

**Women and Newborn Health Service
King Edward Memorial Hospital**

Information for Parents of Pre-term Babies



Government of Western Australia
Department of Health



Delivering a Healthy WA

Dear Parent,

Having a preterm baby can create a mixture of feelings for parents. You may experience feelings of guilt, grief, fear, anger and powerlessness. Having some feelings of detachment are almost universal for parents of preterm babies. Very little in our lives prepares us for the helplessness we feel as we watch our fragile newborns being cared for by medical experts. Very few people understand the specific problems facing parents of very early born babies. In WA sometimes our babies are transferred to hospitals far from home and this can make us feel alienated and lost when we are so far away from family and all things familiar.

Most babies born preterm will need to stay in hospital until they reach their due date and some for many weeks after that. The daily routine of travelling, responsibilities outside the hospital, maintaining a milk supply and coping with sometimes all-consuming fear and heartache can be a profoundly draining for parents. The NCCU environment can be a strange and stressful environment – with its bright lights and complex life support machinery and a new language you need to learn to keep pace with your baby's care.

Some suggestions for helping your baby:

Participate in your baby's care as much as possible. Be guided by the doctors and nurses as to how much your baby can tolerate initially. You can learn how your baby likes to be touched; you will come to recognise your baby's facial expressions and signals. Although your baby may look extremely fragile, once your baby is ready for more handling you can learn to bath, change and care for your baby's skin. Begin kangaroo (skin-to-skin) care as soon as your baby is stable. Parents and babies can both find kangaroo cuddles very comforting and for many it is the beginning of feeling like they really are parents after all.

There is a crèche for other siblings located at the hospital that is available between 9.00am and 4.00pm Monday to Friday. There are limited numbers of parking permits available from the Ward Clerk at the NCCU Reception. The social workers in NCCU are committed to working with parents to provide information and support during this very stressful time and through the journey of your baby's admission to NCCU.

Regards

The NCCU Social Work Team

Social Workers are available Monday – Friday 8.30 am to 4.30pm

(08) 9340 2222

The NICU journey - Some tips for parents

Record as much of the experience as possible... it may not seem like it right now, but over time the memories will fade. Keep a journal, take lots of photos and video footage (from all angles), get a print of your baby's hands and feet as early as possible and hold on to keepsakes such as your baby's first ID bracelet, one of their tiny clean nappies and their hospital sticker.

Don't be afraid to ask for help... you can speak with a social worker if you need their assistance. It's a stressful time and it helps to share your feelings with someone who is removed from the situation. If you need more support let people know, friends and family will generally want to offer their help. Alternatively if you need a break from having visitors accompany you to the nursery, don't be afraid to tell them.

Make friends with other parents... having a premature baby is one of those unique experiences that you have to live through to really understand and you'll benefit from each other's support not only in the hospital but once you get home as well.

Take time out for yourself... a day or an afternoon away from the hospital will do you the world of good. You may not yet know how long your baby will spend in hospital and when they do finally come home you'll need your wits about you!

Trust in your doctors, nurses and your own instinct... your doctors and nurses are doing everything they can to help your child, but if something doesn't seem right with your baby don't be afraid to express your concerns. Having sat by your child's side day-in and day-out you know them better than anyone.

Don't be afraid to get involved in your child's routine care... as soon as you are able to, participate in changing your baby's nappy (or cotton ball if they are very small!), cleaning their mouths, massaging them and picking out an outfit for them to wear the next day. You will both benefit from the contact and bonding these experiences provide.

Set goals and reward yourselves... celebrate all the milestones your child, and you, achieve e.g. reaching the 1kg mark. You may like to bring in a cake to enjoy with the staff and something to decorate your baby's isolette. Make plans with friends and/or other parents e.g. plan to do something special once you're no longer at the hospital.

Allow future families to celebrate with you... if you have seen the notice boards in the NICU filled with letters and posters detailing the lives of former premature patients, you will know the hope that information provides you as you travel your own journey. Make it a goal to create a poster about your child when they have graduated from the NICU and allow achieving that goal to inspire you along the way as well as inspire others once you have left.

Invest in a good bag, hand cream, hand sanitiser, expressing kit (or two) and lunch... there will be certain things you will want to take into the NICU with you every day, so ensure you have an adequately sized bag as well as one that can keep your breast milk cool if you are expressing. You will need to be particularly mindful of not introducing germs to yourself or the nursery, so having your own bottle of hand sanitiser to clean your hands on the go, and a good quality moisturiser to counteract the drying effects sanitiser or washing your hands constantly, is important. If you are expressing, invest in a good quality expressing kit or two. This does not necessarily mean buying one of the very expensive breast pumps that are available, but ensuring you have the correct kit for the pump you are planning to hire or buy and having an extra kit to reduce washing up or so you can pump both breasts at once to save time. Ordering lunch from the hospital café can prove to be very expensive over time, so try to remember to pack lunch, a drink and some snacks to take in each day.

Access the Austprem 'Discussion Forum'... at www.austprem.org.au to find other parents who have been through the NICU experience and understand what you are going through. Ask questions, get support.

Questions you might like to ask the NICU staff:

1. Clarify how you can access the Neonatologist and when is best to meet him or her.
2. What are my baby's chances of survival and long term health problems?
3. What medical problems are affecting my baby?
4. How can I get more information about my baby's problems?
5. How are these problems being treated?
6. What side effects could those treatments have?
7. Are there reasonable alternative treatments we could consider?
8. How can I get more involved in my baby's care?
9. What can I do to nurture my baby?
10. How do I find emotional support?
11. How do I find spiritual support?

Why does my baby not act like a full-term baby?

To learn about what infants do, it is helpful to think about five areas of development. These areas are parts of the whole system, the whole baby. These areas of development are controlled by the brain and develop in cooperation with each other.

Because the nervous systems (brains) of preemies are not as mature as those of full-term babies, development in these five areas is not as far along as in a full-term baby.

For example, you may find your preemie has:

- 1. Immature physiologic development:** as seen when the baby changes colour often, breathing or heart rate is uneven the baby gags easily.
- 2. Immature motor development:** as seen when the baby twitches, is tense or stiff, trembles, is limp and can't stay curled up.
- 3. Immature control over states of consciousness:** as seen when the baby can't become alert, or stay alert for long and is generally fussy.
- 4. Immature development of attention:** as seen when the baby can't focus on you, and becomes worn out trying to respond to you.
- 5. Immature self-regulation:** as seen when the baby has a hard time calming down after being disturbed, has trouble handling several kinds of things going on at the same time, e.g. having you talk and look him/her in the eyes at the same time, or talk while also feeding.

What can my baby do?

Hearing - the Auditory System

Hearing is fairly well developed by 20 weeks gestational age. By 25 to 28 weeks, the preemie responds in different ways to different sounds. For example:

- Shows more interest in voices than other sounds.
- Shows dislike (by frowning or startling) of loud noises, such as a machine alarm or loud voice.
- Can pick out the mother's voice (which he/she has heard in the womb) and prefers it over other voices.

What sounds do preemies hear?

- By 28 weeks babies can hear sounds of about 40 decibels (dB). Normal speech is usually 50 dB and whispers are 30 dB.
- At full term babies can hear sounds as soft as 20 dB, equal to what an adult with good hearing can hear.
- Babies hear sounds with low and medium pitches better than high-pitched sounds.

Seeing - the Visual System

Seeing takes longer to mature than hearing and touch, but progress occurs rapidly between 22 and 34 weeks of gestational age.

- At first, preemies spend only very brief periods of time with their eyes open, and do not focus on anything.
- By 30 weeks preemies will respond in different ways to different sights.
 - They respond to bright light by blinking or shutting their eyes, but in softer light will open their eyes and focus on objects.
 - They can scan an object with their eyes, even though they can't yet control the movement of their heads.
- Babies don't see as well as adults. They are nearsighted (can only see things up close and see best when objects are about 20-25cm away from their faces).
- Preemies take longer to focus on an object than do full term infants, and their vision is not as clear as either full-term infants or adults.

The pattern of wake states

Before 26-27 weeks, it may be hard to tell whether the preemie really wakes up. There is no alert state. Between 27 and 30 weeks the preemie is usually alert only for a very short time. When awake, the preemie is either drowsy or active awake. The time spent alert gradually increases as the baby grows, and the amount of active awake time goes down. Increasing alertness is another sign that the brain is growing well.

The baby needs to be alert to understand what he/she sees. This is a very important form of learning. Alertness is also very important for interacting with people, and is related to social development.

At full term (39-40 weeks), preemies still are not spending as much time alert as a full term baby does. However, many of the things now being done in NICUs to help preemies grow well may help them become more alert earlier.

Communicating

Your baby talks to you through his/her behaviour and you can learn to understand or 'read' your baby's behaviour. You can learn who your baby is, what his/her behaviours mean, what he/she likes and doesn't like. For example, there are cues, or signs, a preemie gives when stressed and others when stable:

Type of Cue	Example of Stress	Example of Stable
Autonomic	Colour changes, gagging, hiccups	Stable colour, sucking
Motor	Tremors or twitches, arms or legs out stiff, spreading fingers wide, arching back	Smooth movements, relaxed posture, grasping/hand-holding, loosely curled up/flexed
State	Weak or gaspy cry, can't be waked up, irritability, a lot of fussing or crying	Rhythmic or robust cry, will slowly wake up, no irritability, not much fussing or crying
Attention	Glassy-eyed stare, turning away, or abruptly going to sleep	Focused attention

'The Dark Shades in the Rainbow'

Coping with the arrival of a premature baby by Melanie Taylor

You've had a baby! Congratulations! You must be overjoyed that it's all worked out! Well, not quite like you planned but look on the bright side, you've got your baby now.

And that is the bright shade of the rainbow – this wonderful baby who tugs at your heartstrings. However for some this rainbow may also have its darker shades. This article looks at some of the colours that do not shine brightly but have become an integral part of the birth story of your baby.

No matter what the outcome, no matter how smooth the medical process, giving birth prematurely is a traumatic experience. Depending on the health of your baby, the trauma may continue for weeks or months.

It is not mandatory, but it is very normal to have a reaction to this.

In the early days, your emotions may be very raw. Pain, anger, inadequacy, loss – you may feel as though your emotions are on a roller coaster that is tied to the health of your little one. You may have a sense of chaos and confusion in those early days. There is a wish for certainty where only probabilities and possibilities can be provided. Living with the "not knowing" is something that we tend not to be very good at. We prefer certainty.

It may be that because of your own state of health you were not able to think of your baby first, but had to concentrate on your own healing. This may lead to a sense of shame – what sort of mother must I be? There may also be the secret guilt of the "if onlys". Those thoughts about how you might have been able to change events during the pregnancy to try and alter this outcome; the dark and private thought that it might somehow be your fault.

You will probably feel cheated and robbed by the delivery experience. I don't know of any mother who did not dream or hope of a full term pregnancy, normal birth and the closeness of baby after the birth. Instead, the possibility of death and disability has arrived.

Further down the track, things may not be back to normal. Personally you may be feeling alienated from other people, frustrated at not being able to communicate, and them not understanding, the deep nature of your experience. You may also have a continuing awareness of the fragility and limits of your body. You may not longer take your body's health for granted, instead believing that it has let you down and cannot be trusted.

Unresolved trauma might also be hampering your attempts to get on with life as you did before. This might present as crying easily and not being able to cope or feel as emotionally robust as you did before. Alternatively, there might be an overemphasis on coping well – a superwoman mentality – in effect denying the magnitude of what has occurred.

Regular checkups with specialists and visits to the Child Health Nurse to check milestones serve to reinforce the status of being different to other mothers and babies. Baby's first birthday or the anniversary of the normalised first birthday can be particularly difficult times. Depending on baby's health, there may still be a sense of living with the "not knowing" about the future. There may be a need to overprotect in order to lessen your own anxiety. It might seem as though you held your breath when baby was born and that you have not been able to relax and breathe easily since.

In short, although there are common issues, there are in fact quite a variety of different physical, emotional and thought reactions that are possible after a premature delivery.

Coping strategies

What follows is a case of "horses for courses". Don't feel that you have to do everything. Instead, pick two or three things that seem most appropriate for your circumstance.

- Don't wait for people to offer, ask for their help. This is your time to be selfish and put your needs first. Friends may offer general assistance, not knowing how to approach the situation. If they do, ask for specific things and make concrete arrangements. If they don't, tell them and tell your relatives what you need and how best they can support you.
- Find a structured support group. You have been through an event that only a small part of the population share. By joining a support group you are more able to communicate that profound sense of the nature of your experience. Hearing the experiences of others may help to heal and minimise a sense of isolation. By being part of a structured group, it is more likely that you will be given room to tell your own story, not only to listen to others.
- Trying to keep a sense of order is also beneficial. Doing particular activities at the same time each day helps with this. Structure in the face of chaos and confusion can be comforting. This is another sense in which keeping a journal or diary is useful.
- Look after yourself. In some ways it is the last thing you feel like doing, and it may not seem like there are enough hours in the day or that you have the energy. Taking care of yourself is actually of benefit to everyone.

Fathers of Premature Babies – ‘Lone Wolves’

The term “lone wolves”, first used by W.E. Freud (1995), captures a lot of what is occurring for fathers of newly-born preemies. So much attention is focussed on the baby and the mother, that the anguish and despair of the father can be overlooked.

The fathers are the ones who are assumed to be strong and self-sufficient. Yet they often feel lost, and have a sense of wandering from one place to the next (home, hospital, work), with no feeling of control, protection or satisfaction.

Fathers of premature babies

The impact on fathers of a premature birth is very different. Often the mother is ill or recovering from surgery. In the early postnatal days, it is the father who must take primary responsibility for the baby – talking to doctors and learning about the condition of the baby. He is the one who must remember all the important little details about the baby in order to inform and reassure his partner. Rather than feeling left out, he can immediately recognise his central role.

Go-between for the mother

One of the father’s important tasks is to relay information about the baby to his partner. Hospital staff will take the mother to see the baby and answer her questions. However, she may not remember to ask certain questions, or their answers. It is the father who is best able to take in information at this time. And it is the father who will fill in the details for the mother and friends and family.

“Not knowing those first few hours is a jewelled jigsaw that is lost for the mother and which I struggle to provide”. (Peter)

Apart from medical information, the mother will want to know details about the baby – his appearance, size, eye and hair colour, weight gained or lost that day, who he looks like.

Reactions of fathers of premature babies

Like all unexpected traumatic experiences, fathers are unprepared to cope with a premature birth. They expected one kind of situation and one role, and are thrust into another. Rather than the luxury of the “exuberant”, “mixed” and “ambivalent” feelings following a full-term birth, the premature birth will have had overtones of emergency, of concern about the health and even survival of mother and baby. Fathers have the full impact of worry and fear for their partner and their child.

Who needs me most?

Later, after the birth, when the immediate fear has passed, fathers may be confused about where they should be and who needs him most. His partner needs him, their child needs him, family and friends need to be informed, and work commitments need to be covered.

“I am tearful and tired and trying to gether information and look at the baby. After a while ... I need to see how the other one is doing. Now there are two for me”. (Peter)

Fathers may feel lost, traumatised, confused and without protection for themselves, yet they are often expected to be self-sufficient, strong, caring, responsible (for their partner and child), and to liaise with doctors and nurses, and friends and family.

“I didn’t know where to go. I didn’t know whether I should go with Timmy or stay with Dianne”. (Michael)

“I left the hospital, I couldn’t talk to Jenny. I wanted to get home. I just didn’t want to cry too much in front of her; ‘cause it would really upset her”. (Jack)

I had to give Dianne the image of absolute non-concern, absolute confidence” (Michael)

Í keep trying to tell her that out of the three of us, I’m the least important ...It’s important that she keeps healthy for Bis (the baby’s) sake and it’s important that he keeps healthy. I’m all right. It doesn’t matter about me”. (Jack)

Loss of protector role

The Neonatal Intensive Care environment is usually a culture shock to parents, but can impact in specific ways on fathers. It can seem to rob him of his protective role in the family. The doctors and nurses can appear to be the primary caregivers, protectors and decision-makers for his family. Some fathers react angrily to this loss of role, as if obstacles are deliberately being created and information withheld. One father was asked to wait outside while his newborn was being treated.

"....after a little time, suddenly it dawned on me. What the hell am I sitting here for, reading a bloody magazine? I threw the magazine down and walked back and just stood". (Michael)

Fear that doctors are not telling you the whole story

Doctors and nurses are aware of these reactions. They will try their best to involve and reassure the father. Even here, fathers may struggle to trust their positive statements.

"You don't know whether they are telling you the truth or not ...whether they are telling you to keep you happy". (Michael)

Taking some form of control

Because the welfare of their baby is in the hands of others, and there is such an overwhelming lack of knowledge and loss of control for fathers, they will look for small ways to gain some advantage, some control.

"So you are tired and you just want to sit by the plastic box and watch and help in any way you can and grease up to the nurses so they will take special notice..." (Peter)

Tips for fathers (with your baby)

- Gain some control over the situation by keeping notes, taking photographs or videos and becoming involved with your baby. For example, fathers as well as mothers can "kangaroo care" for their baby
- Touch and talk quietly to your baby. He/she will be learning to recognise you. He/she can hear and see you, and feel your touch. By interacting with your baby, you are beginning your and his/her bonding process. Remember to speak with the nurse first to find out the most appropriate touching for your baby. The nurse will know his/her current medical condition and what he/she can tolerate on a day-to-day basis.

For yourself

- Recognise your own feelings and needs. You will be a better protector of your family if you let your feelings out and let someone else "hold" you. Don't overestimate your emotional resilience. Write your feelings down, have a good cry, talk to a trusted friend or relative, someone who will look after you so you can look after your family.
- If you have questions, ask them. You may be worrying about something that is totally expected. The baby's weight loss that normally occurs in the days after birth is a good example. You don't need extra anxieties. The doctors and nurses will understand your need for information. Open communication, from you to the doctor and from the doctor to you, is the goal of most nurseries.
- Write down questions as they come to you, and also write down the doctor's answers.

For your partner

- Most nurseries have a Polaroid camera. Make sure a photo is taken so your partner can have it with her.
- You might like to video or audio-tape your baby. Hearing the baby's cries, gurgles and other noises can help your partner experience her baby if she is too ill to spend time with him.
- Help prepare your partner for her first visit to the nursery. Describe what it looks like, the procedure for visiting (scrubbing up, gowning). This mental picture will help your partner to be less overwhelmed by the visit. You might also explain how your baby looks. *"I told her that Christopher had a needle in one of his feet for intravenous feeding, his leg in a sling to protect the IV when he moved, a clear plastic tube going*

into his stomach to relieve gas, and two electrodes taped to his chest to monitor his heart rate and respiration” (Hynan, 1987).

▪ Your partner needs to recover both physically and emotionally from the premature birth. Initially, encourage her to visit the nursery for short periods. Protect her from too many visitors and phone calls.

Siblings

What do I tell my other children? It is best to be honest with them. Provide them with the information they seek. However, give them the amount and detail that is appropriate for their age. Very young children ask simple questions and need simple answers. Refer to the new baby by his/her first name, as for any other member of the family.

What are some common reactions of young children to having a baby in the NICU? Even very small children can sense that you are upset or sad, and their lives will certainly be altered by your emotional state and the time needed to be with your new baby. Common reactions include:

- **Thinking they caused the baby to come early or be sick:** Magical thinking is very common in children aged 2 – 6 years old. This is believing that thoughts or wishes can make things happen. They will not be happy about sharing their parents with a new sibling even though the idea of a new brother/sister may be exciting. They may have wished for the baby not to be born, or they may have accidentally kicked your tummy when being held and think that is why the baby is early and sick. Assure them that they did not cause the baby to come early or to be sick.
- **Thinking that they made you sad or upset by something that they did or said:** Acknowledge that you are sad and unhappy, but assure them that it is not because of something they did or said, but because the new baby is so small or sick.
- **Acting out:** Their family environment and their usual routines are changed, and they can sense that those around them are emotionally upset. This makes them feel insecure. They express this by acting out, the only way they know to get more attention. Try to find someone whom they know well and like (grandparent, close friend, favourite baby-sitter) who can provide them with extra attention, not just when you are gone but when you are at home too. Also, stick to their usual routine as much as possible, such as time for naps, bed, meals and other activities. If they are in day care or school, let their teacher know what is going on so s/he can provide more understanding and attention.
- **Feeling insecure, left out or alone:** Try the approaches listed above. Assure your child that you still love him/her just as much as before the baby came.
- **Thinking they are sick too:** Having more tummy aches, or other hurts. Try the above approaches for increasing attention to them.
- **Fearing that they will catch the baby's illness:** Most children know that the common illness which they have experienced are spread by contact with someone who is ill (colds, chickenpox etc.). Assure them that they and you cannot get the baby's illness.
- **Wondering who will care for them when the baby comes home?** Show them that they are still very important to you and to the family. Talk to them about ways that they can make the baby part of the family. Show them that you are proud of things that they can do for themselves that babies can't.
- **Regressing:** When children are emotionally stressed, they often regress; that is, return to less mature behaviour. For example, they may have more 'accidents' if recently potty trained. They may stop using newly acquired words or refuse to dress themselves. They may start thumb sucking again, using a dummy more often, wanting a bottle, or returning to using a security blanket. Don't scold, punish, or talk negatively to them about these behaviours. They are a child's

way of telling you that s/he needs more of your love and attention. When the child feels secure again, s/he will return to the former level of development.

Should my other children visit my new baby?

King Edward Memorial Hospital has strict visiting policies so please inquire before you bring your other children to the nursery. You might like to encourage children to make something for the baby to help them feel the baby is really their brother/sister and a part of the family. This can be picture of themselves, a picture they have drawn or painted, or something for the isolette such as a small toy or balloon. Pay attention to your children's comments and emotional reactions, and help them understand the things that worry them.

When a baby dies in NCCU

Many parents facing the prospect of losing their baby experience feelings of sadness, shock, anger and sometimes confusion. The need to make decisions about ongoing care often compounds these feelings.

If it is believed that further treatment cannot help the baby, parents may be asked to consider removing life-supporting equipment. In most cases, this decision need not be rushed. It is important for parents and doctors to make the decision that is right for the baby and the family. It can be valuable for parents to discuss the withdrawal of life support with their family, close friends and other health professionals.

Usually when a loved one dies, there are many memories of time spent together, which serve as a comfort to those who grieve them; however, in the case of a preterm baby, these memories will be limited to the NICU. While treatment is being withdrawn, and after the baby has died, parents and family are given the opportunity to spend time with their baby. For some parents, this is the only time they have cuddled their baby.

During this time, many parents choose to hold and comfort their baby. Some also choose to bathe and dress them. Everlasting memories can be made by taking photos and video and making ink or clay prints of the baby's tiny hands and feet

Some parents may wish to have their baby blessed or baptised, especially when faced with the decision to withdraw treatment. The parents, a friend or close family member, nursing staff, hospital chaplain or a celebrant of the family's faith can perform this.

Australian Premmie Websites

National Premmie Foundation - www.prembaby.org.au

Austprem - www.austprem.org.au

L'iL Aussie Prems - www.lilaussieprems.com.au

Parents of Premature Babies Inc. - www.preemie-l.org

Life's Little Treasures - www.lifeslittletreasures.org.au

Loddon Mallee Kids - www.loddonmalleekids.org.au

Featherweight Club - www.featherweightclub.com

Nepean Neonatal Intensive Care Unit Parents Support - www.prematurebabes.org

Miracle Babies - www.miraclebabies.com.au

Little Wonders - www.littlewonders.org.au

Central Coast Premmie and Sick Newborn Support Group - www.centralcoastprems.com

Preterm Infants' Parents Association - www.pipa.org.au

Central Queensland Premmies - www.cqpremmies.com

The Bonnie Babes Foundation - www.bbf.org.au

SIDS and Kids - www.sidsandkids.org

Angel Baby - www.ourangelbaby.org

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References

Freud, W.E. (1995). Premature fathers: Lone Wolves? In J.L. Shapiro (Ed) *Becoming a father: Contemporary, social, developmental, and clinical perspectives*. New York: Springer.

Hynan, T.M. (1987) *The pain of premature parents*. U.S.A.: University Press of America

Tracey, N. (Ed.) (2000). *Parents of premature infants: Their emotional world*. United Kingdom: Whurr Publishers.

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