible with your little one in the NICU, there may be times when you are asked to wait in the family waiting area (Ronald McDonald Room). If this happens, please understand that the care team is doing so to ensure every baby is receiving the best, most personalized care possible. The healthcare team will make every effort to keep you updated on your baby's condition. (Note: By law, we can only share medical information with parents.)

#### **Privacy:**

Your privacy is very important to us. Although the care team tries to keep all information private, there may be times when conversations are overheard in open areas. Please do not ask about other babies in the NICU. Stay with your baby and ask your visitors to do the same.

## Frequently Asked Questions

### What is the process for visiting?

- All parents and visitors must check in at the Women's Pavilion security desk and show a valid photo ID in order to visit. The security guard will give you a NICU visitor sticker. Please place the sticker on your shirt where it is clearly visible. Then, take the elevator to the Second Floor.
- At the main NICU door, pick up the phone and let us know who you are and which baby you are here to visit. The door will then unlock. You must push the door as it does not open on its own. Please do not enter with another family without calling and identifying yourself. Each family must check in via phone.
- When you arrive at the NICU II or NICU III door, **please wash your hands at the sink for at least two minutes. This is the number one barrier to infection and key to your baby's health.** You will not be granted entry into the NICU until you have completed your handwashing.
- Pick up the phone and tell us which baby you are here to visit. When you hear a click, that means the door is now unlocked. Come on in!
- Our team will verify your identity at the nurses' station, then you are free to visit your baby.
- At the end of your visit, please sanitize your hands as you leave your baby's room.

### When can we visit?

It is important for you to visit your baby, and we want you to visit as much as you can! The unit is open for visitation nearly 24 hours per day for parents. Please note the exceptions below.

- From 6:45 to 7:45 am and 6:45 to 7:45 pm, our nurses are in transition of care and the unit is closed to visitors, including parents, due to privacy reasons.
  - o Transition of care is an extremely important time in each nurse's day and our staff needs to focus during this time without interruption.
  - o During transition of care times, phone calls will not be transferred to the nurses. If you would like to get an update via telephone, please do not call during these hours.
  - o After 9 pm, the unit is only open for parents. Other visitors may resume visitation at 7:45 am.
- When a sterile procedure, X-ray or emergency is taking place in the patient room, visitation will be briefly limited.
- If you or a visitor are sick or have been exposed to any contagious illness, visitation will be restricted. All visitors must be free from all symptoms of illness for 24 hours before visiting again. This is for your baby's safety.

### Can I use a phone or camera in the unit?

You are more than welcome to use your phone or camera on the unit to communicate, take photos or play music. Please keep these things in mind:

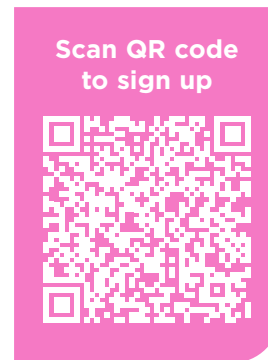
- Phones are covered in germs. Stop by the nurses' station and use the provided wipes to clean your phone and place your phone in a provided plastic bag for your visit. Please wash/sanitize your hands after using your phone and before touching your baby.
- Please keep voices and volumes low; it's better for your baby's sensitive ears and is a courtesy for other families.
- If you wish to video record, FaceTime or video call, please speak with your nurse first.

## NICU Parent Orientation Class

- Learn what to expect in NICU
- Learn who's who on your baby's care team
- Meet the NICU Educator and other parents
- Ask questions
- Make your baby's name card

### Limited to:

Parents only. 8 per class.



## Family Skills Lab

Tuesdays | NICU Education Room  
Open anytime between 1 pm - 2 pm

Facilitated by NICU Educator

### What you'll practice:

- Performing infant rescue breaths
- Performing infant CPR
- How to handle choking

Must watch the CPR video in the NICU prior to attending. Ask your baby's nurse for details.



### Where is the restroom?

Restrooms are located in the hallway between NICU II and NICU III. Please scrub in again before re-entering the NICU.

### If I need to step out of the unit, is there a place for me to wait?

Yes! We have a NICU-only waiting room we call the Ronald McDonald Room. It is located directly across the hall from the bathrooms. There is a TV, sofa, table, chairs and a phone for you in there.

### Who can hold my baby?

Once your baby is stable and after discussion with the nurse about the baby's specific needs, you can use your own discretion as to who may hold your baby. Please let the nurses know what you decide.

### What if I have a question, concern or observation?

Your observations about your baby are an important part of their care. If you have any concerns or notice any changes, please be sure to discuss them with your baby's nurse. If you have a more pressing concern or comment, please don't hesitate to ask to speak with the charge nurse or nurse managers. We welcome comments and suggestions at any time and invite you to fill out a We C.A.R.E. card to share your feedback.

### What resources are available for parents?

In the NICU, we offer parent orientation classes, parent support groups and a family skills lab for practicing Cardiopulmonary Resuscitation (CPR). More information can be found outside of the education room and below.

### Important Phone Numbers for Parent Use Only:

NICU II 850-431-0180

NICU III 850-431-0170



## WHEN MY BABY COMES EARLY:

# What You May Be Feeling

Some parents describe the early days of having their baby in the NICU as “fuzzy.” You are recovering from childbirth; you may feel exhausted and your baby is in the NICU instead of in the room with you. How you feel can also depend on whether you were expecting your baby to need NICU care after birth, your baby’s condition, your own condition and if you have had experience with the NICU before.

In addition to excitement and love for your new baby, it is normal for parents to experience a wide range of other emotions including:

- Fear
- Anger
- Guilt
- Worry
- Loss
- Helplessness

### Managing Stress

Stress about the uncertainty of your baby’s condition, or of the future, may feel overwhelming. Know that it is okay to be frustrated; the more you can maintain a positive outlook, the better prepared you’ll be to manage your baby’s care. The following tips may help.

- **Allow yourself to cry.** You may be worried that if you give in to your feelings, you’ll never be able to recover. Actually, it is healthy to release your emotions.
- **Establish a routine.** Find a way to balance work, home life and visiting the hospital. Allow yourself to leave your baby’s side. Even though your baby needs you, it’s important for you to have time to yourself and for the rest of your family.
- **Keep a journal.** Sometimes, writing your feelings down on paper can help you to cope and move forward. Keeping a journal or diary can help you keep track of how far you and your baby have come on your journey.
- **Vent your frustrations.** Tell others, including your family, how you feel. If your baby has a setback, you may become scared and anxious. It’s okay to talk about your feelings.
- **Celebrate when you can.** When your baby makes progress, experience the joy with those you love.
- **Let others help.** Family and friends may be willing to help but aren’t sure how to ask. Be specific about how other people can best help you.
- **Allow yourself to rest and sleep.** You will need this to fully recover from your delivery and to keep your immune system healthy.
- **Take care of yourself physically and mentally.** Avoid alcohol, caffeine and tobacco, as these substances may add even more stress. Find small bits of time for activities that you enjoy, like exercise, lunch with friends or going to the movies. Try some simple relaxation techniques, like deep breathing, meditation, yoga or prayer.

Source: *March of Dimes* booklet, “Parent: You & Your Baby in the NICU.”

# Your Baby's Care Team

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Your baby's care team includes specially-trained professionals who are dedicated, experienced and deeply committed to providing the highest level of medical care. We are pleased to be of service to you and your family during this difficult time and pledge to ensure your infant receives the best possible care.

The below outlines every expert who may be involved in your baby's care.

## Medical Team:

- **Neonatologist:** Physician with specialized training in caring for premature babies and infants who need extra attention at birth and beyond. Oversees your baby's care and examines them daily.
- **Neonatal Nurse Practitioner:** Registered nurse with specialized training in caring for babies who require extra attention at birth and beyond. Works closely with neonatologists to diagnose and treat illness.
- **Consulting Physician:** Specialist in a specific area of medicine, like heart, bowels, eyes or brain. May be brought in to help with your baby's care.
- **Pediatrician:** Physician specializing in the care of infants and children. If you haven't already, you'll choose a pediatrician to be your baby's doctor after you go home from the hospital.

## Nursing Team:

- **Registered Nurse:** Works closely with you and the neonatologist to plan your baby's care. Monitors your baby closely, directs feedings and gives medications. Members of the care team you'll see the most.
- **Charge Nurse:** Oversees the daily care and operations of the unit during each shift. Answers questions and helps with any concerns when you visit your baby.
- **Nurse Manager:** Oversees nursing operations and unit processes.
- **NICU Clinical Nurse Educator:** Coordinates education for the nurses and parents.

## Support Team:

- **Registered Respiratory Therapist:** Licensed healthcare practitioner trained to care for babies with breathing difficulties. Works closely with the neonatologist to manage your baby's respiratory needs.
- **Discharge Coordinator:** Helps with discharge planning, providing education to parents and coordinating outpatient appointments and referrals.
- **Dietitian:** Specializes in the nutritional wellbeing of preterm and term infants. Works closely with the neonatologist to provide optimal nutrition to help babies grow and develop.
- **Pharmacist:** Reviews, monitors and dispenses medications ordered by your baby's provider.
- **Social/Case Worker:** Provides information about available community programs, guidance and support. Helps deal with insurance companies and addressing any financial concerns or individual needs.
- **Lactation Specialist:** International Board-Certified Lactation Consultant (IBCLC) professional with knowledge, clinical experience and skills to support breastfeeding.
- **Unit Secretary:** Welcomes and helps you, answers questions about handwashing and breast milk storage.
- **Cuddlers:** TMH volunteers trained to provide therapeutic talk and touch to NICU babies when parents are unable to be at the bedside.

# Communicating with the Care Team

A doctor or nurse practitioner will contact with you each day by phone. Your baby's nurse can also update you at the bedside in the NICU or over the phone when you call the unit. To help you make informed decisions about your baby's care, the healthcare team is available to answer any questions and provide updated information. Please remember, information about baby's health is only shared with parents after the specific PIN assigned to the baby is provided.

## Daily Rounds:

Every day between 9 am and 1 pm, your baby's providers complete daily rounds, during which they assess your baby's status and discuss baby's care plan at the bedside. We encourage parents to be present for these daily rounds. If you are unable to be present, the providers will update you after rounds are completed for the day. Please have a valid phone number on file.

## Understanding Your Baby's Care:

Medical terms can be hard to understand or remember, and it's easy to forget important details if you are tired or worried. In addition to the Glossary of NICU Terms in the back of this guide, here are some practical ways to keep track of information and improve communication with your baby's care team:

- Write down any questions or keep a journal.
- If you don't understand a word or subject, ask to have it explained in simpler terms.
- Take an active part in the care and decision making for your baby. It can help reduce anxiety and help you feel more connected.
- Ask when and how you can help with your baby's care.
- Learn as much as you can about your baby's health and condition.

## Tips for Smooth Communication:

- Give the care team a phone number they can use to reach you every day.
- Clear your voicemail messages regularly so there is room for the care team to leave you a detailed message.
- You can call us any time to check on your baby, although there may be times when the nurse has to call you back, like during transition of care.



# Monitors and Equipment

Based on the level of care your baby needs, there may be several types of specialized medical equipment connected to your baby by wires or patches. Your baby's care team will be happy to explain how each piece of equipment works.

## Beds:

- **Incubator/Isolette (A):** A clear box-like bed with an internal heat source. Provides a womb-like environment. Common incubator brands are Giraffe and Isolette.
- **Radiant Warmer (B):** An overhead heater to keep your baby warm. Allows easy access to baby and equipment.
- **Open Crib (C):** When babies can regulate their own body temperature, they will be moved to an open crib.



## Monitors:

- **Cardiopulmonary Monitor (D):** Connects to your baby with sticky pads (leads) on their chest. Measures your baby's heart and breathing rates.
- **Blood Pressure Monitor (E):** A cuff wrapped around your baby's arm or leg to measure blood pressure.
- **Pulse Oximeter (F):** A small bandage-like sensor that shines a red light through a baby's hand, wrist or foot. Measures how much oxygen is in their blood and if they need more or less. Sensor does not cause pain and is not hot.





### Respiratory Care:

- **CPAP (Continuous Positive Airway Pressure):** Uses a special mask or prongs to cover the nose and send a continuous flow of oxygen and air into your baby's lungs. Gently keeps the air sacs open and helps your baby breathe better.
- **Endotracheal Tube (ET Tube):** Goes from a baby's mouth or nose to the windpipe. Used with a ventilator to get air and oxygen into your baby's lungs.
- **Mechanical Ventilator:** Helps babies breathe or breathes for them when they can't breathe on their own. Works by pushing warm air and oxygen through the breathing tube into your baby's lungs.
- **High-Frequency Ventilator:** Oscillating or jet ventilators give a baby small breaths at a faster rate than regular ventilators.
- **High Flow Oxygen or "Vapotherm":** Uses small prongs in your baby's nose to provide a continuous flow of oxygen and air into your baby's lungs.



### Lines:

- **Central Line:** A thin tube placed into a blood vessel. Can be used to give your baby medicine and fluids. Also called a PICC (Peripherally Inserted Central Catheter) line.
- **Umbilical Catheter:** A thin tube placed in a baby's umbilical cord to give them fluids, medicine and blood. Also used to draw blood to measure the baby's blood gases (acid, oxygen and carbon dioxide).
- **Intravenous Line (IV):** A small plastic tube inserted into your baby's vein. Connected to an IV pump to give your baby measured fluids and medications.



### Feeding Tubes:

- **Nasogastric Tube (NG Tube):** Goes through a baby's nose to deliver feedings or medications into their stomach. Also called gavage feeding.
- **Orogastric Tube (OG Tube):** Goes through a baby's mouth (instead of nose) to deliver feedings or medication into their stomach. Another type of gavage feeding.



### Other:

- **Syringe Pump:** Computerized pump that delivers feedings, medicine and blood products.
- **Phototherapy:** A special blue light used to treat jaundice. Your baby's eyes are safely covered during the treatment.
- **Cooling Cap or Blanket:** Used to lower a baby's brain and body temperatures. After three days, babies can be gradually warmed on the radiant warmer to a normal body temperature.



#### Why is that alarm going off? Is my baby okay?

Alarms on monitors alert your baby's care team to many different things. They can be triggered by loose equipment, a hiccup, a baby's movement or changes in vital signs. It is normal to worry when you hear one, but your baby's nurse will check each alarm.

**Note:** Monitors do not pick up on your baby's feelings or behavior. If you think your baby's condition is changing for the worse, notify the nurse. Please feel free to share your concerns or ask questions any time.

# Screenings and Procedures

Newborn screenings test infants shortly after birth for medical conditions that are treatable, but not seen, during the newborn period. Every state requires specific newborn screening tests on all babies. Below are a list of screenings your baby may undergo.

## Metabolic Screening

An essential preventive health measure, metabolic screening tests newborns for developmental, genetic and metabolic disorders that may not be immediately apparent after birth. If identified early, many of these rare conditions can be treated before they cause serious health problems.

### How the test is performed:

A few drops of blood will be taken from your baby and sent to the lab for testing. You will be notified of the results by the hospital or your baby's healthcare provider.

## Hearing Screening

Testing the hearing of babies before they leave the hospital is a common practice. It is recommended that all newborns be screened. If hearing loss is not caught early on, there will be a lack of stimulation of the brain's hearing center that can delay speech and other types of development.

### How the test is performed:

This painless test is performed in the hospital using a tiny earphone, microphone or both. It takes about 10 minutes and is done while your baby is sleeping.

## Pulse Oximetry Screening for Congenital Heart Disease

Pulse oximetry is a simple, painless test used to measure how much oxygen is in your baby's blood. It can help identify certain heart diseases that are present at birth.

### How the test is performed:

Sensors are placed on your baby's hand and foot with a sticky strip and a small red light or probe. The sensors measure the baby's oxygen level and pulse rate. The test takes a few minutes to perform when the baby is still, quiet and warm.





# Adjusted/Corrected Age

In order to evaluate a premature baby's growth and development over the first couple of years, you need to know the baby's "corrected age." A corrected age is the difference between the day the baby was born and the baby's actual due date.

## Figuring out a baby's corrected age takes two steps:

1. Determine how many weeks or months early your baby was by subtracting the number of your baby's gestational weeks from 40 weeks (full-term).

*Example: If your baby was born at 33 weeks, they were born 7 weeks (2 months) early.*

**40 weeks – 33 weeks = 7 weeks (2 months)**

2. To arrive at your baby's corrected age, subtract the number of weeks early from the baby's current age.

*Example: If your baby is now 15 weeks (4 months) old, their corrected age is 8 weeks (2 months) old.*

**15 weeks actual age – 7 weeks preterm = 8 weeks (2 months)**

Using your baby's corrected age will help you realistically evaluate how well your baby is developing. While a full-term four-month-old baby may be starting to roll over, if your baby's corrected age is only two months old, they may just be starting to hold their head up and look around.

**Actual age in weeks – Weeks preterm = Adjusted/corrected age**



# Preemie Development

<p><b>Less than 26 weeks</b></p>	<p><b>Size</b></p> <p>8 to 9 inches long 1 to 2 pounds</p>	<p><b>Characteristics</b></p> <ul style="list-style-type: none"> <li>• No fat</li> <li>• Tiny fingernails</li> <li>• Finger and footprints still developing</li> <li>• Lanugo – coating of fine hair to keep them warm</li> <li>• Thin skin and visible veins</li> <li>• Eyelids may be fused shut</li> <li>• Hearing is very sensitive</li> <li>• Twitchy, jerky movements</li> <li>• Startles easily</li> </ul>
<p><b>27 to 28 weeks</b></p>	<p><b>Size</b></p> <p>Around 16 inches long About 2 ½ pounds</p>	<p><b>Characteristics</b></p> <ul style="list-style-type: none"> <li>• Skin is fragile</li> <li>• Eyes may open briefly, but do not focus</li> <li>• Hearing is very sensitive</li> <li>• Twitchy, jerky movements</li> <li>• Startles easily</li> <li>• May be ready for kangaroo care (skin-to-skin)</li> </ul>
<p><b>29 to 30 weeks</b></p>	<p><b>Size</b></p> <p>Around 17 inches long About 3 pounds</p>	<p><b>Characteristics</b></p> <ul style="list-style-type: none"> <li>• Skin appears more normal</li> <li>• More body fat</li> <li>• Eyes open for short periods of time</li> <li>• Sensitive to bright lights</li> <li>• Loud noises are uncomfortable</li> <li>• Jerky movements, but with more intention</li> <li>• Stretches arms and legs</li> <li>• Benefits from kangaroo care</li> <li>• Begins to suck on pacifier</li> </ul>
<p><b>31 to 32 weeks</b></p>	<p><b>Size</b></p> <p>18 to 19 inches long 3 ½ to 4 pounds</p>	<p><b>Characteristics</b></p> <ul style="list-style-type: none"> <li>• Opens eyes</li> <li>• Briefly looks at faces</li> <li>• Hearing is sensitive, prefers soft voices</li> <li>• All five senses are developed, but are easily overstimulated</li> <li>• Can be held for feedings</li> <li>• Sucks on pacifier</li> </ul>
<p><b>33 to 34 weeks</b></p>	<p><b>Size</b></p> <p>Almost 20 inches long 4 to 5 pounds</p>	<p><b>Characteristics</b></p> <ul style="list-style-type: none"> <li>• Lungs still developing</li> <li>• Immune health still immature</li> <li>• Sucking, swallowing and breathing not coordinated</li> <li>• Movement is smoother</li> <li>• Begins to show cues for feeding</li> <li>• Needs to sleep between nipple feedings</li> </ul>
<p><b>35 to 37 weeks</b></p>	<p><b>Size</b></p> <p>20 inches long 5 ½ to 6 pounds</p>	<p><b>Characteristics</b></p> <ul style="list-style-type: none"> <li>• Looks full-term</li> <li>• Has fat, but not enough to stay warm</li> <li>• Gets tired during feedings</li> <li>• May have low blood sugar</li> <li>• Slow weight gain</li> <li>• Burning calories to stay warm</li> </ul>

# Your Baby's Behavior, Senses & Sleep

## Baby Behavior

Premature babies have six different states of activity that help explain their different behaviors: alert, drowsy, fussy, crying, light sleep and deep sleep states. The more premature your baby is, the less their activity state will change. The predominant state for premature babies is sleep – either light or deep. As your baby grows, you will observe more of the other states.

- 1. Alert State:** Your baby is bright and awake, breathing regularly and not moving around very much. They can focus their attention on a face, an object, the sound of your voice or music. This is the best time to interact with your baby. Try only one stimulation at a time – speak quietly or just smile at your baby without talking.
- 2. Drowsy State:** Drowsy babies have a dazed look, somewhere between awake and asleep. Their eyes are dull, with droopy eyelids and it is harder to focus on you. They may increase their movements or be startled by sounds. You may see a delayed reaction to voices or other noises.
- 3. Fussy State:** Babies may be thrusting their arms or legs, breathing irregularly, appear irritable with raised eyebrows and a wrinkled forehead. Instead of looking worried, your baby may have a glassy-eyed look. This is very tiring for the baby. Comforting measures can help them calm down.
- 4. Crying State:** Your baby is actively moving, crying intensely and hard to calm. This state is very difficult for you as a parent who wants to comfort your baby. If your baby is able, skin-to-skin contact can be soothing. You can also try other comfort measures, like swaddling, hand containment, positional aids and lowering noise and light.
- 5. Light Sleep:** Also called REM (Rapid Eye Movement) sleep, this is the most common sleep state for a premature baby and crucial for learning and memory. You can see your baby's eyes flutter beneath closed lids. Your baby may be restless, make little noises or breathe unevenly. Their eyes may be slightly open and they will likely react to noises and light changes.
- 6. Deep Sleep:** Your baby is breathing evenly and lying very still. They might startle or sigh during this type of sleep. If your baby is very premature, you may not see this state of sleep often. As they get older, the deep sleep state will be very important for growth and brain development.

## Developing Senses

If your baby is in the NICU because they were premature, you need to understand when and how their bodies will grow and develop. Premature babies need time and special care to mature, which is different from full-term babies whose senses are well-developed at birth.

Outside of the womb, your baby will be challenged to develop these senses: vision, hearing, taste, smell and touch. The goal during your baby's stay in the NICU is to mimic the womb environment as much as possible to promote the "natural" development of these senses. Because your baby's neurological system is immature, you'll need to understand the difference between what will help their development and what will overwhelm their fragile state.

### Vision:

- Their eyes are very sensitive to light
- Sight takes longer to mature than hearing and touch
- Too many images at one time can be overwhelming

**Hearing:**

- Important for language development
- Can hear a variety of sounds
- Can pick out their parent's voice
- Soft voice is best
- Shows more interest in voices than other sounds

**Taste:**

- Begins in utero with amniotic fluid
- Taste buds are well-developed by 21 weeks gestation
- Prefers sweet tastes like breast milk

**Smell:**

- Can recognize your scent from the womb
- Helps them adjust to the environment
- Soothing smells help with comfort from pain
- Don't use scented soaps or wear perfume

**Touch:**

- The first sense to mature
- Baby's skin is fragile and sensitive
- Prefers supportive touch with boundaries like in the womb
- Light touch may be too stimulating or even painful

**Sleep Development****23 to 27 Weeks Gestation:**

In these early weeks, your baby sleeps most of the time. They may only have brief moments when they are in a drowsy or partially awake state. An immature nervous system causes their movements to be jerky and trembling, even during sleep. Your baby should be sleeping 23 to 24 hours per day.

**28 to 29 Weeks Gestation:**

At this age, premature babies will begin to have periods of REM sleep and only brief moments of wakefulness. They are still not ready to focus on your face. During these light sleeps, you will see irregular breathing, sucking movements and occasional eye openings. Your baby may respond to voices and other noises and should be sleeping 22 to 23 hours per day.

**30 to 33 Weeks Gestation:**

Your baby's sleep is now cycling regularly between active and quieter stages. They are still unable to reach a deep sleep, but they do enter a quieter stage, which helps them grow and develop. Your baby still needs approximately 21 to 22 hours of sleep a day.

**34 to 36 Weeks Gestation:**

Babies at this age still sleep 18 to 20 hours per day – only a few more hours than full-term infants who need 16 to 17 hours of sleep per day. At about 35 to 36 weeks, your baby will begin to experience very deep, quiet sleep, which is essential for growth and development of the body and brain.



# Parenting in the NICU

Parents are very important members of a baby's healthcare team! Some of the ways you can play an active role in your baby's care include communicating with staff members, feeding, bonding, touching and spending skin-to-skin (kangaroo care) time with your baby. Below are some suggested ways to participate in your baby's care.

## Visit:

Visit your baby when you can and take photos to share with others. When your baby is ready for stimulation, you can softly read, sing or talk to them.

## Taking a Temperature:

Premature babies may not have enough fat to keep themselves warm. Take their temperature before you take them out of the incubator or bed and again when you put them back. This tells you if they can maintain their own body temperature.

## Changing Diapers:

If you are changing diapers while your baby is in the incubator, you may feel a little uncoordinated – it's normal! Their bodies may be a little floppy and difficult to lift if they were born prematurely.

## Touch and Hold:

At first, a touch may be too stimulating for your new baby. Offer a finger to grasp or hold their hand in yours. You can also use containment holding and kangaroo care.

## Bathing:

At first, your baby will get a small sponge bath with warm water. As your baby grows, they will become ready for more frequent baths (at least every four days), which can be both cleansing and therapeutic. This is a great bonding time for parents.

## Dressing:

When your baby is able to wear clothes, you can begin dressing them. We provide the clothes and blankets for your baby while they are in the NICU. Please keep your personal baby clothes and blankets at home, ready for your baby when they come home.

## Mouth Care:

You can begin mouth care right away. Using your breast milk for oral care helps prevent infection. Your baby can absorb immune cells and nutrients from your colostrum. It only takes a few drops, so save a small amount of milk for mouth care when you pump or hand express.



# Communicating with Your Baby

Even though your baby can't speak to you yet, they can communicate. Your baby's cues, or signs, can tell you what they can tolerate and what mood they are in. These signs will be subtler than in a full-term baby. Your baby will also develop skills to soothe and comfort themselves. As your baby grows and matures, their skills will change. See below for an outline of what these cues will look like.

## **"I'm ready to interact."**

- Alert, eyes are open
- Can focus on your face
- Regular breathing pattern
- Relaxed face, arms or legs
- Cooing

## **"I'm soothing myself."**

- Clasping their hands
- Sucking on their hands or fingers
- Tucking their arms and legs close to the body
- Resting their feet on something for support
- Going into a light sleep state

## **"I'm feeling stressed."**

- Changes in breathing pattern or an increased need for oxygen
- Changes in vital signs, like an increase or decrease in heart rate, oxygen saturation or blood pressure
- Hiccups, fussing or crying
- Yawning, looking exhausted
- Frowning or grimacing, won't look at you
- Arms or legs stretched out stiff, hand up as if to say "stop"
- Arched back and neck

When you see one of the signs of stress, it means that your baby needs either a change in activity or rest. Limit the stimulation your baby is receiving and use some comfort measures. Premature babies are very sensitive and can only handle one kind of stimulation at a time. For example, either talk to your baby or hold them. Doing both at the same time may cause your baby to feel stress. As a baby grows, they will develop more socialization skills. Following the cues will help you learn the best ways to communicate with your baby now.





# Understanding Pain

It can be hard to tell if a baby is feeling pain. Sometimes babies, especially preterm babies, can't let us know what they are feeling. Your baby may have some painful experiences while in the NICU. Know that it is very important to the care team that they minimize any pain and do everything they possibly can to keep your baby comfortable.

## Signs that your baby might be in pain include:

- Crying, a worried face or a frown
- Tightly fistled hands or feet
- Higher than normal heart rate and blood pressure
- Change in oxygen levels when touched or handled

Procedures that may cause pain include heel sticks and IV or chest tube placement. Infants placed on a ventilator can be uncomfortable and may need pain medication. The healthcare team uses a method called the Premature Infant Pain Profile (PIPP) to assess a baby's pain. Please feel free to talk to the nurse if you have any questions or concerns about pain.

## Non-medical ways to handle pain:

Sucrose is a sugar used to provide short-term pain prevention and management for procedures like heel sticks, feeding tube placement, vein sticks and shots. Placing a few drops of sucrose on the baby's tongue with a dropper or pacifier can help control pain before, during and after a procedure. Swaddling, nesting, hand hugs and verbal reassurance can also help calm an uncomfortable or fussy baby.

## Medications to prevent and treat pain:

Treatments and procedures known to cause pain can be treated with narcotics given through an IV tube. The medication can either be given slowly and continuously through the IV or only when the baby shows signs of needing comfort. Some babies will need to receive narcotic medications for a short period of time. When no longer needed, medication will be gradually reduced to prevent symptoms of withdrawal. This does not mean your baby is addicted to the medicine, just that their body has gotten used to it.

## Using a pacifier:

Non-nutritive sucking (sucking without taking milk) has many benefits for preterm or ill infants, especially during gavage feedings through a feeding tube. A pacifier or an emptied breast (called nuzzling) can give your baby these benefits. Although pacifier use soon after birth has been linked with breastfeeding problems in healthy term infants, no adverse effects have been reported for preterm/ill babies. Talk with your baby's nurse or healthcare provider about when you can begin nuzzling during gavage feedings.

Pacifiers and bottle nipples can help babies learn to suck. Using a pacifier can also provide comfort during painful procedures. You can expect to see your baby using bottles and pacifiers in the NICU.



# Comforting Your Baby

Having you close can be very comforting to your baby, but every baby is unique and special. Some babies like to be held, talked to, massaged or given a pacifier. Some babies like to be wrapped snugly or nestled between your hands. Some babies prefer to be left alone. Your baby's nurse will help you decide what works best for your newborn. Keeping the area quiet and lowering the lights can also be helpful.

## Ways to help calm and comfort your baby include:

- Holding your baby quietly skin-to-skin (kangaroo care)
- Hugging your baby with your hand
- Swaddling your baby in a blanket
- Placing your baby in a position that cradles them
- Providing boundaries with positioning aids
- Offering your baby a pacifier
- Letting your baby hold your finger
- Shielding their eyes from bright lights
- Decreasing the noise around your baby's bed
- Speaking or singing softly to your baby
- Offering a cloth that smells like you or your breast milk
- Giving your baby some quiet time alone

Note: Placing your warm hands gently on your baby is soothing and calming. However, please note that premature infants prefer not to be stroked, tickled or rubbed. Their neurological system is not ready yet for this type of touch.



**Hand Hug:** Place one hand around the baby's head and your other hand supporting their feet. Hand hugs help your baby curl up and relax.



**Containment:** Move your baby into a curled position with their legs flexed and help them bring their hands up to their mouth.

# Kangaroo Care

Kangaroo care (or skin-to-skin) involves holding your baby, who wears only a diaper, skin-to-skin on your bare chest. There are many positive benefits to providing kangaroo care.

## Kangaroo care helps your baby:

- Stay warm
- Gain weight
- Sleep better
- Learn your smell
- Stabilize their heart and breathing rates

## Kangaroo care also helps with:

- Breastfeeding by increasing your milk production
- Increasing the length of time (in months) your baby will breastfeed
- Lowering stress hormones in you and your baby
- Growth and development of brain function

## Preparing for kangaroo care:

- Use the bathroom before you begin
- Wear clothing that will make it easy (no bra, a button-down shirt)
- Remove all jewelry
- Do not wear perfume
- Dress your baby in only a diaper
- Plan on one to three hours – longer is better

## How to safely hold your baby skin-to-skin:

- Sit up elevated, not lying flat
- Support your arms with pillows
- Lay your baby chest-to-chest with you
- Cover your baby with a blanket
- Make sure your baby has their:
  - o Head under your chin (kiss the head)
  - o Head turned to one side
  - o Chin up, not on their chest
  - o Face visible and not covered by a blanket
  - o Body tucked with a blanket or approved wrap
  - o Legs bent or flexed





# Proper Positioning of Your Baby

In the womb, babies curl into a snug little ball (fetal position) and can feel their “home” on all sides.

Your baby may have to stay on their tummy or back immediately after birth, but in time they will benefit from a variety of positions that help their muscles develop and give them a sense of security. These containment positions mimic the womb by limiting movement and giving babies something to push against to help develop their muscles.

Babies who don't have the energy to keep themselves in a healthy position can be positioned by building a nest around them using positioning aids. Your baby will be placed in a variety of positions to encourage growth and development.

## A baby who is correctly curled (“flexed”) will have:

- Chin tucked into chest
- Rounded trunk
- Forward and rounded shoulders
- Legs bent at the knees and hips
- Thighs resting on or near the tummy
- Arms bent and tucked in close to their sides
- Hands near chest, head or face



# My Mom Pumps for Me

## Why Breast Milk

- Easier for your baby to digest than formula. While formula may be an important part of your nutrition plan, it is not the same as human milk.
- Full of good microbes to assist with digestion and growth factors that help your baby's digestive system mature.
- A source of antibodies that help prevent and fight infections. Because of this, breast milk is often called a baby's "first medicine." It is especially important when it comes to preventing complications from necrotizing enterocolitis (NEC), a dangerous newborn intestinal infection.
- Research shows that premature babies who receive breast milk go home sooner and with fewer complications than formula-fed infants.

Pump early! Pump often! Empty breasts = more milk!

## Getting Started

No matter how early your baby is born, your body has already started preparing to breastfeed.

- Start pumping as soon as possible after delivery. Pump at least eight times per 24 hours, and at least once during the night. The first few days you will likely only get drops. That is expected and it's okay!
- Combine hand massage/expression along with pumping for at least 15 minutes each session. When your milk starts to come in after a few days, continue to pump until your breasts are "empty" or feel softer (which may last longer than 15 minutes).
- Use hand massage to move milk through the ducts if you feel lumps. Hand expression will also help increase your supply, as you can feel the milk ducts that contain breast milk that the pump didn't empty. Using both techniques of hand expression and pumping are necessary to obtain a good supply of your designer breast milk, made especially for your baby!

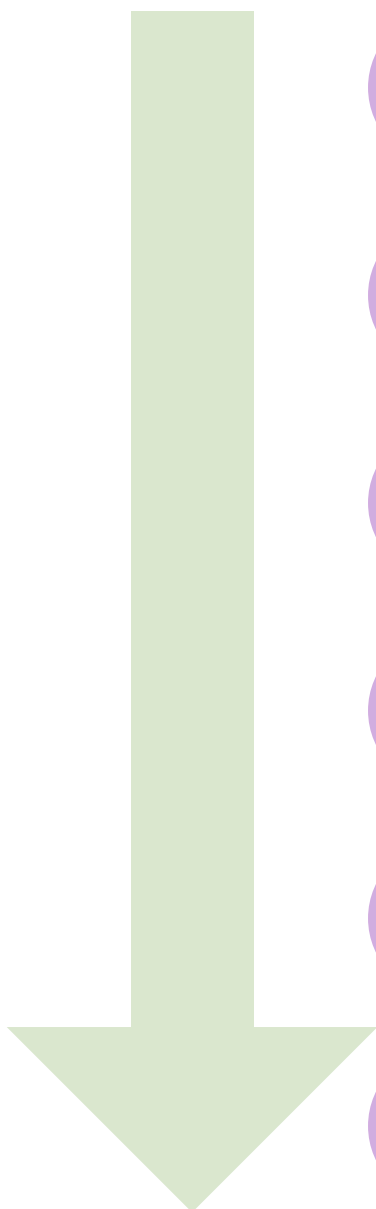
## Skin-to-Skin

When you visit your baby, request to hold them skin-to-skin. Your partner can request this as well. Experiencing this bonding every day will increase your milk supply and help your baby get ready to breastfeed.

## Your Goals are Our Goals

If your goal is to be discharged from the NICU directly breastfeeding, we will help you reach that goal. If your goal is to provide breast milk by bottle, we will help you with that also. Some moms go home both breastfeeding and bottle feeding. No matter how you feed your baby, remember that you are a great mom!

# Seven Steps to Successfully Providing Mom's Own Milk in the NICU



## STEP 1

Start to pump within 6 hours of delivery.

## STEP 2

Obtain a double electric pump for use at home before you are discharged from hospital.

## STEP 3

Keep pumping every 2 to 3 hours or 8 to 10 times a day.

## STEP 4

Hold your baby skin-to-skin as often as possible.

## STEP 5

Seek help if you are not making at least 500 ml of milk each day (about 16.5 ounces) by the time your baby is 14 days old.

## STEP 6

Have your baby nuzzle at your breast during skin-to-skin.

## STEP 7

Start breastfeeding when your baby is ready to feed by mouth.



# Human Pasteurized Donor Milk (HPDM)

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## What is recommended?

Studies have shown that mom's own milk is best for their babies. When mom's own milk is not available, human donor milk is the next best thing. The medical team will discuss this with you if your baby meets the criteria and is eligible to receive human donor milk.

## What is it?

Human Pasteurized Donor Milk (HPDM) is breast milk that is donated by healthy lactating women. It is heat treated or pasteurized from a certified milk bank. By heating the milk, any bacteria or virus that may be in the milk is destroyed to make it safe for your baby. This milk is easier to digest, has active hormones to help your baby's immune system and supports brain development.

## Is pasteurized human milk safe?

Healthy donors go through a very thorough screening process. All mothers must meet strict criteria to donate from the Human Milk Banking Association of North America (HMBANA). All donors:

- Have a verified medical history
- Provide a written health history
- Do not smoke or drink alcohol
- Do not take any medication (including over the counter) that is not approved
- Have physician approval to donate
- Have negative test results for HIV, Hepatitis B, Hepatitis C, HTLV and Syphilis

## How does it help my baby?

Human milk helps protect premature babies from a serious gut infection called necrotizing enterocolitis or NEC. There is no other medicine or formula that can do this.

The special nutrients in human milk that are not found in formula protect your baby by helping them:

- Fight infection
- Improve digestion
- Prevent allergies
- Improve brain development
- Improve eye function

## What are the alternatives?

Infant formula is an alternative to human donor milk if mom's own milk is not available. However, formula does not have the same protective factors as human milk.

Talk to someone on your baby's healthcare team or your lactation consultant if you have further questions about donor milk.

Note: We do not recommend unpasteurized breast milk that is not from a certified milk bank.

# Going Home

It's the day every family is waiting for – going home! The answer to the question “when can I take my baby home?” will be different for every baby. To ensure your baby thrives outside of the NICU, there are several things that need to happen before your baby can be discharged (released) from the hospital. You and your baby may have items to accomplish for several weeks to prepare for that big day, outlined below.

## Your Baby's Checklist

- Breathing on their own (some babies may go home on oxygen therapy)
- No incidents of apnea and bradycardia or changes in color (some babies have a home apnea monitor if the episodes do not require intervention)
- Maintaining a normal body temperature in an open crib
- Feeding well from the breast or bottle
- Gaining weight steadily
- Passed the car seat challenge test (if your baby was born before 37 weeks gestation)
- Screened for hearing

## Your Checklist

### Weeks before discharge:

- Learn what kind of car seat is best for your baby
- Schedule a Parent Discharge Class
- Baby-proof your house
- Learn about safe sleep
- Activate your baby's health insurance
- Choose a healthcare provider for your baby to see after they come home
- Spend time taking care of your baby in the NICU so you feel prepared to do it at home

### Days before discharge:

- Ensure your baby's car seat is properly installed in your car
- If your baby is going home with medications, have the prescriptions filled
- If your baby will need medical equipment, make arrangements with the company providing it
- Schedule an appointment for follow-up with your baby's doctor

Thank you again for entrusting us with your baby's care. We are honored to be part of your family's journey. You can do this!



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# Glossary

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The below are common terms regarding your baby's care that you may encounter in the NICU. If you have a question about a term not included in this list, please ask your baby's healthcare team.

**Antibodies:** Proteins produced by cells in the body to fight infection.

**Apnea:** A pause in breathing for 15-20 seconds. This is very common in a premature baby.

**Bacteria:** A one-celled organism visible only through a microscope. Bacteria live all around us and within us and are important because they can cause illness.

**Bili lights:** Blue lights that are used to treat jaundice (soft eye shields are placed to protect the eyes). Also see 'Phototherapy.'

**Bilirubin:** A yellowish substance formed during the normal breakdown of old red blood cells in the body.

**Blood gas:** A blood test to check how well your baby is breathing.

**Bradycardia (Brady):** A slow heart rate.

**Breastfeeding:** To feed a baby from your breast. Immune properties in the breast milk can help the baby fight off infections.

**Cardiopulmonary monitor:** A machine that tracks heart and breathing rates.

**Chest tube:** A tube that is placed in the chest to remove air that has leaked out of the lung.

**Colostrum:** It is the forerunner to breast milk and may be yellow to almost colorless. It is present in the breasts during pregnancy and the initial fluid that baby will receive for approximately three days until breast milk is established.

**Continuous Positive Airway Pressure (CPAP):** A machine that blows pressurized air into the lungs through small tubes in the baby's nose. The air sacs in the lungs are kept open to help the baby breathe.

**Desaturation:** A drop in the oxygen level in the blood.

**Echocardiogram:** A painless test that uses sound waves (an ultrasound) to examine the heart.

**Endotracheal (ET) Tube:** A small plastic tube that is inserted into the baby's mouth and helps the baby to breathe when the tube is connected to a ventilator.

**Feeding cues:** Signs that let you know your baby is hungry. These can be lip smacking, mouth opening and hand-to-mouth motion.

**Gavage feeding:** Feeding through a flexible tube that goes through the nose or mouth into the stomach.

**Hyperglycemia:** High blood sugar.

**Hypoglycemia:** Low blood sugar.

**Incubator:** A clear plastic, enclosed crib in which babies are placed to keep them warm and to decrease the chance of infection.

**Intravenous (IV):** A tiny tube (catheter) placed into a vein, usually in the hand, foot or the scalp. The baby gets nutrition and medicine in the IV. Splints are used to keep IVs from accidentally getting knocked out of place.

**Jaundice:** The skin and eyes appear yellow from excess bilirubin in the blood. Very common in babies. It is treated with phototherapy.

**Kangaroo care (skin-to-skin):** A method of holding a baby that involves skin-to-skin contact. The baby, who is naked except for a diaper, is placed in an upright position against the parent's bare chest.

**Late-preterm infant:** A baby born between 34 and 36 completed weeks.

**Mechanical ventilation:** Use of a machine called a ventilator to help a baby breathe.

**Nasal cannula:** Soft plastic tubing with prongs that is placed in the baby's nose and delivers oxygen.

**Necrotizing Enterocolitis (NEC):** A severe problem with the intestines. The cause is not well understood. It is usually treated with antibiotics.

**Phototherapy:** Blue lights that are used to treat jaundice (soft eye shields are placed to protect the eyes). Also see 'Bili lights.'

**Premature baby:** A baby born at less than 37 weeks of pregnancy.

**Pulse Oximetry (Pulse Ox):** A small red light wrapped around the baby's hand or foot to monitor oxygen in the blood.

**Radiant warmer:** An open bed with overhead heating to keep the baby warm.

**Rounding:** Daily rounding involves various disciplines coming together at the bedside to discuss your baby's condition and coordinate care. Your baby's doctor or nurse practitioner leads the rounds. Parents are encouraged to be present.

**Tachycardia:** Fast heart rate.

**Tachypnea:** Fast breathing rate.

**Transition of care:** Nursing shift change when your baby's outgoing nursing team discusses your baby's care with the incoming nursing team.

**Ultrasound:** A painless test that uses sound waves to show pictures of tissues in the body.

**Umbilical catheter:** A thin tube that is inserted into an artery or vein in the belly-button, through which fluids and medicines can be given.



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