PRINCETON NASSAU
PEDIATRICS

Newborn Manual

Congratulations! Princeton Nassau Pediatrics (PNP) is excited to welcome you and your family into our practice. We are a group of board-certified pediatricians whose mission is to provide the highest level of care to the children in central New Jersey and the surrounding area. We pride ourselves on establishing lasting relationships with our patients and their families by providing comprehensive care from infancy through adolescence and into young adulthood. While this is an exciting time, the infancy period can also be stressful and challenging. This newborn manual is intended to provide guidelines, answer common questions and offer support. Thank you for choosing us, and we look forward to caring for your family.

Sincerely,

The Doctors and Staff of Princeton Nassau Pediatrics

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Logistics After Birth

Notify your insurance company of the birth of your newborn as soon as possible. This will ensure that the coverage of your newborn starts immediately and will help you avoid receiving bills.

If delivering at Penn Medicine Princeton Hospital, identify Princeton Nassau Pediatrics as your child's pediatrician to the nursing staff. A Princeton Nassau Pediatrics pediatrician will meet you and examine your baby every morning the baby is in the hospital. He or she will also tell you when to make your first office appointment.

If delivering at another hospital, please notify the pediatric hospitalist who examines your baby in the hospital that Princeton Nassau Pediatrics will be your child's medical practice. Please call our office to schedule your baby's first office appointment at 609-924-5510 on the morning of the baby's discharge from the hospital. Please specifically request a summary of all pertinent birth information and bring all paperwork from the hospitalization with you to your first appointment.

If you have any further questions, please call our business office at 609-799-4311.

At your first office appointment, you will be given information about Princeton Nassau Pediatrics' financial policy, privacy practices and online patient portal registration.

On our website (*www.princetonnassaupediatrics.com*) you will find:

- Our locations, hours and contact information
- Our physicians' pictures and short bios
- Parent resources - including age specific guides to your child's health, dosage charts for common medications, mental health resources and the immunization schedule
- Log-in access to our Patient Portal where each family can access their child's growth charts, immunization records, lab results and forms/letters from the physician. Through the portal you can also ask non-urgent medical questions to our nurses, contact the business office, request refills for medications and request referrals.
- Online payment option for bills
- Sign up for our patient email listserv. This is highly recommended as we will keep you informed about essential things related to your child, office updates and important announcements.

Breast Feeding

The American Academy of Pediatrics recommends that infants be exclusively breastfed for the first 6 months of life and then continued breastfeeding along with introducing complementary foods up until 1 year of life or longer. There are many benefits of breastfeeding including that breast milk contains the mother's antibodies which provide the baby with protection against infections. While breastfeeding is strongly encouraged, we recognize that breastfeeding is not always the best option for families. Breastfeeding is hard work and can be a great source of anxiety in the infancy period. If you are interested in breastfeeding, it is highly recommended for you to familiarize with breastfeeding before the baby is delivered in order to help you have a better experience. Lactation consultants at the hospital are available to help advise you during the initial days of breastfeeding. Your pediatrician and lactation consultants outside of the hospital will provide continued support in the home setting. While it is impossible to provide all the information about breastfeeding in this manual, below are pearls of information about breastfeeding.

The Initial Days of Breastfeeding

During the first few days after birth, breasts produce colostrum which is thick, yellow milk which is supplied in low volumes but is very rich in antibodies, fats, carbohydrates and protein. Colostrum typically provides enough volume of fluid for an infant to stay hydrated. In order to ensure milk volume increases, it is recommended to latch the infant every 2-3 hours (which amounts to 8-12 times in a 24 hour period). All babies are expected to lose weight in the first days of life when only drinking colostrum. While weight loss is normal, it is closely monitored by the pediatrician. If a baby loses too much weight, expressed breast milk and/or formula supplementation may be needed to ensure the infant stays hydrated.

Early challenges of breastfeeding include latching issues and sore nipples. For latching, it is important that the baby's mouth is opened wide, the nipple is placed on the palate (roof of mouth), and the bottom jaw is used to massage the milk out. Nipples should be cared for at the first latch in order to avoid future damage and cracks. If the latch is painful, unlatch the infant by sliding your pinky finger into the baby's mouth to open the gums and relatch. Moisturize the nipples after latching with nipple cream. Nipple gel pads are very soothing and also provide a barrier from the bra so that the bra's fabric cannot further irritate raw areas of the nipple. Nipple shields can be used to help a baby latch or stay latched to the breast. Sometimes nipple shields are used to reduce pain if nipples are very raw and cracked. For troubleshooting all initial breastfeeding issues, it is highly recommended to speak to a lactation consultant.

Typically within 4-6 days after birth, a mother's colostrum matures into white milk and the volume of milk substantially increases. As the baby grows and becomes better at breastfeeding, the feeding sessions will be more efficient. In the beginning, it is normal for a breastfeeding session to take about 30-45 minutes. With the recommendation of feeding every 2-3 hours when the baby is still below birth weight, it is common for there to only be a 60-90 minute period of time

after a feeding session before the baby should be latched to feed again. Also, it is normal for an infant to cluster feed and latch on and off frequently. This feeding cycle can be incredibly challenging for parents as the sleep deprivation intensifies. Once the baby gains back their birth weight, the baby can sleep for longer periods at night and does not need to be prompted to feed every 2-3 hours at night.

Pumping Information

Pumping is a great option for many families. Some mothers choose to strictly pump and provide their child with expressed breast milk as opposed to breastfeeding. Other mothers opt to both breastfeed and provide expressed breast milk from bottles. Giving expressed breast milk is a great way to let a non-lactating parent or guardian participate in feeding and provide the lactating mother a break. Families who choose to do a mixture of breastfeeding and bottle feeding of expressed breast milk often voice concerns about nipple confusion. Typically, this does not cause too much of an issue. However, all infants are different and some babies may develop a strong preference for either breastfeeding or bottle feeding. If you are interested in having your baby take a bottle and breastfeed, it is recommended to introduce an occasional bottle after a week or two of breast feeding. For more information and questions, please ask your pediatrician and/or lactation consultant.

All health insurance plans are required by law to cover the cost of a breast pump. Plans differ dramatically in what is covered- from manual to electric, new pump vs rental pump, and when the pump can be delivered (before or after the birth of the child). Please contact your insurance company for more information. Health insurance plans are also required by law to provide breastfeeding support. Typically this is in the form of fully covered or partially covered appointments with a lactation consultant. Please contact your insurance company for more information.

Breast Milk Care

Breast milk freshly expressed can be kept at room temperature for up to 4 hours before use. If the breast milk will not be used right away, you can either refrigerate or freeze the breast milk. See chart below for storage guidelines. When warming up breast milk for a feeding, place the bottle of milk in a mug/bowl of lukewarm water for a few minutes to bring the milk to body temperature (99F). Never microwave or heat the breast milk on the stove- this will damage the antibodies and other proteins in the breast milk, as well as increase the risk for burning the infant's mouth.

Breast Milk Storage Guidelines per CDC

Type of Breast Milk	Countertop 77°F (25°C) or colder (room temperature)	Refrigerator 40°F (4°C)	Freezer 0°F (-18°C) or colder
Freshly Expressed or Pumped	Up to 4 Hours	Up to 4 Days	Within 6 months is best Up to 12 months is acceptable
Thawed, Previously Frozen	1–2 Hours	Up to 1 Day (24 hours)	NEVER refreeze human milk after it has been thawed
Leftover from a Feeding (baby did not finish the bottle)	Use within 2 hours after the baby is finished feeding		

Formula Feeding

While the American Academy of Pediatrics recommends breastfeeding, there are numerous circumstances for which formula is the best option for the baby and their family. Iron-fortified infant formulas are safe and excellent alternatives to breast milk. There is no single brand or type recommended. Depending on medical conditions diagnosed in the baby, a special type of formula may be required later on. Of note, European formulas are not regulated by FDA and also tend to have less iron fortification that do not meet FDA standards.

Formula comes in powder or ready to feed liquid options. Powder formula is significantly less expensive and safe to use. For powder formula, read the instructions very carefully to learn how to properly make a bottle. Most formulas require 1 scoop of unpacked, level powered formula per 2 ounces of water. Always fill the required amount of water into the bottles first, before adding the powdered formula to ensure the correct concentration. Be cautious to keep the can and scooper clean to prevent bacterial growth. Never give a newborn pure water as it puts infants at risk for seizures.

For heating bottles of formula, follow the same technique for heating breast milk. Put the formula bottle in a mug/bowl of warm water for a couple minutes to allow the formula to warm up. Bottle warmers may be used but can be dangerous as they increase the risk for accidental skin burns (for both parents and children).

Cleaning Care for Infant Feeding Items

Bottles, nipples, pumping equipment and pacifiers should be kept thoroughly clean. Typically washing these items in hot, soapy water and allowing to air dry, or washing in the dishwasher on a high heat setting and heated drying cycle is sufficient. Sanitizing provides extra protection by removing more germs. It is important to sanitize feeding items if your child is premature, has a

weakened immune system or is younger than two months old. For sanitizing, you can place feeding items in boiling water, steam the items in the microwave or use bleach for cleaning. Infant product sanitizers are available at most baby stores/websites.

For further information on cleaning, please visit:
https://www.cdc.gov/hygiene/about/clean-sanitize-store-infant-feeding-items.html

For further information on cleaning a breast pump and its parts, please visit:
https://www.fda.gov/medical-devices/breast-pumps/cleaning-breast-pump

Weighing In

All babies lose weight after birth. Losing up to ten percent of birth weight is considered normal. Weight is closely tracked during the first 2-3 weeks of life to ensure the baby is staying hydrated and getting enough nutrition to grow. Your pediatrician will measure and review the baby's weight with you at every visit. If the baby loses too much weight, there may be concern for dehydration and possibly other medical conditions causing poor growth. At this time, the pediatrician will discuss supplementing feeds and recommend the appropriate medical work up required for that baby's specific clinical situation.

Urination and Stooling in the Newborn

The urine and stool output are closely monitored by nurses and physicians in the hospital and in the first visits in the office. The number of wet diapers is a marker of the baby's hydration status. It is typical within the first week of life to expect the same number of wet diapers for how many days old the baby is. For example, if the baby is three days old, it is expected the baby will give three wet diapers within a 24-hour period. After a week old, babies tend to have at least 7-8 wet diapers a day. Sometimes an orange or light red substance can be seen in the early diapers. This is a normal urinary crystal which resolves.

Stool is checked to make sure the baby passes meconium (thick, green, sticky stool) and to ensure the stool transitions to a more watery, yellow/green/brown, thin, seedy stool. Stools that are white or red are not normal and need to be discussed with the pediatrician immediately. Normal stools are very watery and with absorbent diapers, you may only notice a small yellowish stain on the diaper. In the first few weeks of life, babies can poop up to 8-10 times a day. Over the first month of life, stools decrease in number. Breastfed babies can sometimes go up to 7-8 days without pooping and this can be normal. Breast milk is so well absorbed in the body that very little is left over to make stool. If you notice a great deal of mucus in the stools or flecks of blood in the stool, discuss this with your pediatrician.

Vaginal Discharge

Due to the maternal hormones that are within the baby girl's body, the baby girl's vagina can produce a white discharge and even shed a small bloody discharge (a mini period) from the baby's uterus. This is normal and decreases over time as the maternal hormones dissipate.

Circumcision & Care

If you desire a circumcision for your son, it is best to be completed in the hospital when they are just a couple days old. As the baby grows, the circumcision can be done at a later point but may require sedation and/or anesthesia depending on his age and the urologist performing the procedure. After circumcision is completed, apply liberal amount of petroleum jelly over the tip of penis at every diaper change for 5-7 days. You can stop applying the petroleum jelly when the redness disappears. You can wash penis with soap and water 7 days after the procedure.

Bathing and Umbilical Cord Care

Your baby will receive a sponge bath in the hospital. Infants should continue to receive sponge baths until the umbilical cord falls off (which typically occurs by week 2-3 of life). Umbilical cords should be left alone until they fall off. Try your best to keep them dry and away from dirty diapers. Umbilical cords do not need to be cleaned with alcohol or medication. Do not pull them off. If the umbilical stump has redness, pus, active bleeding, redness that is spreading on surrounding skin, or a foul odor, the baby needs to be seen immediately as these can be signs of serious infection.

Once the cord has fallen off and the belly button looks dry, the baby can have a traditional bath. Always make sure the water is a lukewarm temperature and double check the temperature with your hand before inserting the baby in the water. Never leave a baby or child unattended in water and always stay within arms reach to ensure the baby's safety.

Skin Care

Babies can have a variety of rashes in the newborn period. Most rashes are normal and do not require treatment. Neonatal acne, cradle cap and milia are the most common skin findings. If you see little red pimples, do not pop them as this increases the risk of infection. If you have a question or concern about your child's rash, please ask your pediatrician.

Diaper rashes are very common and caused by irritation (from the poop and pee itself) and/or a fungus that is on the skin. For all red, irritated skin in the diaper region, it is best to treat with a diaper cream or ointment that acts as a barrier to protect the skin and allow time for skin to heal. Petroleum jelly or zinc oxide is an excellent barrier ointment. It may be advised to avoid wipes with diaper rashes and gently dab the genital area with either a warm cloth or cotton balls to remove urine and feces. Baby powder can be harmful to an infant's lungs if inhaled and is not recommended. Fungal rashes can be treated with antifungal cream and sometimes require a

prescription strength cream. If there are areas of red, open sores on the bottom, the pediatrician may prescribe a steroid cream to hasten healing and decrease inflammation.

Bilirubin and Jaundice

Jaundice is the medical term for the common yellowing of a newborn's skin after delivery. It is caused by a build up of a metabolite called bilirubin in the baby's body. When inside the mother's uterus, the mother was clearing away the bilirubin for the baby. After birth, the baby must get rid of the bilirubin on its own through peeing and pooping. Because the baby has not used their gut before in this way, sometimes there is a delay in how well the baby can get rid of bilirubin. Other factors that affect the level of bilirubin in the baby's body include prematurity, dehydration, family history of jaundice, race, blood types, bruising from birth trauma and inadequate feeding. If there is too much bilirubin that builds up in the baby's body, the bilirubin can cross into the brain and cause permanent, neurologic damage called kernicterus. Kernicterus is a never event, meaning that it should never happen because it is entirely preventable. The treatment is phototherapy which is given in the hospital if needed. Pediatricians test bilirubin levels in the hospital and sometimes continue to track them in the office until they reach a safe level. If the bilirubin level is ever too high, the baby will be readmitted to the hospital for proper phototherapy treatment to drive down the bilirubin to a safe level.

Safe Sleep

Tragically, between two and three thousand babies in the United States die unexpectedly while sleeping each year. Often their death is attributed to sudden infant death syndrome (SIDS) secondary to suffocation or strangulation. While there is no way to prevent SIDS, pediatricians and researchers have found safe sleep guidelines which dramatically reduce your child's risk of SIDS. The ABC's of safe sleep include: Alone, Back and Crib. Babies should always sleep alone in their own sleep space. Do not sleep in the same bed as the baby. Babies should always be placed on their back. Placing children on their back to sleep reduces the risk of SIDS by 50%. And conversely, placing your infant on their belly to sleep doubles the risk for SIDS. Finally, babies should sleep on an entirely flat surface, such as a crib or bassinet that meets current standards. Keep the sleep space completely free of loose blankets, bumpers, and toys. Other preventative measures against SIDS include not overheating/overdressing the baby, not overheating the baby's sleeping room, not smoking while pregnant, not smoking around the baby and breastfeeding. Use of a pacifier has also been shown to reduce the risk for SIDS.

Sleep Training

Sleep is a common topic which is addressed with families at the well visits. Newborns can sleep for over 18 hours per day. As the babies grow, they can stay awake for longer intervals at a time. The pediatrician will help you and your partner strategize how to maximize sleep for both parents while maintaining feeding schedules and prioritizing safe sleeping habits for the infant. When the

baby is 4-6 weeks old, you can start to teach your child how to fall asleep on their back on their own. Falling asleep and self-soothing are skills which babies must learn from their caregivers. Your pediatrician will help guide you how to teach your baby how to fall asleep.

Typically, it is recommended that once the baby is fully fed and in a drowsy milk-drunk state, the baby should be put down in the crib on their back to fall asleep on their own. It will take multiple attempts and practice but over time the baby will learn how to self soothe and fall asleep without being rocked or held. This is an important skill for the baby to learn. Teaching the baby the skill of falling asleep on their own will help bring longer periods of sleep for both the baby and the parents at a later time. Your pediatrician will help teach you how to do this over multiple conversations at various well visits.

Fever Rules

A fever in an infant less than two months of age is considered to be a medical emergency. Fevers are taken very seriously and require thorough medical evaluation. A true fever for an infant is a temperature, taken rectally, equal to or above 100.4 °F or 38 °C. Hypothermia for an infant is a rectal temperature equal to or less than 96.8 °F or 36 °C, and is also considered an emergency. Rectal temperatures are most accurate. Most thermometers come with detailed instructions, but generally you should insert the silver tip of the thermometer about ½ - 1 inch into the rectum.

It is not recommended to routinely check your baby's temperature. Only check the temperature if you are concerned the baby is ill. Signs of illness include: feeling hot, excessive sleepiness, excessive crankiness, poor feeding, and less urine output. If your baby either has a rectal temperature of 100.4 °F/38 °C or higher, or of 96.8°F/36 °C or less, call PNP immediately to get medical advice.

What about…

Hiccups: Extremely common, harmless and do not bother the baby. There is nothing to do about them.

Sneezing: Also very common. Sneezing is how infants clear their noses.

Congestion: Infants have very small nasal passages so any amount of nasal congestion can make their breathing very loud (especially when they sleep). It is very common for babies to have congestion and typically not a sign of illness. You can put a few drops of saline in the nose and suction with bulb suction to remove any congestion.

Eye Discharge: Small amounts of clear or yellow discharge collected in the corner of the eye can be normal. If the white part of the eye looks red, if the eye looks swollen, or if the skin around the eye is red, call your pediatrician.

Immunizations

Pediatricians at PNP feel strongly that providing vaccines to children in order to prevent illnesses which can cause severe disease and death is one of the most important things we do every single day. Vaccines are given in accordance with the American Academy of Pediatrics guidelines. At every well visit, your pediatrician will review each vaccine your child is due for and answer all of your questions. Below is the vaccine schedule for the first two years of life. There are minimal variations tolerated to the schedule and each exception is discussed in depth between each family and their pediatrician. Gross vaccination delays and vaccine refusals will result in a family being asked to leave the practice. It is our job as pediatricians to provide the best medical care to your child and also protect all the other children in our community; we accomplish this goal through many ways, including vaccinations.

PNP Physicians recommend all patients receive COVID-19 vaccination when eligible.

<table>
<tr><th colspan="10">Vaccinations from Birth to 2 years</th></tr>
<tr><th></th><th>Birth</th><th>1 mo</th><th>2 mos</th><th>4 mos</th><th>6 mos</th><th>9 mos</th><th>12 mos</th><th>15 mos</th><th>18 mos</th><th>24 mos</th></tr>
<tr><td>Hepatitis B</td><td>x</td><td>x</td><td></td><td></td><td></td><td>x</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Rotateq</td><td></td><td></td><td>x</td><td>x</td><td>x</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>Prevnar</td><td></td><td></td><td>x</td><td>x</td><td>x</td><td></td><td>x</td><td></td><td></td><td></td></tr>
<tr><td>Polio</td><td></td><td></td><td>x</td><td>x</td><td></td><td>x</td><td></td><td></td><td></td><td></td></tr>
<tr><td>MMR</td><td></td><td></td><td></td><td></td><td></td><td></td><td>x</td><td></td><td></td><td></td></tr>
<tr><td>Varicella</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>x</td><td></td><td></td></tr>
<tr><td>Hepatitis A</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>x</td><td></td><td>x</td></tr>
<tr><td>Influenza</td><td></td><td></td><td></td><td></td><td>X - Booster after 1 month</td><td></td><td colspan="4">X - Given every winter season</td></tr>
<tr><td>RSV</td><td colspan="9">Ideally given to mother during pregnancy, otherwise given to infant soon after birth (seasonal)</td></tr>
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