



Caring for Your Premature Baby



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Home Journey

Like most parents of premature babies, you're probably both excited and anxious about taking your baby home. The time you spent at the hospital watching her[†] progress may have been a challenge. Your transition from hospital to home, and settling into a comfortable routine, will take time as well.

In the first days after your baby was born, you adjusted to the fact that she was born earlier than expected. Many parents blame themselves for their baby's premature birth. Or, they feel guilty because they don't feel like they did enough to avoid the premature birth. These reactions are normal.

During the days in the hospital, you and your baby developed bonds that will grow even stronger now that you're home. This is a lifelong process of attachment that is important to

healthy development. You'll learn more about each other with each passing day. You probably already know much more than you think you do.

The first few weeks that your baby is home will be wonderful as well as challenging. You'll have an entirely new routine. In addition to being physically tired from meeting the demands of your new baby, you may find yourself worrying about many of the things she does.

^{††} This booklet alternates between "she/her/hers" and "he/him/his" when referring to babies.



This booklet will give you guidance as to what to expect during the early months your premature baby is at home. You'll learn how to use this information to help her grow and develop.

You'll also learn some ways to help you relax and enjoy your new baby. Remember, you are an expert when it comes to your child.

- Trust what you see as a guide in deciding what to do for her.
- Simply watching her actions closely will help you understand her needs and feelings.
- If you have any questions or concerns, call your baby's doctor or nurse.

Development

You may be concerned about your baby's development. As a parent, you may have certain ideas about when your baby should smile, roll over, sit, walk and talk.

It's important for you to know that the progress of premature infants is somewhat different from that of full-term babies. While premature babies follow a similar order of development, their time schedule is different.

A baby who developed in his mother's womb for only 6 to 8 months shouldn't be compared with a baby who had a full 9 months to develop and grow.

When considering your baby's development, think in terms of his "adjusted age." You can find it by subtracting the number of months your baby was born early from his actual age.

Adjusted age gives parents and healthcare professionals a realistic view of a premature baby's progress.

A 5-month-old baby who was born 3 months early should be considered a 2-month-old from a developmental point of view.

If your baby was very sick, he may lag behind his adjusted age during his early months of life in physical or motor skill development. If you are concerned about your baby's development, call your healthcare professional or the early intervention service in your community. The more you know, the better able you will be to help your baby grow and develop to his full potential.

Adjusted Age

Your baby's actual age ___ months

— Number of months premature ___ months

.....

= Adjusted age ___ months



How Premature Babies Act

Most premature babies come home within 2 weeks of their actual due date. Even a baby who has finally reached her expected birth date still has some catching up to do. She may:

- Not give you clear signs that she's hungry or tired
- Still be weak and hard to feed
- Spend her day either sound asleep or crying, and may go from one stage to the other within seconds

Your baby's behaviour patterns may be difficult to understand at first. This can be frustrating and stressful. However, as the weeks and months go by, her nervous system will continue to develop and her actions and responses will become more predictable.

Your baby will get better at making her needs known to others, and you'll learn what certain cues mean (see pages 19-20). As with all babies, your premature baby will have stages of rapid development followed by long periods when nothing much seems to happen.

Don't be discouraged. This is normal.

- You can't motivate or push your baby to develop before she's ready.
- Don't try to force her into activities when she's tired or actively resisting. Pushing will just leave both of you frustrated.
- Offer her your companionship, your time and plenty of encouragement.
- Maintain a calm, accepting attitude toward her development.
- Focus on her progress. Whether she began walking at 12 or 20 months won't matter years from now.
- As you watch her for signs of behavioural development, always use your baby's adjusted age to judge her abilities.

Movement

Premature babies often have very uncoordinated movements. It's hard to predict how your baby will respond to you and the world around him.

- His reactions may have a jerky, startled quality, because he is still trying to adjust to changes

in his environment, or even to his own physical needs.

- He may suddenly stiffen his arms and legs or draw them inward.
- At times, he may go limp and then quickly become tense.

As he grows, these reflex actions will gradually disappear. You can help your baby control his movements by:

- Holding his arms and legs close to his body
- Making slow, gradual changes when you move him

In premature infants, the development of the senses is often faster than the development of muscle coordination.

Your baby may seem to be slow to gain control of the movement of his head or to grasp objects. However, he may show an increasing ability to respond to sights and sounds—an indicator of healthy development.

Breathing

Breathing patterns and the skin colour of premature babies can change rapidly and without warning. Observe your baby and get to know his usual breathing pattern and “normal” colouring.

- Watch his chest as he breathes.
- Count his normal number of breaths per minute.
- Listen to the noises he makes when breathing comfortably.

By being familiar with these “normal” behaviours, you’ll be better able to detect problems.

Any time you’re concerned about your baby’s breathing or colour, call your healthcare professional.

Sleeping

Your baby will do more sleeping than anything else during her first weeks at home.

At first, your baby may sleep 15 to 22 hours a day. Premature babies tend to have long sleep sessions and short wakeful periods. Your baby may come home from the hospital with her days and nights mixed up.

Keep in mind the kind of sleeping environment your baby is used to. While some babies just out of the nursery adapt easily to sleeping in a dark, quiet room, others miss the noise and lights. If your baby has trouble sleeping:

- Turn on a night light. Provide background sounds, like a softly playing radio.
- Gradually turn down the extra noise and light to help your baby adapt to your home.
- Resist the urge to play with her during nighttime feedings. Keep her attention focused on eating during this time.

When your baby reaches an adjusted age of 6 to 8 months, she’ll most likely be sleeping through the night.

Experts recommend that most babies be placed on a firm mattress on their backs for sleeping. Check with your baby’s doctor or nurse for advice on sleep positions for your baby.



Crying

Your premature baby may not cry much at first. His crying may then seem to “turn on” as your original due date (adjusted age of 0 months) nears.

Your baby’s first periods of crying may be short. He may be easily comforted by a soothing touch or something to suck on. As your baby grows, he may cry more often. In a way, crying is a good sign of your baby’s normal development.

Crying can alert you that your baby may be hungry, uncomfortable or tired. Responding to his cries helps your baby develop a feeling of trust and a sense that he can communicate with others.

Don’t worry about spoiling your baby. Give him lots of attention. In these early months, your baby needs to be held as often as you can make time to do it.

Sometimes comforting a crying baby is hard. Long periods of crying may be a sign that a baby is sick or in pain. If your baby cries for an unusually long time, you should call your doctor or nurse.

Usually nothing is wrong, but it's always wise to check.

- Full-term newborns may cry 2 to 3 hours a day during the early months of life.
- Some premature babies, especially the smallest ones, are very fussy and may cry 6 hours a day or more.

As premature babies develop, they become easier to comfort. With time, they learn to calm themselves. Fussing and crying generally reach a peak at 3 to 4 months' adjusted age. As your baby gets older, he'll probably cry less, and his periods of sleep will become more regular.





Calming a Crying Baby

First of all, make sure your baby isn't hungry and doesn't need a diaper change.

- Position your baby so that he can see you. Talk softly to him.
 - Bring his hand to his mouth, or give him a pacifier.
 - Hold your baby's arms close to his chest.
 - Swaddle him. His shoulders should be forward and his body wrapped gently but firmly in a baby blanket.
 - Pick him up. Motion usually helps, so try rhythmic rocking or walking.
 - Resist the urge to entertain him.
- He may have a low tolerance for stimulation. Instead, offer calmness.
- Give your baby a warm bath (unless he dislikes water).
 - When all else fails, put him down and let him cry it out. This is sometimes just what is needed to calm a crying baby.
 - **Never shake your baby to try to make him stop crying. Shaking your baby can result in brain damage, or even death.**



Feeding Your Premature Baby

Premature babies may not cry to be fed as full-term babies do. Because of the immaturity of her nervous system, your baby may not know when she's hungry. And because her stomach is small, her feedings need to be smaller and offered more often (about every 3 hours, sometimes sooner).

Your baby may also take longer to feed until she grows stronger and better able to coordinate her sucking, swallowing and breathing.

A premature baby needs a lot of energy for sucking. Her mouth is small, and the muscles used for sucking may be weak.

- If you're breastfeeding, you may need to give extra support to your baby's head and shoulders.
- If you're bottle feeding, you may need to use a special soft nipple designed for premature infants, which makes sucking less tiring. Your baby will eat best when she's wide awake. Help her

concentrate on eating. Until your baby gets skilled at eating:

- Feed her in a quiet room without bright lights
- Keep distractions, even talking or rocking, to a minimum

Be sure you make eye contact with her and support her head and neck with your hand or arm. Keep her comfortable—not too stretched out and not too hunched over.

Try to make feeding a comfortable, relaxed time for you and your baby. Nutrition is important to your baby's growth and development; so, too, is a pleasant feeding experience.

Your baby may have a bowel movement after every feeding, or only every 1 or 2 days. If you breastfeed, your baby's stools will be yellowish and soft—like cottage cheese. If your baby is fed formula, stools may be soft and yellow to brown/green.

Notice the normal frequency and consistency of your baby's stools so that you can recognize constipation and diarrhea.

If your baby passes hard stools or

suddenly develops frequent, watery stools, you should call your doctor or nurse.

Also notice how often your baby wets her diaper. She should have a wet diaper at least as often as she takes a feeding. If she wets fewer diapers, it may be a sign that she's not getting enough breast milk or formula.

Breastfeeding

The experience of breastfeeding and of feeding your baby your own milk offers many special benefits. Certain components of breast milk help protect babies from infection. Breast milk is an excellent source of nutrients for premature infants.

At discharge, your premature baby may still tire easily while eating and not completely empty your breasts. To ensure adequate milk production in the early weeks, it may be necessary for you to pump your breasts and feed or store the expressed milk.

In addition to the feedings at the breasts, some premature babies may need a supplement to help them grow—either a breast milk fortifier,

a vitamin-mineral preparation or a special formula. Your doctor will tell you if your baby needs one of these.

- Before you leave the hospital, make sure you're comfortable with all aspects of breastfeeding your baby.
- Make a plan with your nurse, doctor or lactation specialist as to how often you'll need to feed, and if you'll need to offer supplements.
- Early weight checks, at home or at the doctor's office, will give you the information and reassurance you need to be sure your baby is getting the nourishment he needs for proper growth and development.

Remember to get plenty of rest. Most of all, enjoy the good feeling you get from breastfeeding your baby.

Bottle Feeding

If you're not breastfeeding or expressing milk for your baby, your doctor may prescribe a special infant formula.

Experts recognize the benefits of special preterm discharge formulas containing higher levels of nutrients than standard infant formula.

The American Academy of Pediatrics[‡] has recognized that continued feeding of a preterm discharge formula to premature infants to age 9 months may improve length and weight gain compared to feeding a standard term formula.

It's possible that before being discharged from the hospital, your baby was started on Similac[®] Advance[®] Neosure[®] Infant Formula with Iron, a nutrient-enriched postdischarge infant formula for conditions such as prematurity.

To meet your baby's increased nutritional needs, Similac Advance Neosure has higher levels of calories, protein, vitamins and minerals than standard Similac Advance and should be used only as directed by your doctor.

[‡] Kleinmen RE, editor Pediatric Nutrition Handbook 5 ed ELK Grove(III): American Academy of Pediatrics 2004.

Similac Advance Neosure contains DHA and ARA, special nutrients found in breast milk that are important for an infant's mental and visual development.

Before you take your baby home, learn any special feeding techniques, and find out how much formula he should be taking in a 24-hour period.

Because your premature baby is at risk of developing iron deficiency, he'll need added iron in his diet—either through his feedings or as iron drops. Without it, he's likely to use up the iron stores in his body by 2 months of age and could become anemic.

Check with your baby's healthcare professional to find out if a vitamin supplement is needed.





Your Baby's Developing Senses

Seeing

At an adjusted age of 0 months, premature babies can best see objects 8 to 12 inches away—almost exactly the distance from their eyes to the face of the person who is feeding or holding them.

By the adjusted age of approximately 6 months, premature babies can see almost as far as adults can.

All babies notice dark-light contrasts.

- Early on, they like simple black-and-white patterns, such as a bull's-eye or diagonal stripes.
- As they get older, babies like to look at more detailed or complex patterns and bright colors.
- Like adults, babies get bored looking at one object for a long time.

Most of all, babies like to look at faces.

- The ever-changing expressions of the human face are continually interesting to them.
- Your face-to-face contact with your baby, while brief at first, will become an important source of learning in the early weeks and months at home.
- At an adjusted age of 0 months, your baby may be able to imitate smiles, frowns and other facial movements. He may even copy you if you stick your tongue out at him!

You'll become the main focus of your baby's interest and attention. Your smile, the sound of your voice and the comfort you give are critical to his development. Look for your baby's increasing responsiveness to you as an important marker of progress.

Hearing

Babies seem to like sounds that change, such as a voice or music, more than sounds that stay the same.

- Your baby will especially be "tuned" to and enjoy the sound of your voice.
- Babies enjoy soft music, especially people singing, even if it's off-key!

Although premature infants are generally screened for hearing loss prior to discharge, you should note how your baby responds to sounds.

Often a baby with normal hearing will ignore some loud noises. A consistent lack of response, however, should be brought to the attention of your healthcare provider.

Touching

You naturally touch and stroke your baby. Touching is a calming force that keeps him feeling safe and secure. Babies who like being cuddled—and most do—will usually relax and snuggle up to the person holding them. Enjoy these times.

Babies like to feel many textures. Help yours to feel the many things he comes in contact with every day—towels, diapers, water, clothes and your skin.

Tasting and Smelling

Your baby can taste and smell. Newborns seem to prefer the taste and aroma of their own mother's milk. And they will often wrinkle their noses when offered a sour substance.





Communicating

One of your baby's first accomplishments is social smiling, which begins around an adjusted age of 2 to 3 months.

To encourage your baby to smile, smile at her. Respond to your baby by smiling, talking to her or picking her up whenever she smiles at you.

Although your baby can't understand words in the early months of life, she's learning the give-and-take of conversation.

Talking to your baby is extremely important.

- It helps her learn language and serves as a basis for many other skills.
- Don't be shy about talking to your baby about everything you're doing.
- Never hesitate to express your love in words.

By an adjusted age of 7 months, your premature baby should begin cooing and babbling—her first attempts at speech.

Comfort Signals

As premature babies communicate, they give “ready” signals that tell others now is the time they want to socialize or play. When your baby is ready to interact, she may have:

- Good skin color
- A bright, alert expression
- Eye contact with wide-open eyes
- Hands that she can put together across her chest
- Her fist to her mouth
- Relaxed arms and legs

Stress Signals

Babies also have a set of “stress” signals that indicate when they need a break. When too much is happening your baby may:

- Look away
- Fuss and cry
- Hiccup
- Spit up or vomit
- Arch his back
- Stiffen his arms and legs

If you see a comfort signal, continue your activity with your baby. If you see a stress signal, slow down the activity or stop it. Give him time to relax.

For example, you may be rocking your baby while talking to him and making eye contact. If he tenses his arms and legs, or sends other stress signals, you need to provide less stimulation. Some premature babies can cope with only one activity at a time. So slow down the pace of one activity and stop the others. You might rock more slowly, stop talking and briefly look away from your baby’s eyes. This gives him a chance to relax and build coping skills.



Working With Your Baby's Doctor

- C**hoosing your baby's primary care doctor is very important.
- Be sure any doctor you interview knows that your baby was premature and received care in a neonatal intensive care unit (NICU).
 - The doctor should listen to you carefully, respect your judgment and be sensitive to you and your baby's needs.
 - Select a doctor who understands your normal feelings of fear and frustration, as well as love, as you care for your baby.

First Visits

Your baby should be seen by her doctor according to your hospital discharge plan. Be sure that all necessary medical information about your baby's stay in the NICU is conveyed to your pediatrician by the time of discharge. If you're breastfeeding, this visit needs to be early in the first week. At that time, the doctor will discuss with you how often your baby should be seen.

Be sure you know how to reach your doctor at all times. Use office visits to ask questions, discuss your baby's progress and talk about your concerns. Write down your questions ahead of time, using the space provided on page 25.

What you tell the doctor or nurse about your baby is very important. Be sure to discuss issues relating to activities, attention level, sleeping and feeding patterns, and personality.

Don't let your baby's weight or bowel movements be the only thing you talk about. Ask the doctor or nurse to explain anything you don't understand. Ask them to write down the information or repeat it until you understand it.

Immunizations

Discuss your baby's immunization schedule with your pediatrician, and don't miss scheduled visits.

Cosmetic Concerns

Premature babies commonly are born with birthmarks called hemangiomas. These "strawberry marks" are soft, red, raised areas composed of swollen blood vessels (capillaries). Toward the end of the first year, they will start to slowly disappear and usually are gone by age 4.

Other cosmetic concerns include scars from surgeries or procedures, which can seem large and unsightly on some tiny babies. Most of these become much less noticeable with time and growth.

Home Monitors

There is a growing trend toward sending premature babies home while still on apnea monitors or oxygen.

This allows babies to go home with their families a little sooner than expected.

- The home environment can help your baby's development.
- It's a much less expensive way to give your baby the care she needs.

If your baby comes home with oxygen, you'll be carefully instructed and trained how to use it. It's also important for family members and potential baby sitters to be trained and comfortable using this equipment.

Another word of caution: It's very important that no one smoke around an infant, especially when oxygen is being used.

CPR

If your baby comes home with oxygen or a monitor, infant CPR (cardiopulmonary resuscitation) may be part of the overall training you receive before leaving the nursery. This training will give you the skills to get your baby's heart and lungs working again in case of an emergency.

CPR is a skill every parent and caregiver should know.





Does Your Baby Need Testing?

Newborn Metabolic Screen

All newborn babies are tested for certain rare inherited diseases. These diseases, if untreated, can seriously interfere with a baby's development. For testing, a few drops of blood are taken from your baby's heel. Although all babies are tested in the hospital, sometimes a baby will have to be retested after going home. Check with your baby's doctor at the time of discharge or at an early visit to be sure that your baby has been tested for these rare but serious diseases.

Follow-Up Eye Exam

All premature babies, born weighing less than 1500 grams (3 lbs. 5 oz.), and those who have medical complications while in the hospital,

should have examinations by an ophthalmologist.

If your baby received a hospital eye checkup, you should ask for the results. And you should find out if or when your baby will need to see an ophthalmologist after discharge.

Follow-Up Hearing Exam

Your baby most likely had a hearing screen prior to leaving the hospital. Follow-up evaluations are often recommended. Check with your doctor or nurse to see if further testing is needed.

If you have concerns about any of these tests, check with your baby's doctor or nurse.



Practical Tips

Car Safety Seat

Always place your baby in a government-approved, rear-facing safety seat in the back seat of your car before driving anywhere. Even the tiniest baby needs to ride in a safety seat.

All provinces by law require infant car seats. Transport Canada states that you should:

- Always put a rear-facing infant seat in the back seat of the vehicle.
- Never put a rear-facing infant seat in the front passenger seat.
- If your vehicle has side air bags, see the Transport Canada fact sheet on How to Read the instructions that came with your baby's car seat.

A premature baby in a car seat will need extra support to keep her body straight so she can breathe easily. Rolled-up blankets and cloth diapers can provide padding to keep her from slumping over and will help prevent excessive movement.

Have the NICU team show you how to position your baby properly. They may monitor your baby's oxygen level and general condition while sitting in the car seat before going home. Monitoring your baby's oxygen levels while sitting in the seat can indicate if there is a problem.

Diapers and Clothes

You may want to buy diapers that are designed to fit premature infants. Your baby's nurse should be able to tell you where you can purchase these smaller diapers.

You may decide to make or have clothes made for your baby. Since your baby will soon outgrow these clothes, you shouldn't need many of them. Most large department stores and many Internet sites sell ready-to-wear clothes for premature babies. Make sure clothing meets the safety standards necessary for infant wear.

Crib

Never use bumper pads in your baby's crib and be sure that the slats on the crib are less than 6 cm apart. If the spaces are wider, his head could get caught.

- The mattress should be firm and fit snugly into the frame.
- There should be no more than a thin, tight-fitting sheet between the mattress and your baby.
- Don't put any soft, bulky items in the crib that could block your baby's breathing.

Room Temperature

Keep your baby's room at a comfortable temperature. A baby under 3.63 kg doesn't have much insulating baby fat and has trouble coping with temperature changes.

Keep your house at a low-to-mid-21°C temperature. Dress him comfortably. Check the temperature of his skin as a precaution.

- If his hands and feet are cool, pale or blue, warm him up.
- If he feels warm and looks flushed, he may be overdressed.

Because the skin of a premature baby is sensitive, keep your baby out of direct sunlight. Also, try to avoid cold drafts and extremely low humidity.

Infection Control

The fall and winter months bring colds and respiratory infections. A common and serious respiratory infection in premature babies is caused by RSV (Respiratory Syncytial Virus). Talk to your nurse or doctor before leaving the hospital about how to keep your baby from developing a severe respiratory illness from RSV.

Once you get your baby home, give yourself a few weeks of adjustment time before having company. Then, as long as your baby's visitors are healthy, there's no reason to keep them away from your premature baby. Insist that they wash their hands with warm water and soap before touching your baby. Be aware that kissing the baby can spread RSV infections. Hug her gently, or stroke her head instead.

When you do begin to take your baby out, stay away from people, places or situations where you can't control her exposure to germs. And remember, **never let anyone smoke around your baby**. Infants and children exposed to smoke have a higher than normal incidence of respiratory illnesses.

Bath Time

Keep bath time as short as possible. Premature babies lose body heat quickly.

- Check the temperature of the water with your wrist or elbow before you place your baby in the tub. Keep the room warm, and shield him from drafts.
- Use smooth, soothing motions when washing and handling him. Swaddle him in a soft towel after the bath.





Tips for Relieving Your Stress

Whenever possible, sleep when your baby sleeps. This is not a one-person job—don't be afraid to ask for help when you need it. Take turns caring for him.

- Although family and friends can be asked to hold off visiting until you and your baby have time to get settled, gladly accept their help with cooking, cleaning and running errands if offered.
- Parents need time away from their baby. Take time-outs. Privacy and recreation for you are essential if you are to continue to meet the challenge of caring for your baby.
- Many parents find that talking with other parents of premature infants lowers their anxiety and stress. For the name and location of a parent support group in your area, check with the NICU staff.

Your Baby's Future

You may wonder if premature birth will affect your baby's mental development. Most premature infants develop normally. Only a small percentage of babies born early have serious long-term problems.

Many famous people were premature infants. They include Mark Twain, Albert Einstein, Anna Pavlova and Winston Churchill.

One of the most important factors in the development of premature infants is their home environment. Your loving attention and caring will help your baby develop to his full potential.

It's easy for parents to become overly protective of their premature baby—even when the doctor or nurse has assured them that all is well. In these families, the child may become dependent and demanding. As the parent of a premature infant, you need to help your child develop emotionally as well as physically. As your baby grows, you can help him adjust by setting schedules and limits.

Stay in touch with your baby's doctor and nurses. They can reassure you about your baby's progress and help

you develop workable schedules. Having a daily routine is essential to the healthy parent-child relationship that you both need.

Abbott Nutrition joins your doctor, nurse, nutritionist and hospital in extending to you and your baby best wishes for good health and many happy years ahead.



Similac® Advance® Neosure® Infant Formula

Premature and low-birth-weight babies usually leave the hospital when their health is stable and they are growing. However, they still have unique nutritional needs after they leave the hospital.

Similac Advance Neosure was developed to help meet the nutritional needs of premature and low-birth-weight babies after they are discharged from the hospital. Similac Advance Neosure provides more protein, vitamins and minerals than formulas designed for full-term infants and helps support the rapid growth of a premature baby.

Similac Advance Neosure contains DHA and ARA, special nutrients found in breast milk that are important for an infant's brain and eye development.

Good nutrition is very important during this first year of rapid growth. Similac Advance Neosure helps meet the nutritional needs of premature babies throughout the important first year of life. In a published scientific study, premature infants fed Neosure for the first year of life had improved growth when compared to premature infants fed term formula.^{††}

Ask your doctor about your premature baby's special nutritional needs and the extra nutrition Similac Advance Neosure offers for conditions such as prematurity.



^{††} Carver JD, Wu PY, Hall RT, et al: Growth of preterm infants fed nutrient-enriched or term formula after hospital discharge. *Pediatrics* 2001;107:683-9.



The Right Nutrition at the Right Time

Similac® Advance® Neosure®

Babies grow and develop faster during the first year than at any other time. You'll want to make the most of that important first year with the right nutrition. **The American Academy of Pediatrics*** has recognized the importance of post-discharge formula in the first 9 months in preterm infants.

Similac Advance Neosure contains DHA and ARA, special nutrients found in breast milk that are important for an infant's brain and eye development.

