



The Royal College of
Midwives



Maternal Emotional Wellbeing and Infant Development

A Good Practice Guide for Midwives

Foreword

The importance of new mothers understanding and responding to their baby's feelings is crucial to their wellbeing and development. Although mothers are biologically programmed to respond to their baby, midwives are in a unique position to provide an enabling environment for this to take place. Supporting a woman through pregnancy, birth and the early postnatal period offers many opportunities for midwives to explore attitudes and hopes for their future parenting experience. This guide provides midwives with evidence based information and practical guidance to support early mother baby relationships. As Schore stated:

"A child's first relationship, the one with his mother acts as a template that permanently moulds the individual's capacity to enter into all later emotional relationships" (Schore, 2002).

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Introduction

Pregnancy, birth and the postnatal period is a time of major psychological and social change for women as they negotiate their roles as mothers. Supporting mothers' emotional wellbeing during the perinatal period is now recognised to be as important as the traditional focus on the physical health of the mother and child. Increasing evidence about early brain development and the way in which infants develop emotional and behavioural wellbeing within the context of their early relationships, has highlighted the particular importance of building a bond with the unborn baby, and sensitive early caregiving.

The Commission on the Future of Nursing and Midwifery, March 2010, acknowledges the contribution midwives can make to 'reducing inequalities in outcomes for mothers and their babies'. It recognises that midwives do far more than just deliver babies, and that they have 'important roles to play in health education and in counselling women, their families and the wider community', indicating that this wider work should include 'child care'.

This guide provides midwives with recent evidence about the impact of the mother's emotional wellbeing during pregnancy and the transition to parenthood, and suggests the best ways to support healthy parent-infant relationships. Each section provides an overview of recent theory and research, and is followed by practical suggestions about how women might be supported. A summary of the key messages is provided at the end of each section.

It is recommended that this guide is used as a starting point for discussion between colleagues, and for further development of ideas to advance practice.

Table 1. Summary of Issues

- ✓ Evidence from a range of disciplines highlights the importance of supporting women in the transition to parenthood so that they can provide the warm sensitive relationships that babies need for optimal development
- ✓ The practices recommended here are as important to the wellbeing of the fetus and the infant, as the physical care that midwives routinely provide
- ✓ Try to build these practices into the care that you deliver, particularly with high risk and disadvantaged families, where they can have a significant impact
- ✓ New ways of working should be explored with colleagues, and aspects of routine practice that are outdated or not evidence-based, should be discontinued.

“Evidence about early brain development has highlighted the importance of building a bond with the unborn baby”

The Antenatal Period

Introduction

This section examines the importance of the ante-natal period in terms of the 'transition to parenthood' with the associated psychological changes that occur during this period; the mother's relationship with the developing baby; and the impact of the mother's mental health on the fetus.

The 'Transition to Motherhood'

The 'transition to parenthood' focuses explicitly on the emotional and social changes that take place during pregnancy and the immediate postnatal period, and recognises that this is a stressful time that involves both men and women making significant psychological changes, and adapting to new roles. The relationships of many couples may be severely challenged during this period, and sometimes break down after the birth of a baby (Belsky and Kelly 1994; Cowan and Heatherington 1991). It has been argued that the 'conspiracy of silence' that surrounds this period can leave parents feeling that they are the only ones having a 'hard time' (Cowan and Cowan 1992). A study that focused on the key features of the transition to parenthood found that significant numbers of 'low risk' parents experience psychological stress during this time, and that their concerns were much broader than the issues addressed by traditional ante-natal classes (Parr, 1996).

The birth of a new baby can sometimes place stress on a relationship given the huge changes that a new and often demanding addition to the family brings. The transition to becoming a parent can be challenging and may often involve the loss of control and disruption to relationships (Hanzak, 2005, Robertson & Lyons, 2003). Most couples are able to cope with these changes – tiredness, loss of libido and lack of focus on the parental relationship – until things improve and some level of normality returns. A recent study showed that 90% of couples found their relationship deteriorated after their first baby was born (Doss et al, 2009). It was significant that the couples who were strongly united and romantic in their relationship before the pregnancy found it harder to adapt to parenthood than those whose relationships were already faltering. Unfortunately for some couples, their relationship does not always recover. An Early Years study estimated that around 14% of couples split up before the baby is born or the new-borns were not living with both their biological parents (Dex & Joshi, 2005).

Increased recognition of the significance of the changes taking place for both men and women during the transition to parenthood, and the importance of preparing parents for their new roles has underpinned the recent development of Preparation for Parenthood classes, many of which are replacing the more standard 'antenatal classes'. For example, a recently developed model by the NSPCC (Pregnancy, Birth and Beyond: Manual for Facilitators) focuses on preparing parents for parenthood by addressing the emotional changes that take place during this period, and helping parents to address the problems that occur (Underdown 2011).

“The transition to becoming a parent can be challenging and may often involve the loss of control and disruption to relationships”

The Mother's developing Relationship with the Fetus/Baby

Engaging with the fetus/baby

A range of factors can influence the capacity of mothers-to-be to engage with their developing baby, including whether the baby was planned and/or wanted. The level and nature of the mother's engagement is indicated by the mental representations (i.e. mental images) about the developing baby that take place between the fourth and seventh months of gestation (Stern 1985). These mental representations are shaped not only by the biological changes taking place but also by a range of psychic and social factors such as the mother's memories of her own early relationships, her family traditions, her hopes, her fears and her fantasies. The following quotation from a young mother illustrates how she imagined her son:

"Well we found out it was a boy at 16 weeks so I don't think he'll have too many of my features. I think he will look just like my partner... we are both tall... so physically long and thin, just like myself. I think it is just a mental picture that I've built up... he is very active at night time when the comedy programmes are on so we think he will be like quite a cheeky little thing..."

Some pregnant women may, however, be reluctant to engage with their baby during pregnancy, or be overwhelmed by negative feelings (e.g. of being invaded), particularly if the pregnancy was unplanned or unwanted.

The 'bonding' with the baby that is indicated by these mental representations is an important foundation for the mother's later relationship with the 'real' baby, and research found that:

- ✓ The richness of ante-natal maternal representations was significantly linked with the security of the infant's attachment to the parents at 1 year of age (Benoit, Parker and Zeanah 1995);
- ✓ Women who had experienced domestic abuse had significantly more negative representations of their infants and themselves, and their babies were more likely to be insecurely attached (Huth-Bocks 2004);
- ✓ Mothers who already had 2-3 children under 7 years and an unplanned pregnancy, had more negative representations (Pajulo et al 2001).

Although most mothers adjust quickly from their 'imagined' baby to the 'real' baby, very occasionally this can be problematic if she is fearful about the unborn child or has unrealistic, idealised representations (Raphael-Leff 2005).



How can midwives encourage mothers-to-be to engage with their babies?

- ✓ Explore with the mother how she imagines this baby to be. Encourage positive images of the baby; explore further with the mother any negative images that emerge; encourage women who appear to be 'disengaged' to think about their baby
- ✓ Explorations that identify extremely negative images or that suggest the mother is extremely 'disengaged' should involve referral to a clinical psychologist
- ✓ Share research findings that may help expectant mothers to begin to relate to their baby as a person
- ✓ Ultrasound scans show that babies in-utero yawn, exercise, move about to get comfortable, grimace, have rapid eye movements, sleep and suck their thumbs (Piontelli 2002)
- ✓ From around 20 weeks the unborn baby begins to respond to sound (Hepper and Shahidullah 1994). Louder sounds can make the baby startle and move about
- ✓ As the unborn baby matures he or she can recognise different voices and the parents' voices will be familiar to the baby. A newborn can recognise music that he or she heard in the womb. If the mother watches a particular television 'soap' newborns may respond to the music.

Table 2. Activities to share with mothers

Suggest some of the following to mothers:

- ✓ Put on some of your favourite music and notice whether s/he seems more active or whether they go off to sleep
- ✓ Try playing gentle, soothing music while you are going to sleep. See if s/he remembers it and goes off to sleep after they are born
- ✓ Babies love nursery rhymes and songs – if no one is around why not sing a few songs?
- ✓ When you feel a kick, put your hand on your stomach and say it's okay I am right here!
- ✓ Try sitting down and relaxing. Gently rub your 'bump' and ask your baby how he or she is
- ✓ Get your partner to do the same and have a chat with your baby
- ✓ As you go from one activity to another, talk to your baby as though she or he were right there in front of you. Say what you are doing. "Okay, let's see what we going to have for dinner? Are you hungry?"
- ✓ Get parents to try it out – the feelings of fun and togetherness can be really good for them and their baby.

(Underdown 2011)

Table 3. Birth – Key Messages

The transition to parenthood:

- ✓ The 'transition to parenthood' refers to a period of normal psychological and social changes associated with pregnancy and the arrival of a newborn baby that may nevertheless be stressful
- ✓ Parents say that they would like more preparation for the changes that will occur
- ✓ All parents, but first-time parents in particular, should be offered the opportunity to attend antenatal education classes that include components that are aimed at preparing parents for these psychological and role changes.

Maternal representations:

- ✓ Maternal representations (mental images) about the baby during the mid trimester of pregnancy indicate the mothers 'engagement' or bonding with the fetus
- ✓ Women experiencing extremely negative representations or who are very 'disengaged' may benefit from referral to a clinical psychologist.



Maternal Mental Health during Pregnancy

Changes in mental health during pregnancy

Recent evidence suggests that a significant number of women experience common mental health problems such as anxiety and depression during pregnancy. One study showed that around 15% of pregnant women experience serious feelings of stress, anxiety or depression (O'Hara and Swaim 1996). The majority of women experiencing postnatal depression had also experienced antenatal depression, and similarly postnatal anxiety was preceded by antenatal anxiety (ibid).

What are the consequences of maternal mental health problems in pregnancy?

Recent evidence indicates that stress and anxiety in pregnancy can have harmful effects that may continue throughout the infant's lifespan (Mueller and Bale 2008; Talge et al 2007), although this may be influenced by its timing, magnitude and/or chronicity (Misri et al 2004; DiPietro et al 2006).

Persistently high levels of stress hormones such as cortisol, are known to have damaging effects on the development of neural pathways in the fetal brain (Glover and O'Connor 2002). Two primary systems that mediate the influence of women's moods during pregnancy are the autonomic nervous system and endocrine system (e.g. Hypothalamic Pituitary Adrenal Axis). For example:

- Elevated/chronic sympathetic nervous system activation increases release of catecholamines and vasoconstriction.
- Increased catecholamines levels increases maternal vasoconstriction and blood pressure.
- Vasoconstriction alters utero-placental blood flow reducing oxygen and calorie intake to the fetus influencing fetal Central Nervous System development.

ALSO

- Maternal cortisol crosses the placenta and influences fetal brain development and HPA-axis regulation (Bergner, Monk and Werner, 2008).

The research suggests that anxiety or depression that is chronic may have an impact on the physiological and behavioural functioning of the fetus/baby, with consequences for their later development (ibid). For example, a recent overview of the evidence found that depression was associated with increased basal cortisol levels, and increased high-frequency heart rate variability, and that babies born to depressed mothers had lower motor tone, were less active and more irritable. They also had fewer facial expressions in response to happy faces, disrupted sleep patterns, increased fussiness and non-soothability, and that there was increased negative reactivity in 2 and 4-month olds (Bergner, Monk and Werner 2008).

A number of studies have also highlighted the effects of severe maternal anxiety during pregnancy. Fetuses of anxious women were more active, had more growth delays, experienced greater right frontal EEG activation and lower vagal tone; and had lower dopamine and serotonin levels (Field et al 2003 in Bergner, Monk and Werner 2008). Newborns of anxious mothers spent more time in deep sleep and less time in quiet and active alert states (ibid), and had more state changes and a less optimal Neonatal Behavioral Assessment Scale (NBAS) score (ibid). Longitudinal studies show an increased risk for hyperactivity (Van den Bergh and Marcoen 2004) and conduct disorder (Glover and O'Connor 2006; O'Connor 2003; 2002). There is also evidence indicating that increased stress hormones in-utero are linked with impaired cognitive development, although its impact is dependent on the quality of the mother–infant relationship. (Bergman et al 2010).

What can midwives do to support anxious or depressed pregnant women?

- ✓ If a pregnant woman feels anxious or depressed she should be encouraged to consult her GP
- ✓ Being a good listener can be helpful if a woman is feeling anxious or depressed – this takes time but is important in terms of the developing fetus
- ✓ Encouraging a 'mindful' approach may be helpful in slowing the body and mind, and increasing feelings of being in control. 'Mindfulness' means putting all your attention into what is actually happening in the present moment by concentrating the mind on the minute steps of the task in hand. The aim of this is to increase awareness of feelings, body sensations and movements, which is the opposite of being on 'autopilot' (Astin 1997; Vieten and Astin 2008)
- ✓ Link women in with local groups that are being run to support pregnant women who are anxious or depressed, or work with psychologist colleagues to set up some groups.



Inter-Partner Violence

Women are disproportionately affected by domestic violence with around 30% of domestic abuse starting during pregnancy (DH 2010; Lewis and Drife 2001), and around 9% of women being abused during pregnancy or after giving birth (Taft 2002). According to Women's Aid, 70% of teenage mothers are in a violent relationship (Harrykissoon et al 2002). Domestic abuse in pregnancy is associated with a wide range of compromised physical outcomes (e.g. miscarriage; low birthweight; placental abruption and pre-term delivery), and also with postnatal depression (Flach et al 2011) and Post Traumatic Stress Disorder (PTSD) (e.g. Loring et al 2001).

The potential role of midwives in screening for domestic abuse has been identified (Bewley and Gibb 2001) and recent research (Bacchus et al 2002; Mezey et al 2003 cited on: www.midirs.org/development/MIDIRSEssence.nsf/articles/757181624A03A2D38025783B00502D7A) that examined the benefits of midwives being trained in the administration of a screening tool alongside support strategies for women who disclosed abuse, found a range of benefits. Women identified the importance of privacy, trust and confidence in the midwife, and of being repeated opportunities for disclosure (for more information see the above website). The National Collaborating Centre for Women's and Children's Health have provided an evidence-based model for service provision for women experiencing complex social problems of this nature (NCCWCH, 2010).

What should midwives do if they suspect domestic abuse?

- ✓ Be available to listen, talk, understand and support
- ✓ Ask women about domestic abuse sensitively, when the partner is not present, and provide multiple opportunities for disclosure
- ✓ Provide flexible midwifery appointments and venues, and assurance that information will be confidential and not included in hand held notes
- ✓ Ensure that same sex independent interpreters and advocates are used for non English speaking women
- ✓ Offer support from a dedicated domestic abuse support worker
- ✓ Contribute to the development of clear local protocols/referral pathways in consultation with social care and voluntary sector providers
- ✓ Support should also involve referral to social services for an appropriate pre-birth assessment and intervention.

(www.midirs.org/development/MIDIRSEssence.nsf/articles/757181624A03A2D38025783B00502D7A; NCCWCH, 2010)

“Domestic abuse in pregnancy is associated with compromised physical outcomes and postnatal depression and Post Traumatic Stress Disorder”

Substance/Alcohol Misuse

Substance/alcohol misuse in pregnancy usually co-exists with a range of other problems such as limited financial resources, poor accommodation and few support networks. Women who are misusing substances are more likely to have a history of abuse or neglect, and negative experiences of parenting during their own childhoods, and to have more negative representations of their unborn baby (Pajulo et al 2001). Pregnancies are unlikely to be planned, and women are more likely to experience stress and anxiety, and other mental illness (Mayes and Truman 2002; Suchman et al 2005). Knowing that these substances are harmful to the unborn child can be a powerful incentive for the woman to make positive changes and midwives should discuss these issues with women and support them to access help.

What approaches are best when working with pregnant women who abuse substances?

- ✓ Be available to listen, talk, understand and support
- ✓ Ask women about substance/alcohol use sensitively, when the partner is not present, and provide multiple opportunities for disclosure
- ✓ Provide flexible midwifery appointments and venues, and assurance that information will be confidential and not included in hand held notes
- ✓ Offer support from a dedicated substance/alcohol misuse support worker
- ✓ Contribute to the development of clear local protocols/referral pathways in consultation with social care and voluntary sector providers
- ✓ Support should also involve referral to social services for an appropriate pre-birth assessment and intervention.

“Women who are misusing substances are more likely to have a history of abuse or neglect and negative experiences of parenting during their own childhoods”

Table 4. Pregnancy – Key Messages

Mental health during pregnancy

- ✓ Anxiety and depression during pregnancy are common (i.e. in the region of 15%)
- ✓ Chronic anxiety and depression have an impact on the developing fetal brain and are associated with significant changes to fetal/infant physiology and behaviour, and long-term problems such as Attention Deficit Hyperactive Disorder (ADHD) and conduct disorder (CD)
- ✓ Most pregnant women who experience emotional problems during pregnancy do not seek help from their doctor, midwife or health visitor
- ✓ Pregnant woman experiencing chronic anxiety and/or depression should be provided with psychological support.

Substance/alcohol misuse

- ✓ Substance/alcohol misuse in pregnancy is common, and is associated with serious consequences for the fetus/baby
- ✓ Women who are misusing substances/alcohol during pregnancy require appropriate support, including dedicated help to minimise their use of such substances
- ✓ Support should also involve referral to social services for an appropriate pre-birth assessment and intervention
- ✓ Care pathways for pregnant women abusing substances/alcohol should be developed with the involvement of midwives, social care and voluntary organisations.

Inter-partner violence

- ✓ Domestic abuse often starts during pregnancy (i.e. around 30% of cases) with up to 9% of women being abused during pregnancy or after giving birth
- ✓ Domestic abuse has both a physical and psychological impact on both mother and fetus/baby
- ✓ Support should involve a dedicated support worker alongside referral to social services for an appropriate pre-birth assessment and intervention
- ✓ Care pathways for pregnant women experiencing domestic abuse should be developed with the involvement of midwives, social care and voluntary organisations.

Birth – Supporting Bonding

Introduction

This section focuses explicitly on the birth and in particular the parents' experiences of the birth and the impact of traumatic birth experiences on the developing relationship with the baby. It also examines the evidence about the importance of 'bonding' and what midwives can do to promote the early maternal-infant relationship.

Traumatic Experiences of Giving Birth

Traumatic birth experiences – the evidence

Although most women in the UK have safe and satisfying birth experiences, a significant number of women have 'traumatic' experiences of giving birth. What is most important is the woman's individual experience of the birth as traumatic rather than whether objectively the birth went well. Many of the women traumatised by childbirth experience feelings of intense fear about their own death or that of their baby, or of being physically damaged (Anderson & McGuinness 2008), and this may be accompanied by feelings of fear, terror, and helplessness (Elmir et al 2010).

The evidence suggests that between 2 – 9% of women experience Post Traumatic Stress Disorder (PTSD) following childbirth, and that between 18 and 35% experience elevated levels of post traumatic stress symptoms (Beck et al 2011). One study showed a prevalence of between 2.8 and 5.6% at 6 weeks postnatal, which reduced to 1.5% by 6 months (Olde et al 2006). PTSD has been shown to be related to a range of factors including high levels of obstetric intervention, dissatisfaction with the care received during the delivery process, feelings of powerlessness during childbirth, preterm delivery, anxiety and depression or psychiatric problems, previous counseling related to childbirth and a history of sexual abuse (ibid., p. 190).

“What is most important is the woman's individual experience of the birth as traumatic rather than whether objectively the birth went well”

What are the consequences of 'traumatic' birth experiences?

The consequences of PTSD are wide-ranging. In addition to PTSD symptoms (i.e. vivid memories of the event, flashbacks, nightmares, irritability, hypervigilance, avoidance of reminders of the trauma, feelings of numbness, anger, depression, and chronic sleep problems), is the isolation that it causes both in terms of the woman's relationship with her partner and family, and to her relationship with her baby.

One woman described it as follows:

'Not only does PTSD isolate me from the outside world, it isolates me even from those I love... That is the real problem with PTSD. It separates people at the time when love and understanding are most needed. It's like an invisible wall around the sufferer' (Beck 2011, p. 217).

The research shows that PTSD due to birth trauma is linked to fear of childbirth, poor relationship with the partner and sexual dysfunction, and difficulties with the mother-infant relationship/impaired bonding (Ayers, Eagle & Waring 2006; Nicholls & Ayers 2007), difficulties with breastfeeding (Beck 2011).

What are the signs of PTSD and what should midwives do following birth?

Although there is a high natural remittance of PTSD, this may take up to 6 months, and the high prevalence of sub-clinical and clinical level symptoms, alongside the consequences for the mothers relationship with her baby and for subsequent pregnancies, suggest that midwives should identify and provide additional support to women who have had difficult births.

- ✓ Women who are at high risk of being traumatised by the birth should be prior to delivery, and provided with additional emotional support during the delivery
- ✓ Women who feel traumatised by the birth experience should be identified before they leave hospital. A range of simple checklists are available some of which comprise as few as four items and can be used by midwives to assess whether there may be a problem

Table 5. Primary Care PTSD Screen (PC-PTSD)

In your life, have you ever had any experience that was so frightening, horrible, or upsetting that, in the past month, you...

1. Have had nightmares about it or thought about it when you did not want to?
 YES NO
2. Tried hard not to think about it or went out of your way to avoid situations that reminded you of it? YES NO
3. Were constantly on guard, watchful, or easily startled? YES NO
4. Felt numb or detached from others, activities, or your surroundings? YES NO

- ✓ Although the evidence about formal 'debriefing' interventions following delivery is inconclusive, there is increasing recognition of the importance of midwives giving women the opportunity to talk about their experiences of the birth and how they are feeling after it
- ✓ Findings of a recent systematic review provide evidence to suggest that while debriefing and counselling are inconclusively effective for PTSD, support such as Cognitive Behavioural Therapy (CBT) or Eye Movement Desensitisation and Reprocessing (EMDR) may improve PTSD status (Leann et al 2010)
- ✓ Women identified as having PTSD should be referred to a clinical psychologist.

Promoting Bonding

Bonding and the early mother-infant relationship

The process of 'bonding' refers to the intense emotional connection that takes place between a mother and a baby. Although babies are born ready to socially interact with their parents, a range of factors may interfere with the capacity of the mother to bond with the baby. While many early difficulties immediately following the birth may disappear over the first few days and months, they may also be a sign of pending problems. Difficulties may be compounded if the mother has a history of other problems (e.g. psychiatric problems, drug/alcohol misuse; domestic abuse etc), or is experiencing problems specifically related to the pregnancy or birth (e.g. PTSD; postnatal anxiety/depression). Anecdotal evidence suggests that as many as 1:5 women may experience difficulties in bonding with their baby, and this can be associated with very strong feelings of guilt, shame and inadequacy.

Overviews of the evidence from humans and other mammals suggest that the close body contact of the infant and his/her mother during the immediate post birth period influences the physiology and behaviour of both (Winberg 2005), and that this takes place as a result of a range of mechanisms including behavioural programming, secretion of neuroendocrine substrates and activation of sensory cues, in addition to changes brought about as a result of breastfeeding (Dageville et al 2011).

Consequences of problems with bonding

Although the consequences of problems with bonding depend on the circumstances, a recent review suggests that early separation can have an impact on the infant's biological responses to stress, their learning behaviours and their social skills with some evidence suggesting that this may partly explain biological and behavioural problems in adulthood (ibid).

What can midwives do to promote early bonding?

Encourage mothers to have skin-to-skin contact with their baby soon after birth, and where possible, at other opportunities as well. Skin-to-skin care is the best way of getting to know the baby regardless of the method of feeding. Suggest the following to mothers:

- ✓ Place the baby on your tummy, with his or her head near your breast
- ✓ Gently stroke and caress your baby
- ✓ Ask for you and your birth partner to be left undisturbed so you can gently stroke the baby and talk together
- ✓ Allow the baby to focus on you and your partner's face and let them enjoy gazing.

Skin-to-skin contact between mother and baby after birth reduces crying, improves mother-infant interaction, keeps the baby warmer, and the extra tactile, olfactory and thermal cues may stimulate babies to initiate breastfeeding more successfully. Newborn babies tend to be more alert within the first two hours of life, and this should be considered an important time for initiating successful mother and child interaction (Puig and Sguassero 2007).

Other methods of promoting bonding and sensitive parenting that are recommended by the Healthy Child Programme (HCP) (DH 2009) include encouraging mothers to use soft baby carriers, and participation in an infant massage class.



“The close body contact of the infant and his/her mother during the immediate post birth period influences the physiology and behaviour of both”

Table 6. Birth – Key Messages

Experiences of the birth:

- ✓ A significant proportion of women may experience the birth process as traumatic
- ✓ PTSD occurs in up to 9% of women and may be a direct result of the birth process
- ✓ Symptoms include vivid memories of the event, flashbacks, nightmares, irritability, hypervigilance, avoidance of reminders of the trauma, feelings of numbness, anger, depression, and chronic sleep problems
- ✓ PTSD is associated with significant long-term consequences including difficulties in the relationship with the baby
- ✓ Women who are at risk of PTSD following the birth should be identified prior to the birth and provided with additional emotional support
- ✓ Midwives need to identify women who have had a very difficult birth and screen them for PTSD using simple screening tools before they leave hospital
- ✓ Women who have PTSD should be referred to a clinical psychologist for CBT or EMDR therapy.

Experiences of the birth:

- ✓ Bonding plays a key role in the behavioural and physiological regulation of both infant and mother
- ✓ Many women may experience difficulties in bonding with their baby
- ✓ Impaired bonding may have long term impact on the infant's development
- ✓ A range of methods are available to support early bonding including skin-to-skin care; baby carriers; and infant massage.

Postnatal Period – Supporting Healthy Relationships

Introduction

The postnatal period involves further emotional and psychological transitions for new parents. Factors such as adapting to the needs of a new baby, tiredness, and the loss of other identities that are associated with the arrival of a new baby, requires that women make complex physical and psychological changes during the postnatal period (Woollett and Parr 1997). While many of these are similar for men, a survey of new mothers and fathers showed that men's feelings and experiences during this time differed in a number of important ways from those of women. Both parents, however, viewed parenthood as having a negative impact on their sex life due in the part to the associated changes in women's bodies and their identities as parents (ibid).

The closeness that many couples experience during pregnancy is often expected to continue after the baby is born. Following childbirth, however, there is frequently a polarisation of goals and expectations as men and women negotiate their new roles (Belsky and Kelly 1994). It has been suggested that this experience of polarisation is influenced by the 'motherhood constellation' which, is a temporary period in which the mother is pre-occupied with several themes (Stern 1985). One of these, the 'life growth theme', is biologically driven, making the mother's need to keep the baby alive her top priority. Couples are often unprepared for these fundamental changes in sense of self, and without the recognition that these transitional changes will affect their relationship, there may be resentment and blame. For example, after childbirth the mother may seem more concerned with the man as a father than as a sexual partner. Although the baby may be the focus, it is often the fundamental changes in the parents that cause the disunity, and couples may need to mourn the loss of their close relationship before they can celebrate their new roles.

In addition, there may be deep tensions between the cultural aspirations of a contemporary woman living in the developed world and the experience of deep biological drives associated with motherhood. These tensions may be exacerbated by the transition from being a 'competent woman' in control of her life to an 'incompetent', inexperienced mother. As support networks loosen and traditional rituals decline, the challenge to health professionals lays in ensuring the healthy birth of the social mother and father.

This final section focuses on the importance of the postnatal period in terms of recent findings about the 'social' baby, and the impact of early parenting on the baby's neurological development. It examines the specific aspects of parenting that have been shown to be important in terms of the baby's development, and concludes with an examination of the factors that impact on early parenting (e.g. mental health problems; substance misuse; domestic abuse).

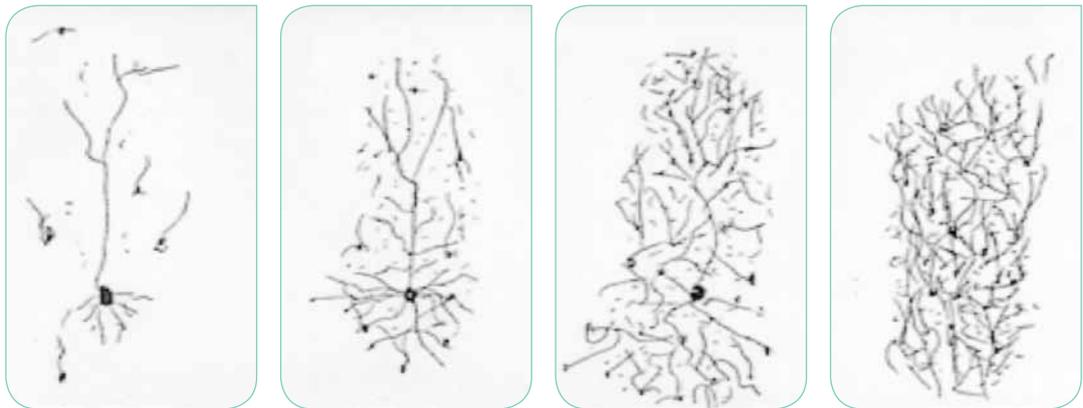
“As support networks loosen and traditional rituals decline, the challenge to health professionals lies in ensuring the healthy birth of the social mother and father”

The impact of parent-infant interaction on the developing brain

At birth, the baby's brain contains approximately 100 billion neurons. The neurons rapidly make connections as a result of social interaction. The neurons send chemical messages along projections (axons) which are received by the projections (dendrites) of the targeted neuron. The connections or synapses are made across the fluid filled spaces between the neurons. Connections that are used frequently get covered in a fatty myelin sheath that speeds up the messages between neurons. Connections that are not often used get pruned away. This 'use it' or 'lose it' process of brain development can be seen in the way language is acquired. While neonates can hear the inflections from all languages, by one year of age, the connections for their native language(s) have been reinforced at the expense of others.

The baby's brain grows rapidly in size, weighing approximately 400g at birth and 1000g at 1 year. Much of this is due to the neural connections and figure 1 is a diagram of the density of connections at 1 (left hand side) 3, 6, and 12 months (adapted from Penn 2008).

Figure 1. A demonstration of the density of neural connections at 2 months, 3 months, 6 months and 12 months



Adapted from Penn (2008)

One of the most significant environmental factors influencing early brain development is the parent-infant relationship (see Schore 2004; Gerhardt 2006 for summaries of this research). For example, research shows that the babies of depressed mothers show atypical frontal brain activity (e.g. reduced joy; interest; anger) (Dawson et al 1997).

Babies are born socially interactive

Babies most enjoy looking at the face of their carer and will watch and follow faces. As the baby's visual capacities develop over the first few weeks they will begin to focus more and to listen intently. Babies engage best with their parents when they are in a quiet alert state. Suggest to parents that they watch their baby to see how quickly they move from one behaviour state to another. Young babies usually move from one state to another quite quickly. Share with parents the different sleep/wake states so that they can get to know their baby.

Table 7. Infant Sleep and Awake States

Quiet alert state	Wide eyed with a bright face, little body movement – ready for interaction. Prepare parents to expect the baby to look away and take some time out, and to offer time and space during the interaction for the infant's response.
Active alert state	Alert but fussy, may cry or may be soothed. Lots of limb movements and may be more sensitive to light and noise. Sometimes babies may show they are over stimulated through physical signs such as hiccupping, yawning, sneezing, squirming, throwing their head back as they move from this state.
Crying	Lots of body activity, grimaces and intense crying. Baby needs calming. Some parents find that babies who have been nursed in the neonatal unit are very sensitive to light and noise.
Drowsy – dozing beginning to wake	Pre-awake state. Eyes open but glazed or heavy lidded. Occasionally may startle, body movements generally smooth. May fall back to sleep or move into alert state.
Light sleep state	Eyes closed or fluttering. Maybe be rapid eye movements under the lids. Easily roused may make sucking or smiling movements.
Deep sleep state	Breathing steady and regular, eyes closed, lies fairly still and is more difficult to rouse.

Parents play a key role in helping infants to regulate their physiological, emotional and behavioural states. Encourage parents to recognise their role in regulating their infants using the tips for practice in Table 8.

Table 8. Tips for Practice Activities for Parents

Ask the new parents to notice how their baby likes to be soothed. For example, ask parents to think about which of the following their baby likes:

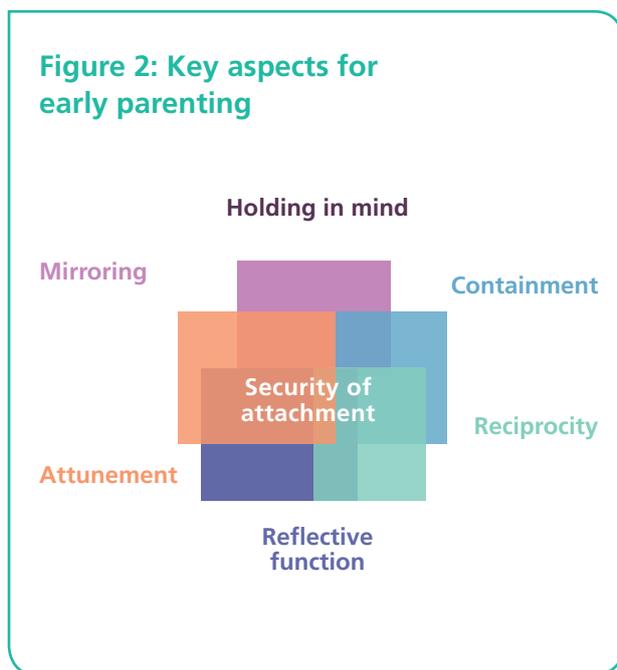
- Sucking on their fingers?
- Gentle rocking in the pram?
- Being held while you walk about?
- Soft singing?
- Being close to you in a baby carrier?
- Have a favourite cuddling position?

Research about soft baby carriers shows that their use can improve outcomes particularly in disadvantaged groups of women (Anisfield et al 1987).

Key aspects of early parenting

During the first months babies who receive consistent sensitive care will usually begin to form a healthy secure attachment with their caregiver. Sensitivity and warmth in response to infants have been identified as crucial elements in healthy interactions, and this is conveyed through eye contact, voice tone, pitch and rhythm, facial expression and touch.

The key components of a sensitive relationship are highlighted in **Figure 2**.



Attunement (Stern 1985) refers to an empathetic sharing of emotions between parent and infant. However, parents and infants are not attuned all the time and it is through healthy 'ruptures' followed by 'repairs' to attunement that much learning about interaction, and the regulation of emotions and behaviour takes place.

Reciprocity (Brazelton et al 1974) involves turn-taking, and occurs when an infant and adult are mutually involved in initiating, sustaining and terminating interactions. Young babies are socially interactive and will seek to initiate interaction from an early age. When babies fail to elicit responses or are overwhelmed by intrusive responses, they will eventually stop trying to engage.

Marked Mirroring (Gergely and Watson 1996) happens when a parent shows a contingent response to an infant such as looking sad when the baby is crying. When parents mirror the emotion, babies recognise that their feelings are understood. 'Marked mirroring' refers to the way in which parents reflect a modified or exaggerated facial expression, which indicates to the baby that his/her distress is not the parent's distress, and can be understood and contained by them.

Containment (Bion 1962) occurs when the adult tries to take on board the infant's powerful feelings and make them more manageable using touch, gesture and speech. A mother rocking a crying infant and saying sensitively 'there, there, I know you have a hunger pain in your tummy but I am just going to feed you now' is helping the baby to manage his or her emotions both now and in the future. Learning to manage emotions and behaviour is a key developmental task in early infancy.

Reflective function (Slade 2005) refers to the parent's capacity to understand their baby's behaviour in terms of their internal states and feelings, and highlights the importance of parent's recognising their baby as an individual with their own likes/dislikes and personality traits, rather than just in terms of their physical characteristics and behaviour. Infants need to have their individual gestures and behaviours accepted and to be celebrated as individuals, and continuity of carers is essential so that these intimate relationships can be established.

Table 9. Encouraging healthy interactions

Encourage parents to talk and sing with their baby by sharing the following with them:

- ✓ Babies interact best when they are in the quiet alert state (see table 7 above)
- ✓ When baby looks ready, hold him or her facing you and see if they make eye contact
- ✓ Babies need lots of time to respond, so pause and wait until they are ready to engage
- ✓ Babies also spend lots of time looking away because too much interaction can be very intense for them. Wait for them to come back in their own time
- ✓ The very best activity for a baby is looking at their parents face and listening to their voice
- ✓ Try singing softly to baby then pausing and watching for a reaction then singing some more.
(Tell them not to worry if they can't sing in tune – their baby will still love being close to them!)

Babies learn to feel safe and secure by knowing that parents are there to care for them. Encourage parents to enjoy caring for their baby and having cuddles as often as they can. Babies will learn how to soothe themselves by gradually feeling that it is okay to be alone in the cot because they feel sure that parents are not far away. They will only begin to feel this way if parents have responded promptly to their cries for attention. Some babies give a short protest cry when they are first put in their cot. Parents should be encouraged to recognise this. Babies who are regularly left to cry will find the stress unmanageable, and the high level of cortisol is toxic to their developing brain (Caldji 2000).

Babies don't come with an instruction manual, encourage parents to watch; wait and wonder:

- **Watch** quietly what their baby is doing, noticing his signals and cues;
- **Wait** for him or her to initiate an action or interaction;
- **Wonder** about what their baby might be feeling, and talk to their baby about what they think their baby may be feeling.



Factors that impact on early parenting – mental health problems; substance misuse; domestic abuse

Postnatal depression and interaction

From the first few weeks onwards the infant's stress systems are organised via transactions with sensitive main care givers. The development of emotional and behavioural regulation is the key task of early infancy, and this is learnt through every day interactions with consistent, sensitive caregivers.

Research on the effects of maternal postnatal depression indicates that:

- The long-term effects of continued postnatal depression include compromised emotional (e.g. Stein et al 1991) and cognitive functioning (e.g. Tronick et al 1986)
- Depression in the postnatal period is associated with insecurity of attachment in early childhood (i.e. around 18 months postpartum) (e.g. Murray 1992; Stein et al 1991)
- Nearly half babies of depressed mothers show lower levels of left frontal brain activity (e.g. joy; interest; anger) (Dawson et al 1999).

It is important to create a helping relationship where the mother feels confident to talk about her feelings so that she can receive appropriate help and support. Research shows that attending an infant massage group may help early interaction between mothers with depression and their infants (Onozawa et al 2001).

If the mother feels depressed after the birth of her baby she should be encouraged to visit her GP.



Substance Misuse

The effects of drug misuse during the postnatal period are extensive, and substance misuse on the part of one or both parents is associated with high rates of child maltreatment (Chaffin, Kelleher and Hollenberg 1996), with around 25% of children who are subject to a child protection plan involving parental substance misuse (Advisory Council on the Misuse of Drugs, 2003). Parents who are dependent on psychoactive drugs are at risk of a wide range of parenting deficits (summarised in Suchman et al 2005). For example, independent observations of mother-infant dyads have identified poor sensitivity and responsiveness to infants' emotional cues alongside heightened physical activity, provocation and intrusiveness (ibid).

There is also recognition that where the parent's mind is occupied by drug dependency, parent-infant interaction may be compromised as a result of emotional unavailability, incongruent mirroring and dyadic dysregulation (Soderstrom et al 2009). This has consequences in terms of the child's developing neurological system, and their later capacity for emotional regulation. These findings are corroborated by research drawing on the perspectives of parents who are misusing substances, which found 'a lack of understanding about basic child development issues, ambivalent feeling about having and keeping children, and lower capacities to reflect on their children's emotional and cognitive experience' (Suchman et al p.431).

“The development of emotional and behavioural regulation is the key task of early infancy, and this is learnt through every day interactions with consistent, sensitive caregivers”



Inter-Parental Violence

A significant amount of domestic abuse occurs around pregnancy and it therefore seems likely that many newborn infants, babies, and toddlers are witnessing such violence. A recent review of the developmental effects of exposure to intimate partner violence in early childhood has concluded that infants who hear or see unresolved angry conflict or a parent being hurt may develop symptoms of PTSD, which will manifest in eating problems, sleep disturbances, lack of typical responses to adults, and loss of previously acquired developmental skills, although this varies according to the extent to which the violence impacts on the parenting relationship, and on the mothers maternal sensitivity, mental health and stress (see Carpenter and Stacks 2009 for a summary). There is also evidence of an impact on their capacity for emotional regulation, and the occurrence of later behaviour problems (ibid).

See antenatal section for guidance about what to do. (Page 11)

Table 10. Postnatal period – Key messages

- ✓ Babies are born ready to relate and socially interactive from birth
- ✓ Babies are born with immature brains, the development of which is significantly influenced during the postnatal period by the parent-infant relationship
- ✓ Parents play a key role in helping infants to regulate their physiological, emotional and behavioural states during early infancy
- ✓ Key aspects of the parent-infant relationship include attunement; reciprocity; containment; marked mirroring; mentalisation/reflective function
- ✓ Mental health problems such as postnatal depression, substance misuse and inter-parental violence can have a deleterious impact on the parent-infant relationship and their later development
- ✓ Midwives have a key role to play – see Table 4 (pg 12) for details about what to do.

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