

Breastfeeding Policies and the Social Context of Breastfeeding.

by

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## ABSTRACT

The World Health Organisation, in 1979, expressed a need to promote infant health through breastfeeding as a global health need. Australia voted in favour of adopting an 'International Code of Marketing of Breast Milk Substitutes' and in 1984 guidelines were issued on the promotion of breastfeeding and implementation of the WHO breastfeeding code. This development occurred in the absence of any evaluation of the social or cultural context in which breastfeeding takes place. The aim of this study is to seek to address the relationship between socio-cultural factors and breastfeeding through an extensive review of the relevant literature. This study found that the socio-economic factors education, occupation and income were significantly related to breastfeeding, with mothers with more education being more successful at breastfeeding. Formal education was found to have a greater influence than breastfeeding education. Also the cultural factors or life practices were significantly related to breastfeeding, with traditional infant feeding practices, after immigration, undergoing breastfeeding modification to those of the host country. The lifestyle practices of cigarette smoking, alcohol consumption and illegal drug use were significantly related to breastfeeding, with smokers, and particularly heavy smokers, being less likely to choose to breastfeed or continue breastfeeding. Another cultural factor found to be significantly related to breastfeeding was the support from family and friends. However, the male partner was found to have the most influence on the duration of breastfeeding. These socio-cultural factors that influence the infant feeding decision need to be appraised by policy makers concerned with promoting breastfeeding.

**KEYWORDS:-** Breastfeeding, socio-economic status, education, returning to employment, income, immigration, cigarette smoking and male partner's influence.

In the nineteenth and twentieth centuries breastfeeding rates decreased as artificial infant feeding rates increased (Fildes 1986). One of the significant consequences of this change in infant feeding practice was an increase in infant mortality and morbidity which breastfeeding would have helped to prevent (Cunningham, Derrick, Jelliffe and Jelliffe 1991). In Australia in 1984, guidelines were issued on the promotion of breastfeeding and implementation of the World Health Organisation (WHO) breastfeeding code. Hospitals, health areas and individual bodies then formulated policies designed to promote more widespread breastfeeding.

While initial breastfeeding rates have increased with the implementation of the new breastfeeding policies, many babies are weaned to breastmilk substitutes before the recommended breastfeeding time of six months or longer. This study explores a growing literature that suggests that social and cultural factors may be strongly implicated in this trend. As such, policy makers concerned to promote breastfeeding may need to appraise themselves of such factors.

### **1) Changes in infant feeding and their health consequences.**

Alternatives to breast feeding are not new. In fact, they can be traced back to the prehistoric period. Feeding vessels have been found in infant graves dated at 2,500 B.C. (Phillips 1976). In England in the preindustrial period it was considered unsafe for the new born infant to have any milk for the first few days until the meconium had been passed. Meanwhile the neonate was given a purge, the most popular being butter and honey or sugar. About the third day the infant was put to the breast of the mother or

a wet nurse (Fildes 1986). With the industrial revolution came employment opportunities and a decline in wet nursing as an occupation, with the result of a decrease in the supply of respectable wet nurses.

Minchin (1985) reports that in the nineteenth century women began to have a choice concerning infant feeding. Mothers unable to breastfeed or afford a suitable wet nurse were able to choose from the various kinds of artificial milk that were becoming available. In the mid-nineteenth century condensed milk was developed, then evaporated milk (Anderson, Chinn and Fisher 1982). Towards the end of the nineteenth century enough was known about cow's milk for it to be modified for infant feeding. The twentieth century saw commercial promotion of breast milk substitutes which led to a rapid decline in breastfeeding. America pioneered the mass use of artificial feeding after commercial milk technology had improved (Anderson et al. 1982). Ebrahim (1978) states that in the developing world, at no time in human history has such a rapid change in human behaviour been recorded as the recent decline in breastfeeding.

According to a United Nations report on 'The State of the World Children' (1985), two thirds of one year old infants were being breastfed in 1914 worldwide. In America by 1973 one quarter of infants were being breastfed at birth and this decreased to 10% beyond three months. This American trend was soon followed in Europe. In Sweden babies being exclusively breastfed at two months of age dropped to 35% in 1970 and in Holland the numbers decreased to 11% in 1975. A similar pattern was reflected in the United Kingdom (Arton 1985).

Breastfeeding rates in western and industrialised countries began to increase in the decade preceding Arton's paper in 1985 [see previous paragraph], so that in the United States of America (U.S.A) mothers who breastfed their babies increased to 54%, and in Norway, Sweden and Finland to 95%. In the developing world a trend away from breastfeeding

had been noted and this trend was led by urban mothers (Arton 1985).

In traditional societies, breastfeeding is considerably longer than in Western societies (Klackenberg and Klackenberg-Larsson 1968), and among the latter the falling breastfeeding rates have been faster in some societies than others. However in the 26 years since Klackenberg and Klackenberg-Larsson's paper was written there have been successful promotions to increase breastfeeding rates.

Artificial feeding was believed to be responsible for much of the infant mortality and morbidity which prevailed in the 19th century (Cunningham et al. 1991). When a need was expressed by the WHO in 1979 to promote infant health globally through breastfeeding, breastfeeding policies (mentioned later in this paper) were then formulated to encourage, support and protect breastfeeding. Apart from both short and long term nutritional benefits to infants, such as the prevention of dental caries, obesity and possibly atherosclerosis, breastfeeding also has physical benefits to the mother. Through breastfeeding mothers can return to their normal weight and the uterus return to its normal size (Allen, Coyne, Dumbrell, Fairbairn, Marr, Mason and Vermeesch 1981). In Australia, breastfeeding is recommended for all these benefits and is also recommended to reduce the risk of 'sudden infant death syndrome'.

There are also economic and environmental advantages of breastfeeding and these include decreasing the economic burden on families due to the high cost of artificial feeding, decreasing government spending for artificial baby milk and decreasing medical costs by preventing illnesses caused by artificial feeding. Environmentally, breastfeeding would decrease the pollution of air, water and land from the production and preparation of formula and used formula tins (Meershoek 1993).

The magnitude of the benefits of breastfeeding differs in developing and



developed countries. Reduced infant mortality and morbidity is a benefit worldwide but a greater benefit in developing countries. In Australia and other developed countries the long term health benefits of breastfeeding are now an issue.

Current popular medical opinion is that breastfeeding in the first six months of life is essential for the nutritional and medical benefits to have their optimal impact (Rogers, Morris and Taper 1987). Because of the health benefits of breastfeeding, the American Academy of Paediatrics, the American Public Health Association and the American Dietetic Association recommend breastfeeding for the first four to six months (Janke 1993). Another recommendation on how long babies should be breastfed is proposed by Cunningham et al. (1991) who state in their global epidemiologic review, that in technically developed countries such as Europe and North America, babies should be breastfed for six months or more. In countries such as Bangladesh, Rwanda and Egypt the infant's survival may require its mother's breastmilk through the third year of life (Cunningham et al.).

### 11) Breastfeeding Policies.

The increased infant mortality and morbidity rates in babies artificially fed compared with those who were breastfed became a concern to infant health workers in the mid 20th century (Cunningham et al. 1991). By 1979, the joint WHO/UNICEF (United Nations Children's Fund) meeting on 'Infant and Young Child Feeding', held in Geneva, identified a need for urgent action by governments, international agencies, nongovernmental organisations, the infant-food industry and health and development workers 'to promote the health and nutrition of infants'. A statement was issued containing twelve points. Part of point number 7 was

*"Breastfeeding is an integral part of the reproductive process, the natural and ideal way of feeding the infant and a unique biological and*

*emotional basis for child development. .... It is therefore a responsibility of society to promote breastfeeding and to protect pregnant and lactating mothers from any influences that could disrupt it" (NH&MRC 1985 p39).*

At a session of the World Health Assembly in 1982, Australia was among the 118 member states of the WHO to vote in favour of adopting an 'International Code of Marketing of Breast Milk Substitutes'. The U.S.A. was the only country voting against the code because of possible repercussions for their economy, the artificial infant feeding industry being a profitable and big industry. There were three abstentions - Korea, Japan and Argentina. The code was adopted in recommendation rather than regulation. In Australia, in 1984, the National Health and Medical Research Council (NH&MRC) issued a statement and adopted guidelines developed by a working party (see Appendix A) on the promotion of breastfeeding and implementation of the WHO breastfeeding code. Adoption of these guidelines represented a shift in the New South Wales (N.S. W.) Department of Health's policy towards the active promotion of breastfeeding (Appendix A).

Following the adoption of these guidelines by the N.S. W Department of Health, it was then up to individual hospitals, health areas and private bodies to create their own specific policies. These have ranged from short policy documents (see Appendix B) to a 53 page policy document by the Department of Health, Central West Region (1993) (see Appendix C).

The breastfeeding policies are concerned mainly with breastfeeding practices, education of health professionals, pregnant and lactating women and protecting breastfeeding by prohibiting the inappropriate marketing practices by artificial formula manufacturers. The makers of these public policies to promote breastfeeding, however, have concentrated on medical issues and proceeded in the absence of any evaluation of the socio-cultural

factors associated with breastfeeding. The importance of considering the socio-cultural factors is that they influence the infant feeding decision and some will continue to do so, either in a negative or positive way, regardless of the implementation of the breastfeeding policies.

### **111) Methodological note.**

In order to identify the socio-cultural factors that influence infant feeding practices, an extensive literature review was conducted using computer searches, references from published papers and relevant articles from lactation and other journals. The articles reviewed were mainly from developed countries, including as many relevant Australian articles that were available. One of the features of this literature was the contradictory nature of the findings presented. One of the reasons for this may be differences in the definition of breastfeeding. Not all studies define what they mean or their criteria for breastfeeding. Other possible explanations for any obvious discrepancies may be the changes in beliefs and attitudes over time, sampling bias and error. With rapidly changing infant feeding practices, the study sample and the year when a study was conducted can give very different results from another study, with just a few slight changes. Factors relating to the breastfeeding decision often interrelate so study investigators must be aware of this, and analyse for confounding factors before coming to their study conclusion. A critical appraisal of some of the studies questions their validity, and some may have spurious results.

## **2. SOCIO-ECONOMIC STATUS AND BREASTFEEDING**

The socio-cultural factors that influence breastfeeding can be categorised into two groups, that is, structural factors or indicators of access to social resources (education, occupation, and income) and cultural factors (life practices). The cultural factors vary according to the conditions under which people live. In relation to breastfeeding, these structural and cultural factors often interrelate and some are more significant than others.

### **I) Education.**

Breastfeeding policies exercise no influence or change over social factors, such as education, occupation and income. Yet these three factors can influence the infant feeding decision. Education, in particular, appears to be the most significant factor in relation to breastfeeding success with formal education and not simply breastfeeding education exercising the greatest influence.

Most women decide on their method of infant feeding before conception. Those undecided often make their decision after receiving information that includes the risks and benefits of breastfeeding and artificial feeding. If a woman has made her choice on the method of infant feeding early then few people will be successful in attempting to change her mind. Women deciding late in the pregnancy often choose to feed artificially and these women tend to view breastfeeding with challenges they are unprepared to overcome (Auerbach 1990). If a woman decides early on her choice of infant feeding, she is unlikely to change her mind, and the effect of breastfeeding education at 'preparation for childbirth' classes is limited. These classes will give invaluable information on breastfeeding but they are

limited in their capacity to influence or promote breastfeeding.

One exception to the type of education was found in a study by Nelson (1982). This showed that 'preparation for childbirth classes' affects the likelihood of breastfeeding more so in the working class than the middle class. In this study the working class woman who attended classes was more likely to breastfeed than the working class woman who did not attend classes.

In the studies that address the relationship between socio-economic status and breastfeeding, higher breastfeeding rates always occur in the higher socio-economic strata. Lowe (1993), for example, states in a study in Victoria, Australia, that the duration of breastfeeding in the city of Melbourne was correlated with an index of socio-economic status. The data of breastfeeding at six months for the 56 local government areas in Melbourne were tested for correlation with the 1986 Australian Bureau of Statistics index of education and occupation. In Lowe's study there was considerable variation in the local government areas. The lowest proportion of breastfeeders was 22% in Sunshine, and the highest in Port Melbourne with a 70.2% breastfeeding rate. When these proportions were compared with the index of education and occupation there was a moderate strength of positive correlation, the higher breastfeeding rates being in the higher socio-economic areas.

Up to twenty five years ago, studies from other developed countries found similar results demonstrating that education was a significant factor in relation to breastfeeding. A study conducted in Sweden by Klackenberg and Klackenberg-Larsson (1968) found that children of mothers in the highest social class, indicated by a number of variables including education, were breastfed the longest. This finding was supported by another study in Sweden by Sjolín, Hofvander and Hillervik (1977). This study reported that mothers with higher education tended to breastfeed

longer than mothers with less schooling. In Sjolín et al's study the difference was not statistically significant between 6-7 years and 9-10 years schooling, but between the other groups with more education, either taken separately or combined, there was a statistically significant difference. According to this research, mothers who left school early more frequently weaned because of anxiety than those mothers with more education. The importance of the results of these two studies is that education has been a factor in successful breastfeeding for some time. At the time of the Swedish studies, the women would not have been exposed to the active promotion of breastfeeding that has occurred in the last decade, whereas in the Victorian study in 1993, the women would have been. Therefore regardless of breastfeeding promotion, women with more education are more successful at breastfeeding.

The amount of education needed to be a significant factor for breastfeeding success is more than ten years formal education. In the U.S.A, Rassin Richardson, Baranowski, Nader, Guenther, Bee and Brown (1984) found in a study of mainly low income respondents from three different ethnic backgrounds, that 18% of mothers with some high school education breastfed and this increased to 40% among women with at least some college education. In Lowe's (1993) Victorian study which included a high socio-economic group and therefore would have included women with tertiary education, the breastfeeding rates of the more educated women was 70%. Both studies show breastfeeding was related to education. The breastfeeding rates were 18% for mothers with some high school education, 40% for mothers with at least some college education and 70% for mothers with a higher level of education. Comparing the results of these two studies it shows as education increases above ten years of formal education, breastfeeding rates increase and continue to increase as the level of education increases.

An English study of young mothers and their breastfeeding rates also

suggests that education is a significant factor. This study addressed the infant feeding practices of mothers under 18 years of age in the city of Oxford. Subjects were drawn from the 'Young Mothers' Club at the John Radcliffe Maternity Unit in Oxford. About one third of all the under 18 year old mothers attend this club and they have approximately 150 new members a year. The level of education was not mentioned in this study, but because of the age of the mothers it would be expected they would have a low level of education. In this group the breastfeeding rates were low. The practicalities of the method of infant feeding and the financial considerations did not influence to any extent the mother's choice of infant feeding. Living accommodation and space for storage of equipment were rarely considered when deciding the method of infant feeding. Unemployment was common and very few of these girls returned to work, causing additional problems financially (Minns 1990). In this study, as with other studies, there were many other issues in the breastfeeding decision, but older mothers with more education may have evaluated the practicalities of the infant feeding method differently than the under 18 year old mothers. The results of this study suggest young age is a confounding factor in the breastfeeding decision.

Better educated mothers in the higher socio-economic group are in a position to make informed decisions regarding infant feeding from the information in the literature they read, in contrast to the lower socio-economic group who are influenced by good or bad breastfeeding experiences of family and friends and possibly incorrect, outdated and conflicting advice. An Australian study found a difference in groups of women who found their sources of information about infant feeding from books, magazines and pamphlets versus family and friends. The most important source of information for mothers of first-born children from the higher and lower social groups was the clinic nurse. The second most important source of information differed for the groups. For the higher social group it was books, magazines and pamphlets, while for the lower

social group it was family and friends (Hitchcock and Coy 1988). This study did not mention the level of education, but the higher social group is known to consist of people with more education and these women accessed the available printed information.

The argument that education is a factor influencing behaviour related to health, is reinforced in a study by Caldwell (1993). This study showed that every additional year of education in women of maternal age resulted in better health outcomes. Caldwell's study covered many issues but one statement was that the improvements in health care was not the result of the general level of care in the household, but more the result of the knowledge of specific innovational strategies. This statement may explain the breastfeeding success that is experienced by mothers with more education.

### **11) Occupation and returning to employment.**

In the literature related to breastfeeding, the relationship between occupation and breastfeeding is rarely addressed but 'returning to employment' and its relationship to breastfeeding has been the subject of several studies. Auerbach (1990) states breastfeeding and employment are frequently viewed as mutually exclusive activities. The results of some studies show that it is possible to continue to breastfeed and return to employment but motivation must be present. Some studies have found that for mothers returning to employment, weaning is not an automatic consequence while in mothers remaining out of the workforce high artificial feeding rates are common.

Martinez and Dodd (1983), Birenbaum, Fuchs and Reichman (1989) and Ryan and Martinez (1989) all agree that women who work during their pregnancy are more likely to breastfeed, than women who are not in the paid workforce during their pregnancy. A study by Kearney and



Cronenwett undertaken in 1991 found that if motivation was present, breastfeeding could continue for many months of maternal employment, although a return to employment in the first two months postpartum appeared to increase breastfeeding problems and shorten the duration of breastfeeding. According to this study more of the professionals and skilled workers returned to employment than the unskilled workers and students. The mothers who planned to return to work did not differ significantly from those who planned to stay at home as far as age and education were concerned. The results of this study were that mothers with 'better' occupations, and employed before the birth, were more likely to return to employment after the birth, and they did not necessarily see breastfeeding as a long term issue. The significance of the results of this study is that occupation and returning to employment may compete with breastfeeding duration, and to combine both, motivation must be present.

Returning to paid employment has been identified in another study as being detrimental to breastfeeding. Gielen, Faden, O'Campo, Brown and Paige (1991) found that by two to three months postpartum less than half of the mothers employed outside the home were still breastfeeding and two thirds of the non-employed mothers were breastfeeding. After adjustment for the demographic variables it was found that the non-employed mothers were 3.25 times more likely to be still breastfeeding than the employed mothers. The mothers who worked twenty hours or less per week were more likely to continue breastfeeding, suggesting that the opportunity to work part time or job share might enable a mother to breastfeed longer. In this study occupation was not found to be a factor predictive of breastfeeding among the employed mothers and work site accommodation was also found not to influence continuing breastfeeding.

Other studies show that returning to employment is not the reason given for weaning. In Ottawa, Canada, for instance, only a minority of 18 women in a study group of over 200 women reported that returning to

work or school was their reason for weaning or introducing supplementation feeds (Goodine and Fried 1984). The women in this study were predominantly middle class women. Klackenberg and Klackenberg-Larsson (1968) agree and state that returning or intending to return to work plays no important role in the falling incidence of breastfeeding. They concluded this from the results of their study where only 6% of the mothers were gainfully employed at the time when the infants were 4 months old and by this time 50% of the children had been weaned. In their study only 3% of the mothers gave 'gainful employment' as the reason for weaning.

From these studies it appears that motivation to breastfeed is a key variable and not employment. However, if a mother wants to combine breastfeeding and employment, she is more likely to be successful if she works reduced hours. Auerbach (1990), for example states part time work is less tiring for a mother than full time work, particularly when she first returns to work. Furthermore, if the mother returns to work after lactation is well established and before starting to miss the breastfeeds while she is at work, then the delay in returning to employment will help to maintain lactation. Auerbach and Guss (1984) found in a national survey that if women are able to breastfeed at work or express their milk, they were more likely to report only minimal effects of employment on their milk supply. Women who didn't express often reported employment decreased their milk supply. From this study, again it appears that motivation is a breastfeeding issue.

Anticipated difficulties in combining breastfeeding and employment, especially in first time mothers, appears to be a reason for why many babies are weaned. A study by Ekwo, Dusdieker, Booth and Seals (1984), found that in a group consisting of women having their first babies, there were three variables in the duration of breastfeeding. One was maternal perceptions of difficulties in scheduling breastfeeding on returning

to work, and the other two were the demands of breastfeeding, and concerns about total yearly family income. These were all negatively related to the duration of breastfeeding.

A review of the studies concerning occupation and returning to employment, resulted in conflicting results. Unskilled workers and students are less likely to return to employment. However, studies show mothers not returning to employment don't necessarily continue to breastfeed. It is possible to continue breastfeeding and employment as some studies showed, but there must be motivation. It has been shown that delayed return to employment and reduced working hours help maintain lactation. Anticipated conflicts between roles occur whether the mother is returning to employment or not. For women returning to employment the weaning process often occurs earlier and therefore returning to employment, for whatever reason, may be at the expense of breastfeeding.

### **111) Income.**

Being used to earning a higher income is related to breastfeeding. In a study by Kearney and Cronenwett (1991), mothers planning to return to work after the birth of their baby worked more hours prenatally and had better incomes (above \$20,000 [American] per year) than those women in the study not intending to return to paid employment. The women intending to return to paid employment also weaned earlier. The numbers in this study were too small to have reliable statistical results. The significance of the results of this study, if they are repeated in other studies, is that breastfeeding is competing with the benefits of increased income, or the loss of income the mother was used to receiving before the birth of her baby.

For women with low incomes, support from friends and relatives is an

important factor in sustaining breastfeeding. Barron, Lane and Hannan (1988) report from their study that the more breastfeeding friends the low-income subjects had, the longer they breastfed. However, their breastfeeding rates remain lower than mothers with higher incomes. Also the support from family and friends is limited because of the already low rates of breastfeeding in the low income groups. In an American national survey by Martinez and Krieger (1985) the percentage of mothers who breastfed their infants when the family income was less than \$7,000 was 36.6% compared to 71.8% when the family income was at least \$25,000. The breastfeeding rates in this study varied with the demographic variables of race, age and income.

As previously stated it is more economical to breastfeed, but in a study where two samples of low-income adolescents were compared to a third sample of low-income adult women, breastfeeding rates were 16.7% and 32.4% for the two teenage groups compared with 35.4% for the adult sample (Baisch, Fox, Whitten and Pajewski 1989). This is lower than the rates reported by Martinez and Krieger (1985) who state that in the U.S.A., 65% of white women and 33% of black women breastfeed their babies. In Baisch et al's (1989) study there were more black than white women represented in the two teenage group, but the racial composition was balanced in the group of adult women. In this study all the study subjects were low income mothers with low breastfeeding rates, and the teenage mothers had the lowest rates. However there were other factors influencing the breastfeeding decision. In the two teen groups 67.6% and 93.4% were having their first child compared to 27.6% in the adult group. Another factor was that the majority of mothers in the three groups were artificially fed as babies. The majority of fathers were also artificially fed as babies in the two teenage groups. The financial benefits of breastfeeding did not appear to influence the breastfeeding decision although all were low income mothers.

For another young teenage group the breastfeeding rates were very low and this may be a reflection of their age, breastfeeding attitude, and lack of breastfeeding friends. The low incomes of the under 18 year old mothers at the John Radcliffe Hospital in London (study mentioned earlier, Minns 1990) did not influence this group of mothers to breastfeed although breastfeeding would have been economically beneficial

These studies show income can have a negative or positive affect on breastfeeding. For higher income mothers relinquishing breastfeeding may enable them to maintain their high paying employment. Low income mothers also tend to relinquish breastfeeding, although other factors appear to be at work here, especially if low income combines with young age.

#### **1V Place of residence.**

Place of residence affects infant feeding. For breastfeeding at six months the proportion of breastfed babies was greater in the rural health regions in the state of Victoria, Australia, than in greater Melbourne (Lowe 1993). According to the author of this study that disclosed this result, one can only speculate why these rates differ and the simplistic explanation is that it could be that rural Victoria lacks the numbers of lower socio-economic status women that tend to live in Melbourne's outer suburbs (Lowe, 1993).

As is widely known, one of the indicators of socio-economic status, is quality of living. In a Swedish study, Klackenber and Klackenber-Larsson (1968) found that poorer women who lived in old fashioned houses stopped breastfeeding earlier than their more affluent counterparts who lived in modern houses. Interestingly, according to this study there was no statistically significant evidence between overcrowded living conditions and the duration of breastfeeding.

### **3. CULTURE AND BREASTFEEDING**

#### **1) Migration and breastfeeding.**

Leininger (1988) [cited in Rossiter 1992], states that culture guides individuals thinking, decisions and actions. When people migrate to another country, beliefs, values and life practices undergo modification and adaptation due to the environmental changes (Leininger 1987 [cited in Rossiter 1992]). The influence of cultural factors on breastfeeding can be illustrated by examining studies of how breastfeeding patterns change after immigration.

One is a study (Rossiter 1992) which was designed to explore Vietnamese women's attitudes, behaviour and beliefs towards infant feeding practices before and after immigration to Sydney. Traditionally, most Vietnamese women breastfeed their children for prolonged periods and in some cases for up to 4 or 5 years. The duration varies considerably according to the mother's health, inclination and convenience (Manderson and Mathews 1981).

Rossiter (1992) states in Vietnam most women breastfeed because it is the traditional thing to do. The health of postnatal women is believed to be weak and vulnerable and in order to regain their health, the women are required to observe postnatal rituals and dietary precautions. The new mother is confined to bed for at least 30 days to avoid future health problems, and to nurse her baby, although this does not happen until the third day as the colostrum is believed to be 'stale milk' and is discarded. The new mother should eat a specific high protein diet with a minimal intake to encourage milk flow and to balance the health of herself and her baby. After marriage the Vietnamese woman usually does not return to work and it is her duty to remain at home and to look after her children and family. After a birth the new mother concentrates on nursing her baby, and

she is in turn looked after by her extended family.

After immigration, Rossiter (1992) states these women experience a complete change from their traditional customs and postnatal care. While in Vietnam the babies are born at home, in Australia they are generally born in hospitals where the mother is required to be up and mobile shortly after the birth and initiate breastfeeding soon after birth. The traditional foods available in Vietnam and believed to be important to increase lactation are not as readily available. Without assistance at home it is inconvenient to prepare these traditional foods. Many women believe the quality of the mother's milk can only be enriched by eating a special diet and this is costly. The Vietnamese mothers tend to relinquish breastfeeding and learnt to adapt to what they consider normal in the host country, - artificial feeding. According to Rossiter (1992) economic factors also affect this decision. To establish themselves in the new country the women often enter the workforce as soon as possible after confinement. They believe the western way of infant feeding is by the bottle and believe that breastmilk substitutes are just as beneficial as breast milk (Rossiter 1992).

The newly arrived Vietnamese women, according to Rossiter's study, can see very little difference in the health of artificially and breastfed babies. After immigration to Sydney the support of friends and family is not there as the family structure changes to a nuclear form. Before coming to Australia these women believed that breastmilk had the right proportion of nutrients for their babies, it contained immunoglobulin, was natural and hygienic. After immigration to Australia their beliefs changed and the idea of breastfeeding being convenient changed (Rossiter 1992). In Rossiter's study, half of the breast feeders and more than half of the artificial feeders believed that breastmilk substitutes were more nutritive and superior to breastmilk. Artificially fed babies were believed by some of the women to be more healthy than the breastfed babies. Influencing the decision to bottle feed was the easily accessible artificial milks and the cost of these

milks in Australia. Eating the special foods that the lactating mother believed to be necessary to ensure a good quality of breastmilk were costly and time consuming in Australia by comparison to Vietnam.

Rossiter (1992) also states that while many of the women relinquished breastfeeding, they agreed that breastfeeding was not embarrassing. However, a comment from the artificially feeding group was that they considered their breasts too small to produce sufficient milk to feed their baby, and they also perceived breastfeeding as being unattractive. They also believed breastfeeding would have an adverse effect on their health and figure. 89% of the breastfeeding mothers compared to 61% of the mothers who chose not to breastfeed stated breastfeeding was not 'old fashioned'. Rossiter (1992) comments that a Vietnamese woman is more likely to breastfeed after immigration to Australia if she does not think breastfeeding is 'old fashioned', is not embarrassed by breastfeeding and is provided with the correct traditional foods and has also achieved a higher level of education.

From this study it can be concluded shows that the newly arrived Vietnamese women are influenced by the infant feeding practices in the new community and their beliefs about the benefits of breastmilk are modified. They adjust their practices in conforming to those of the host country. However, if the mothers have a high level of education they are more likely to breastfeed despite these cultural changes. This concurs with the findings earlier in this paper, that women with higher education are more likely to adapt and maintain breastfeeding.

Another study of Vietnamese immigrants, this time in the U.S.A. (Romero-Gwynn 1989) showed similar infant feeding changes after immigration, but one in Perth, Australia (Reynolds, Hitchcock and Conveney 1988) showed different results. The Perth study group was from a migrant hostel group and therefore a group not integrated into the



Australian community, and living with Vietnamese cultural support. The influence of family and friends was important in supporting the mother who wished to breastfeed. The Perth study indicates that Vietnamese women who lived at a migrant hostel, were able to maintain their traditional breastfeeding patterns.

In another study in the United Kingdom, it was found breastfeeding rates and also the breastfeeding experiences of friends were factors with breastfeeding, in three ethnic groups living in the same area in London. The study found that breastfeeding was initially practised more among African, West Indian and Asian mothers than British mothers (Jones and Belsey 1977). The immigrant groups showed a steeper decline in breastfeeding duration than the British mothers, and by twelve weeks after the birth the rates did not differ much from the British mothers. In some ethnic groups, breastfeeding is accepted as a norm and several of the African women found it difficult to give a reason for not breastfeeding, as they had never considered an alternative. The cultural difference in the breastfeeding practices in this study could not be explained by social class. Experience of friends was strongly correlated with the decision to breastfeed. The African and West Indian mothers more often had friends who had successfully breastfed. If the friends had successfully breastfed then the mother would be more likely to choose this method whereas if the friends had problems breastfeeding then the mother was more likely to choose to bottle feed. In this study less than 25% of the unmarried British mothers breastfed in contrast to 80% of the unmarried West Indian mothers. As with the Vietnamese studies the influence of friends was an important factor. However, unlike the Vietnamese women in Sydney, the three different ethnic groups living in London initially tried to maintain their traditional feeding practices. Despite this, environmental and other factors associated with their new country influenced their infant feeding practices to that of the host country and they only breastfed for a short time.

Interestingly Bangladesh women living in England, took up to three generations to decrease their traditional breastfeeding rates to those of the host country. Mothers in Bangladesh traditionally breastfeed, but according to a study conducted by Ahmet (1990) there are barriers to breastfeeding for Bangladesh mothers living in Tower Hamlets in Britain. Ahmet (1990) states over the last three generations, the declining incidence of breastfeeding has fallen to the low levels of the inner city communities nearby Tower Hamlet. These mothers have come to believe that bottle feeding is expected in England. Some mothers may have never seen a European woman breastfeeding, they have no access to English neighbours' homes and see no lactating mothers on television. They therefore assume that breastfeeding is an unacceptable practice. The majority of the Bangladesh mothers recognise the superiority of breastmilk and 50 % refer to the Moslem holy book, the Q'ran, from which Ahmet (1990) quotes

*"The mothers shall give suck to their offspring for two whole years."*

In this study, like the Vietnamese women, the mothers changed their infant feeding practices to what was the norm of the host country, although in Ahmet's (1990) study the change was over three generations. This was in contrast to two of the Vietnamese studies where the change was immediate. The third Vietnamese group from a migrant hostel in Perth had their own social and cultural support and continued with their traditional way of infant feeding, which was breastfeeding (Reynolds et al. 1988).

As previously mentioned the traditional way of infant feeding in Vietnam and Bangladesh is breastfeeding, but in another Asian country, Hong Kong, the breastfeeding rates are low. They are also low compared to other western countries (Wing and Tsang 1976, Leung and Lam 1980 and Hung 1983, cited in Hung, Ling and Ong 1985). Hung, Ling and Ong (1985) conducted a study which revealed that mothers with different feeding practices were influenced by different sources. The study group were

Chinese mothers. Husband, friends and relatives influenced the breastfeeding mothers, whereas the bottle feeding mothers were influenced more by the professionals and the mass media. In Hung et al's (1985) study it was found the bottle feeding mothers were influenced more by the Hong Kong medical professionals who did not (at that time) support breastfeeding. The finding of this study concurs with the other studies that mothers are influenced by what they perceive as cultural norms.

The significance of the results of these studies is that culture and its relationship to the environment influence how mothers feed their babies. When mothers change their environment to one where there is a different feeding practice, if they have support from family and friends they may attempt to maintain their traditional feeding practices. However breastfeeding changes are likely to occur when there is a change in environment and culture, such as from one economic stratum to another, or from rural to urban living. Although many mothers change their infant feeding practices to those of the community in which they live, it is possible for mothers to continue the practice of breastfeeding if they have a higher level of education.

### **11) Cigarette smoking.**

Cigarette smoking is a cultural practice. Pierce (1989) states that in Australia, following the antismoking campaigns since 1983, there has been a sizable drop in smoking prevalence. Although many smokers are 'quitting' it has been noted that the percentage of younger women starting to smoke cigarettes is increasing. This means that many women giving birth will be smokers.

Taylor (1979) suggests that in the low socio-economic groups, factors such as low income, less education and greater stress may be associated with lifestyle practices such as cigarette smoking. For whatever reasons

women smoke cigarettes, the results of studies are that women who are smokers, and particularly if they are heavy smokers, are less likely to continue breastfeeding. Goodine and Fried (1984) report on a Canadian study of middle class women and the relationship between cigarette smoking and breastfeeding. Of the women who did not smoke during the third trimester 88% breastfed, compared to 72% of the light smokers and 64% of the heavy smokers. The percentage for those breastfeeding during the three to six month period were: non-smokers 55%, light smokers 35% and heavy smokers 15%. The duration of breastfeeding was also found to be negatively associated with breastfeeding with the non-smokers weaning at approximately nine months and the heavy cigarette smokers at approximately five months.

Another way of showing the effect of cigarette smoking on breastfeeding is demonstrated in a study in Chile by Vio, Salazar and Infante (1991). A significant difference was found in milk production between cigarette smokers and non-smokers. The average quantity of maternal milk was 961 plus or minus 120g a day for the non-smokers compared to 693 plus or minus 110g a day for the smokers. During the time of the study the average weight increase for the babies of non-smokers was 550 grams compared to 340 grams for the babies of the smoking mothers. The authors state that these data indicate a negative effect of smoking on the production of breastmilk.

From these two studies it shows that cigarette smoking affects breastfeeding in different ways. Smoking mothers are less likely to choose to breastfeed and if they do, they wean earlier than the non-smoking mothers. The numbers of cigarettes smoked is significant, with the heavier smokers being even more less likely to choose to breastfeed, and weaning earlier than the light smokers. Smoking mothers produce less breastmilk and their babies do not gain as much weight in comparison to the babies of non-smoking mothers. This last point may contribute to the early weaning

of the babies of smoking mothers.

Similar results relating to smoking and breastfeeding are found in an Australian study. The major objective of the study was to determine whether excess weight was associated with early weaning. However the results were that maternal age and cigarette smoking had the greatest effect on the cessation of breastfeeding (Rutishauser and Carlin 1993). The estimated effect of cigarette smoking in their study was that if a woman was a 10 cigarette a day smoker, she was about 2.5 times more likely to stop breastfeeding at any time, than a non-smoker. In this study the proportion of non-smokers still breastfeeding at six months was 50% compared to 20% of smokers still breastfeeding at six months.

Breastfeeding policies in Australia make little mention of cigarette smoking, in spite of the results of the study by Vio et al. (1991) which show the supply of breastmilk and the weight gain of the baby are both decreased in the smoking mother. The WHO doesn't mention smoking but an Australian nutrition pamphlet lists number 4 of 8 'other hints' as

*"If you smoke - now is a good time to quit"* (NH&MRC1985).

A health area 53 page policy document (appendix C) mentions heavy maternal smoking may be the reason for breast refusal and also that smoking should be avoided if possible or at least kept to a minimum while breastfeeding. They also mention the importance of a smoke free environment for the baby. Their policy states smoking is not a contra-indication to breastfeeding. In fact, they state mothers who smoke should be encouraged to breastfeed because of the immunological qualities the baby will receive from the breastmilk.

### **111) Alcohol consumption.**

Alcohol consumption is another lifestyle or cultural practice and it can range from minimal to excessive amounts. Infants can be born with foetal

alcohol syndrome resulting from excessive regular drinking or occasional binge drinking by their mother. For this reason many women choose not to drink any alcohol during their pregnancy.

Alcohol in the past had been recommended to breastfeeding mothers as an aid to lactation but there is no scientific evidence to support this recommendation (Mennella and Beauchamp (1992). Goodine and Fried (1984) in their study found the level of consumption of alcohol was not related to the type of feeding method, nor was it associated with the timing of the introduction of solid feeds or the weaning age of the infant. Their study suggested there was no association between the level of social drinking of alcohol and the duration of breastfeeding.

Alcohol is not mentioned in the breastfeeding policies except for one which advises that alcohol should be kept to a minimum and that the alcohol content is higher in breastmilk than in the maternal circulation (appendix C). In relation to alcohol and breastfeeding there needs to be more investigation regarding the effect of alcohol on the supply of breastmilk and on the baby. One study by Mennella and Beauchamp (1992) does state that alcohol decreases the quantity of breastmilk the baby receives.

Mennella and Beauchamp (1992) comment that the amount of alcohol ingested by the breastfed infant is a minute fraction of that consumed by the mother, but the immediate effects of exposure to alcohol via breastmilk is unknown. They comment that infants have limited capacity to oxidise ethanol. Mennella and Beauchamp (1992) in their study found that short term consumption of alcohol by lactating women resulted in the perceived intensity of odour in expressed breastmilk as assessed by a panel. The intensity of the odour peaked at 30 - 60 minutes after the alcohol was consumed and then decreased. The infants in this study sucked more frequently during the first minute of feeding, but consumed significantly less milk compared to the control group, whose mothers drank a

nonalcoholic beverage. From this study it shows that alcohol does change breastmilk and affects the babies intake of breastmilk.

#### **1V) Illegal drug use.**

Another cultural or lifestyle practice, illegal drug use, affects the breastfeeding decision. Babies exposed to methadone (a drug given to heroin addicts) before birth suffer from withdrawal symptoms and are at increased risk of sudden infant death syndrome. Breastfeeding is a way of the infant withdrawing more slowly (McVeagh 1993). Infant feeding advice to mothers on a methadone programme can be difficult, particularly if there is the possibility of multiple drug use. Another illegal drug, cocaine, if used by breastfeeding mothers can cause the infant to suffer convulsions McVeagh (1993). The breastfeeding policies do not address illegal drug use but this issue is too complex an area to be addressed in the breastfeeding policy documents.

#### **V) Relationship with partner.**

The majority of research has focused on the elements of the mother-infant dyad, however the male partner can influence the maternal decisions regarding breastfeeding and particularly weaning. In Baranowski, Bee, Rassin, Richardson, Brown, Guenther and Nader's 1983 study, 10% of the 129 Anglo-American women indicated their male partners would not be supportive of breastfeeding and of these women, only one intended to breastfeed (Baranowski et al. 1983). Kearney (1988) states a father may experience envy of the infant's takeover of the breasts as objects of sensual pleasure, and he may become frustrated that his partner's attention is diverted, and that sexual relations may be delayed or infrequent. These often unspoken conflicts may put a strain on the relationship and breastfeeding may be especially difficult under these circumstances.

Breastfeeding support from friends and family is important for the mother to continue breastfeeding but it is the support of the male partner that has the most influence on the duration of breastfeeding. Morse and Harrison (1987) report that for women breastfeeding for over six months the support and encouragement of breastfeeding, was withdrawn by different groups of people at various ages of the child. The mother could continue to breastfeed when friends withdrew their support or were silent about breastfeeding when the baby was about eight months of age. She could still continue to breastfeed when the child's grandparents did the same and even when they directed comments at the toddler towards the age of one year. However, when the male partner withdrew his support, which in this study was approximately when the baby was one year old, weaning occurred within a few weeks. The authors state that from the data of their study, that the duration of breastfeeding is not solely determined by the mother, but is influenced by social and cultural norms.

Support and particularly the male partner's support does influence the duration of breastfeeding. Apart from all the other factors concerned with infant feeding, social coercion for weaning may influence the mother, so she is not the only one involved in the breastfeeding decision.



#### 4.

## CONCLUSION

### 1) Profile of breastfeeding mothers.

The information found in this literature review of the socio-cultural influences on breastfeeding agree with Sjolín, Hofvander and Hillervik (1977) who state that mothers who are mature, experienced, are well educated, and live under stable and good socio-economic conditions are more successful at breastfeeding than those who are less fortunate in these respects. A similar comment by Rutishauser and Carlin (1993) is that in general, older and more educated women, who are relatively well off socio-economically and who live in a stable relationship, and with breastfeeding support from family and friends, continue to breastfeed for a longer period of time.

Yet another profile of breastfeeding mothers, as found from numerous studies, is one by Janke (1993). In this study it was found women who choose to breastfeed and are likely to succeed tend to share the following characteristics. They are Caucasian, middle to upper class, well educated, married, in their early 20's to 30's, non-smokers, breastfed themselves as infants, successful with prior breastfeeding attempts and are healthy themselves with healthy infants. Some modifiable variables associated with breastfeeding success were mentioned and these were, intending to breastfeed for a long time, having an early first breastfeeding, having a strong sense of commitment to breastfeeding, having a good support system, avoiding supplement feedings and expressing positive attitudes toward breastfeeding. Janke (1993) states inconclusive and/or conflicting results have been reported on the association between breastfeeding and the number of children, sex of the infant, attendance at prenatal classes, returning to employment and the type of birth. Many of the variables in Janke's study that influence breastfeeding are socio-cultural in nature.

## 11) Implications for breastfeeding policies in Australia.

Breastfeeding rates in Australia have increased during the last decade and this may be a result of breastfeeding awareness and the implementation of breastfeeding policies. However, there are socio-cultural factors relating to breastfeeding that the policies do not address. These socio-cultural factors need to be appraised by policy makers concerned with promoting breastfeeding.

This study found the socio-economic variables of education, occupation and income are all significantly related to breastfeeding. However, the breastfeeding policies exercise no influence or change over these socio-economic factors. The breastfeeding policies address breastfeeding education, but this is limited in its effect, as formal education was found to have a greater influence on breastfeeding than breastfeeding education.

Although breastfeeding policies have no influence on the socio-economic factors influencing breastfeeding, they may exercise an influence on the cultural factors. Culture, or daily life practices, vary according to the conditions under which people live. Therefore the cultural factors can change or are modifiable. This study found the cultural factors relating to breastfeeding are migration, the lifestyle practices of cigarette smoking, alcohol consumption and illegal drug use, and the influence of the male partner. If the reason for traditional infant feeding practices changing after immigration to those of the host country, is socio-economic in nature (that is - education, occupation and income), then implementation of the breastfeeding policies will have no influence on the breastfeeding decision. Concerning lifestyle practices, the implementation of breastfeeding policies and particularly breastfeeding education is limited in its influence to change these practices. Yet these cultural lifestyle factors, and particularly cigarette smoking, can influence the infant feeding decision. More young women in

comparison to other groups in the community, are starting to smoke cigarettes in spite of recent antismoking campaigns. If the antismoking campaigns are not decreasing the cigarette smoking in young women, then the implementation of the breastfeeding policies will also be limited in its effect. The influence of male partner, is a modifiable variable in relation to breastfeeding, and therefore one which may be influenced by the implementation of the breastfeeding policies. The influence the male partner has on breastfeeding is related more to duration of breastfeeding than to initial breastfeeding.

The links between infant feeding and social class are not specifically mentioned in the breastfeeding policy documents, despite the fact that the general relationship between social class and health has been acknowledged in other health policy documents. Although it is possible to increase the breastfeeding rates in all socio-economic groups, because education is one of the most significant factors for breastfeeding success, it would be expected there will always be more breastfeeding success in the higher socio-economic areas compared to the lower socio-economic areas.

Formula feeding is still practised in Australia. Although the majority of babies are discharged from hospital breastfed, many are still being weaned to breast milk substitutes before the recommended time of six months or more. Breastfeeding policies were formulated to encourage, support and protect breastfeeding and it is probably time, in Australia a decade later, to evaluate and reassess these policies. Policy makers need to take the social and cultural factors into account when formulating breastfeeding policies, as these factors play a crucial role in the infant feeding decision.

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Promotion of Breastfeeding and Implementation of the W.H.O.  
International Code of Marketing of Breast-Milk Substitutes:  
Guidelines for the Health Care Sector

The attached guidelines have been developed by a Working Party of N.H. & M.R.C. on which this State was represented. The guidelines aim to promote breastfeeding as the optimal form of infant feeding in terms of its nutritional, immunological and economic benefits.

Adoption of these guidelines represents a shift in Departmental policy towards the active promotion of breastfeeding. In practical terms this means that all new mothers should be encouraged and assisted to breastfeed their babies, and that practices which tend to favour bottle feeding, (such as the distribution of samples of infant formula to breastfeeding mothers) are to be avoided.

It is recognised that not all mothers are able to breastfeed and that others may be deeply reluctant to do so, and in these cases, mothers should be educated in the correct use of infant formulas. On no account should these mothers be made to feel guilty or anxious because of their decision to bottle feed.

Health professionals working in Maternal and Child Health and related areas should familiarise themselves with both the guidelines to promote breastfeeding and the specific guidelines relating to the implementation of the WHO International Code of Marketing of Breast-Milk Substitutes.

B. V. McKAY,  
Secretary.



In reply  
please quote:

The National Health and Medical Research Council at its Ninety-seventh Session in June 1984 adopted the following:

Guidelines on Implementation of WHO International Code of Marketing of Breast-Milk Substitutes

The Council noted that Australia had voted for the adoption of the WHO International Code of Marketing of Breast-Milk Substitutes at the 34th Session of the World Health Assembly in May 1981. The Council considered that while there had been an encouraging reversal of the trend from breast-feeding to bottle-feeding in Australia in recent years, there was need for further co-operative efforts between the Commonwealth, State and Territory health authorities and other bodies to give effect to the aim and principles of the Code.

Council considered that evidence for the nutritional, immunological, and economic benefits of breast-feeding was now well documented and breast-feeding should be actively promoted in the community. Attention should be given to public education about the benefits of breast-feeding and the health education curricula of both primary and secondary school children should include information about breast-feeding.

Pre-natal, confinement and post-natal care should provide the information, preparation and support needed by women to ensure the establishment and maintenance of adequate lactation. Particular attention should be taken to ensure that those practices known to interfere with the establishment and maintenance of successful lactation were avoided.

The training of health professionals, particularly nurses and doctors, should include specific information about the physiology of breast-feeding and should properly prepare them to assist mothers to establish and maintain adequate lactation.

In addition, the health care sector in Australia should take all steps necessary to give effect to the aim and principles of the WHO Code. Detailed guidelines for the implementation of the WHO International Code are attached.

The Council referred these recommendations to State and Territory health authorities, the Australian College of Paediatrics, the Australian College of Obstetricians and Gynaecologists, and other relevant bodies.

GUIDELINES TO PROMOTE BREAST-FEEDING AND IMPLEMENT  
WHO INTERNATIONAL CODE OF MARKETING OF BREAST-MILK SUBSTITUTES

I. PUBLIC EDUCATION

Attitudes about parenting and attitudes to child-rearing, including infant feeding, are developed well before pregnancy. Acceptance of breast-feeding as the normal way to meet an infant's nutritional requirements needs to be established within the general community and particularly among boys and girls as potential parents. Existing community attitudes to, and knowledge about, breast-feeding need to be modified so that new and prospective parents are supported by appropriate (and helpful) community values.

Public education about the many benefits of breast-feeding for both mother and infant should be targeted to the following groups:

- (1) School children at both primary and secondary school levels - appropriate introduction of information on breast-feeding should be made to the health education curricula. The assistance of trained educators (infant health nurse, counsellor of Nursing Mothers Association of Australia, etc) should be sought in both curriculum development and presentation of classroom activities.
- (2) The general community - mass media use (especially radio and television) should be sought by community health education authorities in the States and Territories.

II. PRE-NATAL CARE

Pre-natal care is incomplete if women have not received information about, and preparation for, breast-feeding. Health workers responsible for the medical supervision of pregnant women should take steps to ensure that care is comprehensive and includes the following:

- (1) Information about the advantages of breast-feeding for both mother and infant.
- (2) Information about the physiology of lactation.
- (3) General information about the nutritional requirements of mothers during pregnancy and lactation, and of young infants and how to meet these.

- (4) Routine examination of the breasts at the time of the first pre-natal visit, followed later in the pregnancy by detailed advice on nipple preparation and nipple care.
- (5) Discussion of the expectation that the infant will be placed at the mother's breast in the delivery room, and of the reason for this.

Wherever possible individual counselling should be supplemented by educational activities including the use of appropriate film and printed material. Discussion during group educational activities should be led by specially trained counsellors (registered nurse, health educator, counsellor from the Nursing Mothers Association of Australia). Fathers as well as mothers should be encouraged to participate in these activities.

### III. HOSPITAL PRACTICES

Practically all women who wish to breast-feed their infants are physiologically able to do so and are able to produce milk in sufficient quantity and of quality to support normal growth and development. The establishment and maintenance of lactation, however, are dependent upon appropriate support by knowledgeable individuals and upon a variety of further factors which may enhance or inhibit the establishment of successful lactation.

In this regard hospital facilities and personnel should ensure that routine care favours breast-feeding as the norm for full-term healthy infants and their mothers.

To this end, hospital care of the normal, full-term new-born infant and mother should:

- (1) encourage rooming-in as the norm for all healthy new-born infants;
- (2) encourage mothers to put their infants to the breast within the first hour after birth, providing the condition of mother and infant are satisfactory;
- (3) allow for frequent and flexible feeding patterns based upon individual needs of infants and not on hospital schedules;
- (4) avoid routine use of prelacteal feedings of any kind;
- (5) exclude routine use of complementary feedings of any kind;
- (6) provide registered nurse personnel to assist mothers in techniques of breast-feeding;

- (7) discourage health professionals from using any unnecessary medications before, during or after delivery;
- (8) discontinue the practice of providing routine discharge packs including infant formula to mothers leaving the hospital after the birth of their infants;
- (9) demonstrate bottle feeding techniques only to those mothers who have clearly indicated that they will not be breast-feeding their infants; and
- (10) provide information about appropriate contraception, emphasising practical advice on the timing and choice of contraceptive methods, which do not reduce milk yields.

#### IV. POST HOSPITAL DISCHARGE

Mothers leaving hospital after the birth of their infants should be provided with sufficient information to ensure as far as possible the maintenance of an adequate milk supply, and a care plan for continuing support to replace that of the maternity hospital.

The current early weaning observed among many infants appears often to be not related to the mother's desires to discontinue breast-feeding but rather to a perceived or real insufficient supply attributable to poor management or preparation.

Discharge care plans should include information about the following:

- (1) clearly defined handover of care to appropriate community services or the local hospital (special instructions should be provided for mothers leaving hospital before lactation is fully established);
- (2) expectations regarding demand feeding - mothers should be aware that not all babies establish or maintain a feeding routine;
- (3) expectations regarding night feeds - mothers should be aware that babies will differ in their requirements for night feeds;
- (4) supply problems - mothers should be aware of the importance of frequent feeds and the negative effect of complements/supplements of any kind on breast-milk supply;

- (5) weight gain of the infant as an indicator of adequate supply - mothers should be aware of the normal variation which exists between infants and nursing personnel should be aware of the relative inaccuracy of test-weighing and of the potential adverse affects this may have on the mother (frequency of weighing should occur no more than is required to determine that the infant is growing satisfactorily);
- (6) appropriate contraception - practical advice on timing and choice of contraception during lactation should emphasise methods which do not reduce milk yields;
- (7) drug use during lactation - mothers should be aware that many substances ingested by them may be transferred to the infant by way of breast-milk and information should stress that no drugs should be taken by lactating mothers without medical advice;
- (8) relationship of breast-feeding to food allergies - at risk infants (infants born into 'atopic families') may be protected from allergies by prolonging breast-feeding and delaying the introduction of other foods;
- (9) timing of weaning and appropriate weaning foods - mothers should be aware that, generally speaking, and provided supply is adequate there is no need to introduce additional foods to the milk diet before infants are 4 months of age; most infants will require weaning foods at approximately 6 months of age; education about appropriate weaning foods should emphasise that suitably prepared foods from the family table are less costly than commercially prepared infant foods (health workers should be aware of and respect ethnic perceptions of 'weaning');
- (10) relationship between an adequate milk supply and the mother's 'psycho-social' environment - mothers should be aware that the arrival of a new infant into the family unit is not always unaccompanied by stress; availability of support systems to provide both emotional support and advice for handling of individual problems may be crucial to the maintenance of an adequate milk supply for an appropriate duration; mothers leaving hospital should know how to reach appropriately trained counsellors (registered infant health nurse and/or Nursing Mothers Association counsellor).

In addition to the development of adequate post-hospital discharge care plans, health care workers should not provide mothers with samples of infant formula. (This does not exclude the provision of emergency short or long term



supplies of formula to needy mothers of bottle-fed infants at the worker's discretion). Facilities of health care systems should not be used for the display or products within the scope of the WHO Code, for placards or posters concerning those products or for the distribution of material provided by a manufacturer or distributor which bears a product name or logo.

#### V. SPECIAL EDUCATION FOR HEALTH PROFESSIONALS

Health professionals should possess the knowledge and skills required to assist mothers to make an appropriate informed decision about infant feeding, to explain the basic physiology of breast-feeding, to provide information about the expectations of successful breast-feeding and to provide help when problems associated with the establishment and maintenance of lactation arise. It is therefore recommended that:

- (1) the curricula developed for the training of all medical students be extended to include mandatory course and practical work on infant nutrition in general and breast-feeding in particular;
- (2) the nutrition component in the training of all nurses be revised to include more relevant and up-to-date information; the training and on-going education of nurse-midwives, and maternal and infant community health nurses should include detailed course and practical education pertaining to maternal and infant nutrition and including breast-feeding, so that such education ensures that nurses are equipped, in turn, to provide appropriate information and help to the mothers they advise in routine clinic contacts;
- (3) other professionals who may have contact with pregnant and/or lactating women (physiotherapists, community health educators) have basic information about infant feeding and breast-feeding; course work provided in the training of these individuals should contain a nutrition education component.

#### VI. SPECIFIC GUIDELINES FOR THE HEALTH CARE SECTOR IN IMPLEMENTING THE WHO INTERNATIONAL CODE OF MARKETING OF BREAST-MILK SUBSTITUTES

##### Introduction

Australia voted for the adoption of the WHO International Code of Marketing of Breast-Milk Substitutes at the 34th Session of the World Health Assembly in May 1981. At the Commonwealth level several steps have been taken toward the implementation of the aim and principles of the Code in this country. It is important however that the health care sector be aware of its responsibilities to the Code in all States and Territories. The following guidelines should serve to assist the health care sector meet those responsibilities.

These guidelines should in no way be interpreted to suggest that appropriate breast-milk substitutes and information about their use should not be available to mothers who cannot or have chosen not to breast-feed their infants. These women also must receive appropriate support and advice to adequately bottle-feed their infants.

#### Guidelines.

- (1) Governments should have the responsibility to ensure that objective and consistent information is provided on infant and young child feeding for use by families and those involved in the field of infant and young child nutrition. This responsibility should cover either the planning, provision, design and dissemination of information, or their control.
- (2) Informational and educational materials, whether written, audio, or visual, dealing with the feeding of infants and intended to reach pregnant women and mothers of infants and young children, should include clear information on all the following points:
  - (a) the benefits and superiority of breast-milk;
  - (b) maternal nutrition and the education and preparation for maintenance of breast-feeding;
  - (c) the negative effect on breast-feeding of introducing partial bottle-feeding;
  - (d) the difficulty of reversing the decision not to breast-feed; and
  - (e) where needed, the proper use of infant formula, whether manufactured industrially or home-prepared.

When such materials contain information about the use of infant formula, they should include the social and financial implications of its use; the health hazards of inappropriate foods or feeding methods; and, in particular, the health hazards of unnecessary or improper use of infant formula and other breast-milk substitutes. Such materials should not use any pictures or text which may idealise the use of breast-milk substitutes.

- (3) Donations of information or educational equipment or materials by manufacturers or distributors should be provided only at the request and with the written approval of the appropriate government authority or within guidelines given by governments for this purpose. Such equipment or materials may bear the donating company's name or logo, but should not refer to a proprietary product that is within the scope of the Code (except as detailed in (13)), and should be distributed only through the health care system.

- (4) Any gifts of articles or utensils which may promote the use of breast-milk substitutes or bottle-feeding should not be distributed through the health care system.
- (5) Marketing personnel, in their business capacity, should not have direct or indirect contact of any kind through the health care system with pregnant women or with mothers of infants and young children.
- (6) The health authorities in Australia should take appropriate measures to encourage, promote and protect breast-feeding and promote the principles of the WHO Code, and should give appropriate information and advice to health workers in regard to their responsibilities, including the information in clause (2). Breast-feeding should be protected by the encouragement of social measures designed to provide adequate maternity leave for lactating women and the provision of amenities for women to breast-feed both close to their place of work (child care) and within public facilities.
- (7) No facility of a health care system should be used for the purpose of promoting infant formula or other products within the scope of the WHO Code. This Code does not, however, preclude the dissemination of information to health professionals by direct or indirect contact.
- (8) Facilities of health care systems should not be used for the display of products within the scope of the WHO Code, for placards or posters concerning such products, or for the distribution of material provided by a manufacturer or distributor other than that specified in clause (3).
- (9) Manufacturers or distributors should not be permitted to provide or pay for 'professional service representatives', 'mothercraft nurses' or similar personnel to provide services or give advice to clients in health care institutions.
- (10) Feeding with infant formula, whether manufactured or home-prepared, should be demonstrated only by health workers, or other community workers if necessary; only to the parents or family members who need to use it; and the information given should include a clear explanation of the hazards of improper use.
- (11) Donations of low-price sales to institutions or organisations of supplies of infant formula or other products within the scope of the WHO Code, whether for use in the institutions or for distribution outside them, may be made. Such supplies should only be used or distributed for infants who have to be fed on breast-milk substitutes. If these supplies are distributed for use outside the institutions, this should be done only by the institutions or organisations concerned.

- 2) Where donated supplies of infant formula or other products within the scope of the WHO Code are distributed outside an institution, the institution or organisation should take steps to ensure that supplies can be continued as long as the infants concerned need them. Donors, as well as institutions or organisations concerned, should bear in mind this responsibility.
- 3) Equipment and materials, in addition to those referred to in (3) donated to a health care system may bear a company's name or logo, but should not refer to any proprietary product within the scope of the WHO Code - with the exception of instruction sheets, specific for product use.
- 4) Health workers should encourage and protect breast-feeding; and those who are concerned in particular with maternal and infant nutrition should make themselves familiar with their responsibilities under the WHO International Code of Marketing of Breast-Milk Substitutes.
- 5) No financial or material inducements to promote products within the scope of the WHO Code offered by manufacturers or distributors should be accepted by health workers or members of their families.
- 6) Samples of infant formula or other products within the scope of the Code, or of equipment or utensils for their preparation or use, should not be requested or accepted by health workers except when necessary for the purpose of professional evaluation or research at the institutional level. Health workers should not give samples of infant formula to pregnant women, mothers of infants and young children or members of their families.
- 7) A health worker should disclose to his/her institution the receipt of any contributions from manufacturers or distributors of products within the scope of the WHO Code for fellowships, study tours, research grants, attendance at professional conferences or the like.
- 8) Monitoring the application of the WHO International Code of Marketing of Breast-Milk Substitutes lies with governments acting individually and collectively. The health care sector, as a part of government, shares this responsibility.

## Summary: International Code of Marketing of Breastmilk Substitutes

1. Aim: The Code aims to protect and promote breastfeeding by ensuring appropriate marketing and distribution of breastmilk substitutes.
2. Scope: The Code applies to breastmilk substitutes, *when marketed or otherwise represented as a partial or total replacement for breastmilk*. These breastmilk substitutes can include foods and beverages such as:
  - infant formulae
  - other milk products
  - cereals
  - vegetable mixes
  - juices and baby teas
  - follow-up milksThe Code also applies to feeding bottles and teats. Some countries have expanded the scope of the Code beyond foods merely *marketed or otherwise represented* as breastmilk substitutes to include foods used as breastmilk substitutes.
3. Advertising: No advertising of above products to the public.
4. Samples: No free samples to mothers, their families or health care workers.
5. Health care Facilities: No promotion of products, i.e. no product displays, posters or distribution of promotional materials. No use of mothercraft nurses or similar company-paid personnel.
6. Health care Workers: No gifts or samples to health care workers. Product information must be *factual and scientific*.
7. Supplies: No free or low-cost supplies of breastmilk substitutes to maternity wards and hospitals.
8. Information: Informational and educational materials must explain the benefits of breastfeeding, the health hazards associated with bottle feeding, and the costs of using infant formula.
9. Labels: Product labels must clearly state the superiority of breastfeeding, the need for the advice of a health care worker and a warning about health hazards. No pictures of infants, or other pictures or text idealising the use of infant formula.
10. Products: Unsuitable products, such as sweetened condensed milk, should not be promoted for babies. All products should be of a high quality (Codex Alimentarius standards) and take account of the climatic and storage conditions of the country where they are used.

## BREAST FEEDING POLICY

The staff will encourage and support the breast feeding of all normal, healthy newborn infants of well mothers who intend to breast feed.

Hospital care of the normal, full-term new-born breast feeding infant should:

- encourage rooming-in as the norm for all healthy new-born infants;
- encourage mothers to put their infants to the breast within the first hour after birth; providing the condition of mother and infant are satisfactory;
- allow for frequent and flexible feeding patterns based upon individual needs of infants and not on hospital schedules;
- avoid routine use of prelacteal feedings of any kind;
- exclude routine use of complementary feedings of any kind;  
except when
  - a) extra fluids are MEDICALLY indicated
  - b) fluids ordered by a Paediatrician
  - c) requested by the mother, who then signs a permission form.
  
- provide specially trained personnel to assist mothers in techniques of breast feeding;
- discourage health professionals from using unnecessary medication before, during or after delivery;
- discontinue the practice of providing routine discharge packs including infant formula to mothers leaving the hospital after the birth of their infants;
- demonstrate bottle feeding techniques only to those mothers who have clearly indicated that they will not be breastfeeding their infants;
- provide information about appropriate contraception, emphasising practical advice on the timing and choice of contraceptive methods, which do not reduce milk yields.

# Breastfeeding is Best

Breastfeeding Policy

Department of Health, Central West Region

Including the Evans, Central West and Lachlan District Health Services

## Introduction

The Department of Health has accepted and endorsed the guidelines developed for Australia by the National Health & Medical Research Council to promote breastfeeding and implement the World Health Organisation's (WHO) Code on the marketing of breastmilk substitutes.

This policy was initiated from recommendations of the Final Report of the Ministerial Task Force on Maternity Services NSW (1989). It has been developed and endorsed by the Central Western Region Steering Committee for Maternity Services, and launched with the Maternity Services Strategic Plan in June 1993.

The policy has been developed for all maternity health care providers working with breastfeeding mothers. The NSW State Breastfeeding Policy and the Royal College of Midwives "Successful Breastfeeding" booklet, provide an adjunct to this policy.

A list of recommended books for all maternity units and hospital libraries is attached.

### *Policy Aims*

To increase the incidence and duration of breastfeeding:

- Ensure women receive accurate information during the antenatal period to make an informed decision on infant feeding.
- Provide expert support and information to breastfeeding mothers.
- Ensure consistency and quality of breastfeeding advice.
- Implement health care practices that are conducive to successful lactation.
- Provide all maternity health care providers with an accurate statement of breastfeeding policy.



## *Advantages of Breastfeeding*

- Link mothers to accessible and appropriate networks of breastfeeding support in the community.

It is accepted that breast milk is the ideal nutrition for the human infant in the first six months of life<sup>1</sup>. In Australia 85% of women initiate breastfeeding, with 30% of these changing to some other form of feeding method by 12 weeks<sup>2</sup>.

The success and duration of breastfeeding is often a reflection of care given during the immediate post partum period<sup>3</sup>. It has been suggested that midwives and other health professionals hinder rather than help the breastfeeding couple<sup>4</sup>.

Mothers need consistent and accurate information based on sound scientific evidence. It is therefore vital that health professionals working with breastfeeding families have a thorough understanding of the anatomy of the breast and physiology of milk production.

*Cooperation must exist between the physiology and management of lactation that leads to an uncomplicated and or positive breastfeeding experience.*

The evidence for the nutritional, immunological, emotional and economic benefits of breastfeeding is well documented. Maternity health care providers have a responsibility to encourage all mothers to breastfeed their babies.

## *Reference*

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# Hormonal Control of Lactation

## *Prolactin and Lactogenesis*

Controversy surrounds the variability of prolactin secretion and function.<sup>5</sup>

Prolactin is secreted from the anterior pituitary under the influence of the hypothalamus. Background prolactin levels are present in men and women, with secretion increasing during sexual intercourse, stress, exercise and sleep. The increase following night sleep is the basis for encouraging women to night feed.

Prolactin levels increase steadily during pregnancy falling just prior to delivery.

As the inhibitory effect of the placental hormones is withdrawn, prolactin levels peak 2-3 hours after birth<sup>6</sup>, and is thought to be essential to the onset of lactation.

Prolactin acts directly on mammary epithelial cells to produce and secrete milk. During the initiation of lactation prolactin increases 2-5 times in response to infant suckling<sup>7</sup>. This rise is greatest in the immediate post partum woman and less apparent after several weeks.

Maintenance of lactation is inherent with milk removal, rather than raised prolactin. This is demonstrated by women initiating and maintaining lactation with a breast pump, without raised prolactin levels being demonstrated.

Evidence suggests that there is no correlation between release of prolactin and milk volume, that adequate breast emptying is essential to the establishment and maintenance of lactation.

## *Oxytocin and Let-Down Reflex*

The let-down reflex or milk ejection reflex is essential for the baby to be able to remove milk from the breast<sup>8,9</sup>.

The nipple and areola respond to warmth and suckling stimulation sending nerve impulses to the hypothalamus, the

relay of this message to the posterior pituitary causes release of oxytocin.

Oxytocin causes contraction of the smooth muscle of the myoepithelial cell and shortening of the lactiferous ducts, forcing milk through the duct system to the baby. There is simultaneous contraction of the uterus.

The release of oxytocin occurs in most women before the baby begins suckling, usually when the baby cries. A second release follows in response to suckling with oxytocin release continuing in a pulsatile fashion throughout the feed<sup>10</sup>.

Let-down occurs simultaneously in both breasts, and allows the baby to get both the fore and hind milk.

*Fore-milk* higher in protein, water and lactose and appears more watery,

*Hind-milk* higher in fats and contains 50% of kilojoules is whiter in appearance.

Teaching the mother to recognise the let-down is reassuring, as she knows her baby is getting milk.

## References

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6. McNeilly A., Robinson L.C.A., (1983), Release of oxytocin and prolactin in response to suckling, *J Clin. Endocrin. & Metab. Vol 50 No4 pp 670-675*
7. Howie, P., Mcneilly A., (1980), The relationship between suckling induced prolactin response and lactogenesis, *J. Clin Endocrin. & Metab. pp 670-673*
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9. McNeilly A.S., (1977), Physiology of human lactation, *J. Biol.Sc., 4: 5-21*
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## Antenatal Care

### *Antenatal Advice*

The decision to breastfeed for most women is made prior to, or early in their pregnancy. The choice of feeding method is affected by socially acquired attitudes and the support women get from families and friends.

Printed information on breastfeeding should be easy to read, well illustrated, with practical advice to meet the specific needs of each woman. Ensure, for example, women from non-english speaking background provided in their cultural language, and adolescent women with material relevant to their needs. This enables all women to make an informed decision.

Opportunities for women to discuss concerns or questions about feeding should be provided by all maternity health care providers, with appropriate referral to community support groups.

### *Antenatal Preparation*

There is no evidence that antenatal examination of the breasts can predict successful outcome of breastfeeding<sup>11</sup>. Preparation of the nipples by massage and the application of creams has shown to make no difference to postnatal nipple tenderness<sup>12, 13</sup>. Lawrence suggests that preparation can be detrimental by making breastfeeding too complicated<sup>14</sup>.

The nipple plays a less vital role in breastfeeding than previously thought: positioning and correct attachment are the key to preventing nipple trauma<sup>15</sup>.

Caring for the breasts includes avoidance of soap, alcohol, creams that may cause sensitisation, buffing the nipples with face washer or towel and routine expression of colostrum<sup>16</sup>. Well supporting bras are worn for comfort only.

Antenatal examination and treatment of flat or inverted nipples has shown to be in-effective and can reduce the incidence of breastfeeding<sup>17</sup>.

Women with a strong family history of allergy need to be informed that a decision to breastfeed may assist in preventing some allergies in their children.

## References

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# Initiation of Lactation

## *Basic Principles*

The most important and basic principles for in the initiation and establishment of lactation:

- The first sucking experience, ideally occurs within 1-2 hours of birth.
- Unrestricted suckling time, provided the baby is well attached to the breast.
- Staff are committed to demand feeding, with no limits placed on the baby feeding as frequently as needed.
- Unrestricted 24 hour rooming-in is an essential part of demand feeding.
- Support and encouragement of night feeding.
- Application of hind milk to the nipples after each feed
- Avoid breastmilk substitutes unless medically indicated.

*Breastmilk substitutes must not be given without the informed consent of the mother* (NSW Department of Health State Breastfeeding policy).

- Test-weighs are unnecessary for the care of the well, term neonate. A single test-weigh provides no useful information.
- If clinically indicated test weighs must be carried out over successive feeds for twenty four hours.

To assist the establishment of lactation and build the mother's confidence in her ability to breastfeed:

- Treat each mother baby pair as individuals.
- Provide a calm relaxed atmosphere to allow the mother opportunities to rest and learn about her baby.

## *The First Breastfeed*

- Provide all mothers with correct advice on positioning and attaching the baby on the breast.

The delivery of the well term neonate begins the important early interaction of parent and infant<sup>18,19</sup>. Flexible hospital routines are conducive to beginning a breastfeeding relationship that may continue into the second year or longer.

There are important reasons for recommending that the first feed occur in delivery suite, theatre or recovery:

- the baby is in a quiet, alert and responsive state<sup>20</sup>
- strong rooting and suckling reflex present
- rapid appearance of bowel sounds
- antibodies present in colostrum<sup>21</sup>
- oxytocin release in response to suckling causing uterine contraction minimising maternal blood loss
- suggested correlation between early feeding and duration and success of lactation<sup>22</sup>.

## *Assisting With the First Breastfeed*

- 1 Following delivery the baby may go to the breast immediately if the parents wish - but often this initial contact is a cuddle and licking of the nipple rather than feeding.
- 2 Once the parents are comfortable then, may be the ideal time to commence a good breastfeed:
  - allow parents time to admire and cuddle their baby unwrapped
  - explain the importance of positioning the baby at the breast
  - using the baby demonstrate rooting and suckling reflex and how these reflexes can be used to assist with attaching the baby to the breast



- talk about the let-down reflex and how the baby obtains milk from the breast
- 3 Allow parents to feed in private, but remain close by (completing paperwork). Assist parents when offering the second breast, reinforcing positioning, reflexes and let-down, using the baby's behaviour as a teaching aid.
  - 4 The information given at this feed needs to be brief, too much information may be confusing coupled with the excitement of their baby's birth.
  - 5 If it is necessary that the baby be separated from his parents, or the first feed delayed, the quality of the initial contact and feeding is very important<sup>23</sup>. As outlined the information should be simple and straight forward.

Successful breastfeeding is influenced by the experience of the first feed: provide skilled assistance for all mothers at this first feed.

Babies often have a long first feed, and following an initial period of alertness, may sleep for some hours. Mothers are encouraged to rest with their babies near to them.

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19. Jelliffe D.B., Jelliffe E.F., (1978) Mother infant interactions: in *Human Milk in the Modern World*, Oxford Uni Press p142-161
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# Positioning for Breastfeeding

Many women have never held a small infant or seen a baby at the breast; breastfeeding is not a reflex but a learned skill<sup>24</sup>.

The mother and baby can feed in any position that is comfortable provided the breast mouth contact is not distorted.

Achieving good positioning is the essence in

- preventing nipple damage
- enabling the baby to effectively remove milk from the breast by compression of the sinuses
- ensuring the demand and supply of milk
- establishing a routine for future breastfeeding

It is important that midwives assisting the new mother are comfortable<sup>25</sup>, any position of sustained posture for more than several minutes will result in occupational backache across the shoulders and lower back.

## *Achieving Good Positioning*

Ideally all new mothers should have assistance with all feeds for the first 24 hours (or longer if necessary).

- 1 The mother should be pain free and comfortable. Good positioning is more easily achieved if the breast is fully exposed.
- 2 Unwrap the baby - swaddling the baby with blankets will often prevent the baby getting close enough to allow good attachment.
- 3 The baby faces the mother - baby's head, chest and knees against the mothers body.
- 4 The head should be supported but free to move.
- 5 The baby should be at the level of the nipple, if necessary free to move.
- 6 The head will appear straight or tilted slightly backwards.

- 7 If the breasts are large or very full the mother will need to support them throughout the feed making sure that her fingers do not obstruct the baby's chin on the breast.
- 8 Initiate the rooting reflex - when the baby is correctly positioned facing the mother, he will not have to turn his head.
- 9 When baby's mouth is gaping, tongue down and forward, instruct the mother to gently but quickly pull the baby towards her breast. It is important the mother moves the whole baby towards not just the head and neck.

The most common position for breastfeeding is sitting up, either in a chair or in bed. For women that have a caesarean section, sore perineum or feeding at night, breastfeeding lying down is very comfortable.

### *Sitting*

In a sitting position, the mother's upper and lower back and shoulders should be upright, or slightly forward, so that the breast and nipple are free from the abdomen. The breast should be free of clothing.

Each mother should be assisted to discover the most comfortable method of holding her baby. The baby's back and shoulders should be well supported with the head free to nuzzle the breast.

### *Lying*

The mother lies on her side so the nipple and the baby's mouth are at the same height. The baby lies close to, and facing, the mother, either lying on the mattress or in the crook of the mother's arm. Pillows may be useful to bring the baby to the correct height, and provide additional support.

Anatomically mouths and breasts will vary, and assessment should be made on each mother baby pair.

### *Position at the breast:*

- there is good mouth breast contact
- the baby held firmly against mother - chest to chest

## *Assessing Good Positioning*

## *Signs of Poor Attachment*

### *Baby:*

- behaviour - baby content at the breast
- mouth wide open
- lips flanged back
- tongue visible when lip is gently pushed aside during feed
- chin on the breast
- nose is free

### *The mother:*

- breast shape not distorted
- nipples are comfortable

### *Rhythm of feed:*

It is important for mothers to recognise the change in suckling rhythm. The short fast sucks to longer slower suck-swallow, associated with milk flow, reassures her that her baby is getting milk.

When assisting a mother attach her baby to the breast, it is vital that the entire feed is supervised. Early recognition of problems with attachment will prevent nipple damage:

### *Baby*

The baby's mouth and behaviour indicate poor attachment:

- mouth rounded during feeds
- cheeks sucked in (hollowed)
- lips not flanged during feeds
- space between chin and breast
- baby slips off the breast
- fussing at the breast
- crying: baby may fight the breast
- unusually noisy feeding
- baby fails to gain weight
- no change in baby's suckling pattern

### *Mother*

When the baby is poorly attached the mother will experience:

- nipple pain
- nipple trauma
- nipple compression - blanching or stripe immediately after feed
- mother may feel tongue flicking the nipple

### *Possible outcomes of poor positioning*

- nipple trauma
- engorgement - inadequate milk removal
- pain - inhibited let-down
- constant feeding
- poor weight gain - despite adequate supply
- breast refusal
- supplementation that may lead to early weaning

Assisting a mother attach her baby requires midwives to be patient and sensitive. The aim is to help the mother towards independent feeding.

- Support the baby well, across the shoulders and base of the head.
- Express a small amount of milk for the baby to taste.
- Brush the baby's lips lightly against the nipple.
- Wait until the baby's mouth is wide open before moving it to gently but quickly onto the breast.
- Ensure that the baby takes a large mouthful of breast, not just the nipple.

*Helping Attach  
the Baby  
to the Breast*

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## Natural Feeding Patterns

### *Flexible Feeding Patterns*

Demand feeding (flexible feeding or feeding to need) ensures that the supply of milk is equal to the baby's needs. The suckling action stimulates the production of prolactin, and milk production. Long periods without the sucking stimulation are NOT advisable for women with a low milk supply.

Based on research evidence demand feeding puts the physiology back into breastfeeding.

#### *Advantages to the baby:*

- demand fed infants gain weight more quickly<sup>26</sup>
- breastfeed for longer<sup>27</sup>
- reduced incidence of raised serum bilirubin in physiological jaundice<sup>28</sup>
- allows infant to learn appetite control<sup>29</sup>

#### *Advantages to the mother:*

- increases the incidence of establishing successful lactation<sup>30</sup>
- reduces the incidence of engorgement<sup>31,32</sup>
- establishes supply and demand pattern<sup>33</sup>

### *Unrestricted Feeding*

Milk transfer from the breast to the infant will vary with each mother baby pair, as will the baby's appetite from feed to feed.

It is well documented that milk flow and composition changes as the feed progresses<sup>34,35</sup>. Fore milk taken at the beginning of the feed has a larger volume and lower kilojoule content than the fat rich hind milk at the end of the feed<sup>36</sup>. Woolridge<sup>37</sup> suggests a relationship between the rate of milk transfer and the length of time an infant spends at the breast.

Recent studies have shown no correlation between the length of feeds and nipple soreness, positioning is the key to preventing nipple damage<sup>38</sup>.

*Positioning is the key to preventing nipple damage.*

### *When to Feed*

Babies feed when they are hungry, regardless of the time since the last feed. Ensure mothers are aware that a newborn baby

needs at least six feeds in a twenty four hour period, and it is usual for a baby to feed eight or more times.

The timing of feeds will vary. The baby may have a cluster of feeds at short intervals of one to three hours. This may be followed by longer intervals. If the mother is tired, encourage her to rest while the baby sleeps.

When a baby sleeps for more than six hours between feeds, before leaving, or waking the baby for a feed check:

- The baby's age and gestation.
- The baby's hydration and urinary output.
- The baby's level of jaundice.
- The number of feeds the baby has had in the current twenty four hour period.
- The mother's milk supply and breast comfort.

The mother may wish to express if her breasts are very full and uncomfortable. When the baby is feeding well there is no need to wake him overnight.

*Unrestricted demand feeding does not cause sore nipples as long as the baby is correctly positioned and attached.*

Nipple soreness is not prevented by limiting the baby's time at the breast. Rigid clock watching produces unnecessary anxiety in mothers whose babies either feed slowly or require only small feeds. Insufficient feeding times may also leave milk in the ducts, thus promoting engorgement.

*There should be no limitation on the length of a feed.*

*The rule is: there are no rules.*

### *Duration of Feeds*

The length of each feed may vary from two to three minutes to half an hour, depending on the baby and its need at the time. Mothers need information that feed length will vary according to the baby's appetite.

Encourage mothers to let the baby finish the first breast before offering the second. Reassure mothers that the baby may sometimes want both breasts and at other times only one.



*Additional  
Fluids*

Assist mothers to recognise when the baby has finished the feed, the baby will come off the breast spontaneously.

If the duration of a feed is very long, the mother may need more help and supervision to ensure that her baby is positioned well.

There is no evidence to suggest any benefit from giving complimentary or supplementary feeds to the healthy breastfed newborn. Given the relatively slow growth rate of the human infant, breastmilk provides ideal nutrition<sup>39</sup>.

Breastmilk substitutes should only be given if medically indicated.

"Midwives should remember that bottle feeding does not resolve breastfeeding problems; but knowledgeable enthusiastic and sympathetic help can<sup>40</sup>."

*Implications of  
Additional  
Fluids*

*For the mother:*

- suggests to the mother her breastmilk is inadequate for her baby
- implies that her lactation is insufficient
- breasts receive less stimulation
- decreases the incidence of establishing lactation<sup>41</sup>

*For the baby:*

- demands feeds less frequently
- does **not** reduce serum bilirubin in physiological jaundice<sup>42</sup>
- formula will alter the normal flora in the gut<sup>43</sup>
- foreign protein may cause sensitisation, resulting cow's milk allergy<sup>44</sup>

*Breastmilk substitutes must not be given without the informed consent of the mother (NSW Department of Health State Breastfeeding Policy).*

*Twenty Four  
Hour  
Rooming-In*

Twenty four hour rooming should be the usual practice for the healthy mother and healthy term baby. Separation of mothers and babies should be kept to a minimum, unless an infant needs specialised nursery care.

Flexibility is required, if the mother is exhausted or unwell, with additional help and support from staff. Mothers may feel overwhelmed by the intensity of the baby's demands and the physical effects of the birth. Staff should be supportive, while reinforcing the positive aspects of keeping mother and baby together.

Rooming-in gives the mother an opportunity to:

- "Tune in" to her baby's needs.
- Watch and learn her baby's cues.
- Conditions her let-down reflex.
- Gives practice with night feeding and settling techniques.

Staff should be aware of, and sensitive to individual needs. Some women need short breaks away from their baby to get back in touch with themselves. Others may feel distraught and anxious if their baby is away from them for any length of time.

### *Bedding-in*

Some mothers may choose to sleep with their babies. There appears to be no reason why women who wish to have their babies in the family bed should be dissuaded from doing so, either in hospital or at home.

### *Night Feeds*

Milk production continues throughout the night. By recommending mothers to night feed the incidence of engorgement will be reduced. Night feeds provide the neonate with a third to half his kilojoule intake and suckling time in 24 hours<sup>45</sup>.

The diurnal variation in prolactin levels reinforces the advantages of night feeding<sup>46</sup>.

When a mother is breastfeeding it is assumed she is feeding at night, with the help and support she needs.

Staff should encourage mothers to accept, and be responsive to, night waking as a normal part of breastfeeding. The mother

often needs some confidence boosting at this time. She needs to know she is doing a good job.

It is misleading for the new mother when staff suggest that they feed the baby at night "so she can sleep". Night feeding is important in the early post partum period.

NSW Department of Health circular No. 86/349 which states:

*" If a mother requests not to be disturbed during the night to feed her baby, the hospital personnel are to ask her to express breastmilk for the night feeds. If an infant formula is to be given, written permission for this practice must be obtained from the mother for each feed".*

Consent must be informed consent, including the benefits of breastfeeding and the possible resulting problems of not night breastfeeding.

#### *Sedation*

Sedation should not be given to breastfeeding mothers, unless prescribed for medical reasons. Such medications interfere with the basal metabolism and in turn with milk secretion.

#### *Wind*

Warm water does not have any special anti-wind qualities. Some babies bring up wind while others rarely do. Where it is thought that a baby is unsettled because of wind, and not because it is hungry, lonely, wet or bored, any fluid that generates some bowel peristalsis will produce the desired burp. A little warm breastmilk will do the same thing as water and provide a settling cuddle at the same time.

#### *Pacifiers/ Dummies*

The early use of dummies can interfere with the process of initiating lactation. It would seem appropriate to avoid the use of bottles and dummies if the baby is having difficulty attaching and feeding at the breast.

The use of dummies can interfere with the baby's demand for feeds. The baby does not get the signal that it is hungry if silenced by a dummy. The mother should be encouraged to meet her baby's need for suckling by putting him to the breast.

If the baby is unsettled mothering techniques of cuddling, carrying the baby in a sling, rocking and music may avoid the use of pacifiers.

*Dummies should not be given to babies without the mother's informed consent.*

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*Role of the  
Father and  
Family*

New mothers need the love and support of their partners and family. Midwives can promote the father's and family's involvement with their new baby, ensuring flexible visiting policies and hospital routines.

Fathers, like new mothers need to be taught the necessary skills to care for their baby. Including fathers in bath time, feeding and parenting education, will reinforce the vital role he plays in the family.

Some fathers are ambivalent about breastfeeding and may want to give the baby a bottle. He needs to understand, the benefits of breastfeeding and the process of establishing lactation.

The father and family need reassurance, and guidance about the many tasks in which they can be involved.

The physiology of lactation establishment is not altered by the mode of delivery.

*Breastfeeding  
Following a  
Caesarean Birth*

An initial breastfeed should be attempted as soon as possible after surgery, either in theatre, recovery or soon after the mother returns to the post natal ward. If factors such as a sick mother or baby prevent this, hand expression is encouraged.

Regular, appropriate pain relief and assistance with positioning the baby at the breast in the early days, will help with the establishment of lactation.

*Rest for  
the Mother*

Babies require lots of attention and work, leaving most mothers feeling tired. The expected broken sleep lowers the mother's energy levels.

Suggestions that may help mothers:

- Rest when the baby sleeps.

- Only do household tasks that are essential.

- Accept offers from friends and relatives to cook meals and do housework.

- Feed in a comfortable, quiet setting with few disturbances.

*Guidelines For  
Assessing  
Baby's Progress*

- Leave a note pad for messages on the front door, take the phone off the hook.
- Listen to relaxing quiet music.
- Allow the father or friend to care of the baby.

Babies fully breastfed on demand usually settle after most feeds. It is also normal for babies to remain awake between some feeds.

Babies should be alert ie. responsive during wake periods.

Most babies pass urine in the first hours after birth. Some may not until up to 36 hours after birth. It is normal for the very early urine to contain "urates" which may look pink or red.

After this early period the babies should have frequent wet nappies of clear, colourless urine.

Stools may be frequent at first, usually yellow and soft in consistency. After the initial weeks it is also normal for breastfed babies to have a soft bowel motion once every 5 - 7 days.

Most babies have regained their birthweight by day 10. Information to mothers about weight gains of their baby must be based on good evidence. Unrealistic expectations cause stress when the mother attends the early childhood services.

The baby has good skin colour and muscle tone.

Mother's well being needs to be considered when assessing the baby's progress.

*Expressing  
Breast Milk*

During the normal course of lactation many women do not need to express milk. Expressing breast milk is an essential skill all mothers need to be taught before leaving hospital. Hand expression requires practice and mothers need reassurance they will become proficient.

Understanding the principles of lactation for mothers is important in relation to:

- breast milk production



- milk ejection from the breast by the let-down reflex
- milk removal from the breast by compression of lactiferous sinuses

Mothers should be made aware of the types of breast pumps, their availability and cost through retail outlets on hiring. Giving mothers examples of when she may find breast expression useful, will also influence her decision on what type of expression method she chooses.

The booklet "Expressing and Storing Breastmilk" from NMAA is the ideal way of giving mothers consistent and specific instructions that she can refer to at home. The books include detailed information on the correct technique of collecting, sterilising, storing and transporting breastmilk.

Expression is useful when:

- The baby is sick or premature.
- The mother needs to be separated from the baby eg. illness.
- To increase the milk supply in addition to breastfeeding
- The mother has uncomfortable, full breasts.
- The mother wishes to return to work.
- The mother wishes to leave the baby with a sitter.
- The mother has a blocked duct or mastitis and the breast is too uncomfortable to feed from or tender, sore nipples.

## *Breast Pumps*

### *Hand pumps*

Hand pumps vary with new pumps are often coming on to the market. The most popular hand pumps are cylindrical, available at chemists.

When using a hand pump mothers need to make sure the pump is not causing nipple damage. Hand pumps should not be used if a mother has sore or cracked nipples.

Glass or plastic bulb pumps should be avoided as they can easily cause nipple trauma.

### *Electric pumps*

Electric pumps also vary. Care must be taken when instructing the mother on using an electric pump. Alternating pressure pumps are the most efficient and safest.

Most hospitals have hand and electric pumps available and some NMAA groups or chemists may have them for hire.

### *Hand Expression:*

Expressing by hand is used:

- To soften areola prior to breast feeding when the breasts are engorged.
- Empty breast
- Increase milk supply
- When resting breast due to traumatised nipples
- Milk collection
- Before using breast pumps

### *Considerations*

- Requires no special equipment
- Does require practice
- May not be efficient for long term expression

### *Bulb type pump:*

This type of pump is not recommended,

### *Considerations*

- Relatively inexpensive
- Generally inefficient
- Not useful for collecting milk
- Can cause nipple damage
- Rubber bulb perishes
- Contamination of milk if it enters bulb
- Difficult to clean

### *Cylindrical pumps:*

- Relieve engorgement
- Empty breast

- Collect milk
- Increase supply

*Considerations*

- Relatively inexpensive
- Hire through NMAA
- Not suitable for traumatised nipples
- Easy to clean
- Can feed from same container
- Amount of suction easy to control
- Suitable for long term expression

*Electric breast pumps:*

- Relieve engorgement
- Empty breast
- Collect milk
- Increase supply

*Considerations*

- Expensive
- Hire through some NMAA and pharmacies
- Most efficient for long term expression and maintenance of supply
- Unlikely to cause nipple damage
- Clean by following manufacturer's instructions to avoid contamination
- Some are more efficient than others

Midwives need to be aware of the problems associated with expression particularly if the woman is separated from her baby due to illness or prematurity.

Enthusiasm, reassurance and support will help with continued motivation.

Information on this should be given to all mothers prior to leaving hospital.

Suitable containers:

- Containers for breastmilk storage must be of suitable quality, recycling plastic cream or yogurt containers are not suitable.

*Collecting  
Expressed  
Breastmilk*

### *Storage of Breastmilk*

- Sterilise all containers before use.
- Glass containers will have some loss of antibodies from the milk (glass should not be used for sick or premature babies).
- Plastic bottles have some loss of fatty components from the milk.
- Either glass or plastic may be used for the occasional expressed feed.
- Storage containers should hold enough milk for one feed only to avoid wastage.
- Small sterile plastic bags designed for storing breast milk are available from NMAA or pharmacies.

Expressed milk can be stored for up to 48 hours in the back of the refrigerator at 4 degrees C before use.

### *Frozen milk*

- Storage in the ice cube section of the freezer (freezers in the top of the fridge) for 2 weeks.
- If deep frozen in separate freezer it can be kept up to 3 months.
- Discard milk after 2 weeks in a freezer with an automatic defrost cycle.
- Chill the milk in the fridge prior to freezing.
- Chilled milk can be added to frozen milk to form a layered collection over 24 hours.
- All milk should be labelled and dated.
- Allow room in the container for milk to expand when frozen.
- Frozen milk must be thawed quickly and used within 12 hours of thawing and kept in the refrigerator to prevent bacterial growth.
- Do not let milk stand in boiling water as it may curdle.
- Commence thawing under cold running water and gradually warm the water as the milk liquefies.

### *Thawing and Using Expressed Breast Milk*

*Transporting  
Breast Milk*

- Discard all unused milk from the container offered to the baby immediately after the feed.
- Do not use a microwave to thaw or heat milk.
- Some breast fed babies may not know how to suck from a rubber teat but will take milk from a cup or a spoon.
- All equipment must be sterilised.

Milk should be collected in a sterile container and stored in the back of the refrigerator at 4 C. It should be transported in an insulated container (esky) with crushed ice or freezer block or pack.

# Managing Breast Feeding Problems

## *Nipple Pain and Trauma*

The nipples and areola are designed to be sensitive. This highly innervated area plays a significant role during lactation and suckling<sup>47</sup>.

Sore nipples are a common problem associated with breastfeeding. If not managed correctly can lead to severe pain, fissures, bleeding and a common reason for early weaning<sup>48</sup>.

The usual cause of traumatised nipples is improper attachment<sup>49</sup> of the baby at the breast often secondary to engorgement<sup>50</sup>.

Pain during breastfeeding is a warning and should alert midwives to investigate the cause immediately<sup>51</sup>.

### *Following delivery - initial soreness.*

There is a normal increase in sensitivity following delivery. This tenderness arises with tissue stretching when the infant first attaches to the breast. The tenderness rapidly improves within 7-10 days.

Decreasing the length of feedings does little to alter the incidence<sup>52, 53</sup>.

## *Types of Sore Nipples*

### *Positional Sore Nipples*

This is usually the result of insufficient breast tissue in the baby's mouth. In an effort to remain attached to the breast the baby will:

- increase the suction
- pull his tongue inside the lower gum margin
- clamp his jaws down on the nipple

As a result there is an interruption to the blood supply to the nipple. There is severe pain when the baby attaches, that may become less after some two minutes.

Unrestricted demand feeding does not cause sore nipples when the baby is correctly positioned and attached.

### *Appearance*

Check the nipples immediately the baby is off the breast; the nipple may appear:

- blached
- squashed
- white stripe across the nipple
- dark stripe across the nipple - petechia (small broken capillaries)
- blisters, either serous or blood filled.

### *Fissured Nipples*

Fissures will follow positional sore nipples that are allowed to go uncorrected<sup>54</sup>.

The fissure is often along the base of the nipples, where it joins the areola. Due to the highly innervated nature of the nipple these fissures are extremely painful.

### *Baby Pulling on the Nipple*

Trauma can result if the baby is pulled or pulls from the breast while feeding. Mothers can break the suction on the breast by gently inserting a clean finger into the side of baby's mouth.

### *Bras*

Bras which are not fitted properly, with seams across the nipple can rub the skin and cause discomfort. A well fitted bra is recommended and in some cases no bra is preferable.

### *Thrush Infection of the Nipple*

Fissures that are slow to heal may have *candida albicans*.

Presentation is usually severe, chronic nipple pain that radiates through the breast (mastalgia), long after feedings.

The appearance may be unremarkable, or there might be a very reddened area on the nipple and areola.

The history is one of oral thrush in the baby, maternal antibiotic therapy or maternal genital tract candidiasis.

Treatment is by topical application of antifungal agent to the infants mouth and mothers nipple, for 1-2 weeks. When appropriate treatment of maternal genital tract.

### *Contact Dermatitis*

The nipple and areola appear reddened. The pain unlike fissured and positional sore nipples begins when the baby first attaches and continues throughout the feed. The nipple is tender to touch.

Chemicals are usually the cause. Sensitisation occurs as the result of application of creams, ointments, alcohol sprays, shampoo soap powder on clothing. Removing the cause does much to alleviate the condition. Plastic backed breast pads should be avoided. Pure soap is recommended for washing bras and nursing pads.

### *Hormonal Influences*

Nipple pain can occur early in pregnancy, just before menstruation or around the time of ovulation. In these situations no treatment is necessary as the soreness will resolve. Women need information about these changes in their bodies to make informed choices about contraception and breastfeeding.

### *When to Rest the Breast*

The decision to rest the breast should be made by the mother and her midwife. If the breasts are rested hand expression only.

Once feeding is resumed, supervision with feeds to assist with correct positioning and attachment is essential to prevent further trauma.

Application of hind milk and allowing nipples to air dry will promote healing.

Where a mother continues to feed from a sore breast, it will be less painful to feed from the least sore side. Once the milk has let-down the infant does not suck as vigorously.

Vary the feeding positions while the nipple is healing. This avoids pressure of the baby's tongue directly over the sore or cracked area.

### *Flat or Inverted Nipples*

Flat or inverted nipples may interfere with the baby's ability to effectively grasp the nipple.

The question arises when and if there is an appropriate time to use interventions that will help to prevent subsequent feeding problems.



During the third trimester women with inverted nipples may wish to use Meredith shields and Hoffman's exercises to help stretch adhesions. There is limited evidence that these exercises improve inverted nipples. Nipple protractility usually improves in the first 7 days postpartum.

It **must not** be assumed that the baby will have difficulty attaching. The midwife must remain calm, patient and reassuring as failure of the baby to attach is very distressing for the mother.

The mother will need assistance with all feeds to help with attachment and prevention of engorgement. This will complicate already flat or inverted nipples.

If the baby is unable to attach at any stage, the breasts should be expressed and the breastmilk given to the baby.

Protractility of the surrounding tissues will determine the baby's ability to make an effective 'teat' from the breast. Nipple protractility usually improves in the first 7 days post partum.

### *Nipple Shields*

Nipple shields reduce milk yield and should be used with caution. Nipple shields may be helpful to draw out flat or inverted nipples but it has been suggested that other methods eg. gentle rolling or pumps may be more effective.

If nipple shields are used for flat or inverted nipples they should be used for short term only and the thin silicon or the latex nipple shield is preferred.

Canon breast shells have been shown to be of some benefit in drawing out the nipple when worn between feeds in the first few days, prior to the milk "coming in".

Nipple shields adversely effect lactation by:

- Decreasing milk supply through reduction in nipple stimulation.
- Preventing proper drainage of the breast, risking engorgement, blocked ducts and mastitis.
- Reducing milk intake.

- Difficulty attaching the baby to the breast. The mothers fingers on the shield prevents the baby grasping enough areola to compress sinuses or get his chin onto the breast.

Discreet feeding is impossible.

- Prevents proper extension of the nipple to the back of the baby's mouth, causing grazing at the base of the nipple.
- Weaning the baby from the shield may be difficult. This is best done by cutting a small slice off the shield each day over a week or so until the baby is attached to the breast.

*Nipple shields should not be used until the milk is flowing well (usually around 72 hours after delivery).*

If the choice to use a shield is made, the importance of using an appropriate shield, correctly fitted, with ongoing support, supervision and education is vital.

*Discharging the mother with a nipple shield*

If the baby is unable to attach without the shield before discharge:

- The mother and midwife discuss a plan for continuing at home.
- Reassure the mother that as the baby grows his sucking will become more vigorous, and attaching to the breast easier.
- Follow-up by the community midwife or early childhood nurse are essential.
- Support form other breastfeeding mothers through the NMAA is desirable.

*Milk Supply Problems*

*Too much milk*

This problem occurs in a small number of women. It can be confused with a fast let-down reflex. Oversupply may be a temporary difficulty easing when the supply adjusts to the baby's requirements.

Possible strategies to manage too much milk:

- Ensure the baby is correctly positioned and attached.
- Ensure baby has finished on one side before changing breasts.
- Temporary feeding on one side only until milk supply settles.
- Do not reduce maternal fluid intake, this has no bearing on milk supply.
- Relieve pain with ice packs, analgesia and good support for the breasts.

### *Too little milk*

True insufficiency of milk is rare and the majority of women will produce more than sufficient milk for their baby's nutritional requirements. Appropriate reassurance from a health professional is necessary when a woman doubts her milk supply.

The first and most important aspect of low milk supply or inadequate weight gain, is assessment of the breastfeeding process.

Many of the problems of low milk yield are related to inappropriate breastfeeding regimes with inadequate suckling stimulation. If this is detected early it may be relatively easy to increase the milk yield with changes in feeding management.

The infant that is truly failing to thrive on breastmilk may also fail to thrive on formula. This infant requires careful medical assessment and supervision.

### *Assessing the causes*

#### *Infant:*

- weight gain pattern
- number of wet / dirty nappies each day
- position, attachment and suckling patterns
- settling after feeds

*Mother:*

- emotional and physical wellbeing
- number of feeds given in 24 hours
- functioning let-down reflex
- knowledge of breastfeeding

Additional expression will help to increase supply and supplement feeding.

Many women suspect low supply when their once engorged breasts have settled.

It is important the mother understands the significance of demand feeding and the relationship between suckling and milk production. Reassurance may be all that is necessary.

Increasing supply:

- Increase the number of breastfeeds .
- Ensure the mother is comfortable and pain free.
- Ensure the baby is correctly positioned and attached.
- Avoid dummies, supplementary or complementary feeding.
- Encourage let down reflex
- Appropriate reassurance, encouragement and information should be given to the mother.

## *Vascular Engorgement*

### **Engorgement**

The withdrawal of placental hormones following delivery begins the process of lactogenesis. There is a dynamic alteration in maternal metabolism, with extensive cardiovascular changes. Blood flow to the breasts, gastro-intestinal tract and liver is increased.

The breasts may feel heavier and slightly tender from 24 - 48 hours after birth. The degree of discomfort will vary depending on these vascular increases.

The early changes are not due the breasts being over full with milk, but are part of the normal physiological process. The use of expression or syntocinon are of no value.

Frequent breastfeeding to encourage milk flow and establish lactation are the most appropriate methods to manage this condition.

## *Milk Engorgement*

There is a degree of overlap between vascular changes in the breast and the onset of milk production.

Once milk is secreted and stored in the alveolar sacs, it is essential that the baby has unrestricted access to the breast, is correctly attached and the let-down is functioning.

An interruption or delay in feeding, results in a rapid increase in milk volume. The pressure from the overfull alveolar sacs will cause congestion of fluids in the tissues.

#### *Appearance*

- The breast becomes red, hard and painful
- Skin appears shiny and transparent
- Nipples become flat and oedematous - making it difficult for the baby to attach, resulting in nipple trauma
- Mother may have low grade pyrexia and malaise.

These symptoms are in response to activation of the mother's immune system. It is the result of milk substances being forced from the alveolar sacs into the surrounding tissues. These are the symptoms of *non-infective mastitis*, if untreated will progress to infective mastitis.

*Preventing  
and Managing  
Engorgement*

Milk engorgement is almost always iatrogenic. Correct management aimed at prevention, enabling mothers to feed on demand, ensuring correct attachment and efficient removal of milk from the breast.

*Milk engorgement is nearly always iatrogenic - it rarely occurs when mothers are able to feed unrestricted and uninterrupted, day and night.*

- Establish possible causes
- Ensure feeds are not being regulated
- Gentle expression to soften areola to aid attachment and prevent trauma.
- Warmth to the breasts before feeds to promote let-down, warm shower or face washers
- Cold compresses between feeds may relieve discomfort.
- Expressing the breasts "right out" once - with a comfortable alternating pressure electric pump is effective.
- Extra support for the breasts, a binder or larger sized bra.
- Analgesia

Removal of milk reduces pressure in the breast and allows vascular and lymphatic congestion to ease rapidly.

Unresolved milk engorgement will lead to atrophy of milk secreting cells and involution of lactation.

It is commonly thought that to encourage frequent feeds and expression will increase milk supply and exacerbate engorgement. The opposite is true. In artificially feeding mothers, unrelieved milk engorgement is the mechanism by which the mother dries up her milk.

## *Blocked Ducts*

Blocked ducts will prevent the removal of milk from the breast at the rate which it is produced.

A localised lump can usually be felt in the breast. This may be the result of trauma or pressure from bras or rough hand expression.

If the duct is not cleared, pressure in the alveoli may cause milk substances to be forced into the surrounding tissues.

### *Managing blocked ducts:*

- Feed frequently beginning on the affected side.
- Massage the lump towards the nipple during and after feeds.
- Apply heat to the affected area before a feed.
- Cool packs may help after the feed.
- The mother should return to normal feeding patterns when the duct has cleared.

Correct positioning is essential in preventing this condition.

## *Mastitis*

### *Preventing non-infective mastitis*

This condition is often the result of engorgement. It should be prevented in the same way as the prevention of engorgement.

Advise mothers to avoid pressure on the breast by compression of breast during feeds, tight fitting bras, and gentle handling during expression.

Encourage the mother to massage the breast towards the nipple to remove any lumps. Feeding with the baby's chin pointing towards the lump will also assist with drainage.

Correct positioning is essential.

### *Infective mastitis*

Mothers that develop "flu" like symptoms are usually diagnosed as having mastitis, until proven otherwise. Infection usually occurs in the outer skin of the breast or the glandular and connective tissues.

Treatment is important to prevent abscess formation.

The breast tissue or nipple may be damaged by incorrect positioning of the baby at the breast. Once the skin surface is broken bacteria are able to enter and multiply.

Mothers are usually prescribed anti-microbial drugs. These drugs do not get into the breast milk in sufficient quantity to affect the baby<sup>55</sup>

There is no justification in advising a mother with mastitis to wean.

The principles of management are:

*feed, rest, empty the breast*

- Offer the breast frequently, beginning on the affected side.
- Apply warmth to the affected area before and during feeds.
- Encourage the mother to rest. Assistance with children and housework is beneficial.
- Avoid weaning as it increases the chances of abscess formation.



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## Less Common Breastfeeding Problems

### *Blood in the Breastmilk*

Blood in breast milk usually originates from nipple trauma. Breastfeeding should continue and the cause of the problem resolved.

Blood in milk commonly appears when the baby possets. Small amounts of blood do not usually upset the baby.

if blood persists after several days medical referral is recommended.

### *Cleft Lip*

This usually does not cause any feeding problems. Most surgeons encourage breastfeeding soon after surgery.

### *Cleft Palate*

This defect causes major problems with feeding. The baby cannot create a seal between his mouth and the breast, which is essential for milk removal from the breast.

The defect can be closed with a feeding plate, but this is difficult for the baby to manage.

Mothers who want to breastfeed their babies should be encouraged to express their milk. Excellent information is available from NMAA. Encourage mothers to speak to other mothers who have breastfed a baby with cleft palate.

### *Down's Syndrome*

These babies require much additional support during the establishment of lactation. The babies are often very sleepy and have poor suckling reflexes.

Most mothers find they need to express breast milk to supplement their baby's feed and stimulate their supply.

### *Breast Abscess*

Abscess is a painful and serious condition that usually requires surgical incision and drainage under anaesthesia. Breast abscess is usually the result of untreated mastitis.

Following surgery breastfeeding should resume immediately, unless the abscess was under the nipple or areolar or there is a purulent discharge from the nipple. The baby needs to be positioned away from the wound area.

### *Preterm Infants*

Mothers who have successfully initiated lactation using breast pumps find the transition from tube feeding their premature baby to breastfeeding can be very difficult and frustrating. The preterm baby is usually delayed in his competence at feeding. He has not had the experience of sucking swallowing in utero.

It has been demonstrated that preterm infants who are able to suck find breastfeeding less demanding than bottlefeeding<sup>56</sup>.

Babies should be offered the breast once developmentally competent. Babies allowed to suck at their mothers breast is of benefit to the baby and mother.

Mothers of preterm babies need well informed, supportive staff and hospital policies to assist with establishing lactation.

### *Breastfeeding Multiples*

Mothers with two or more babies should be encouraged to breastfeed. Feeding two or more babies is a challenge for the midwife and the mother.

Mothers need additional support from partners and family while breastfeeding. Many mothers find that breastfeeding twins is time saving and convenient.

Refer mothers to A Multiple Birth Group, and provide good information on breastfeeding.

The decision to feed the babies simultaneously or individually will depend of the mothers recovery after delivery. Some mothers prefer to feed the babies together, while others feed separately, on the same or alternating breasts.

Feeding the babies together gives the mother time between feeds to do other things. Simultaneous feeding is the most common method for women who feed twins long term.

### *Breast Refusal*

A baby's refusal to suck at the breast is a distressing problem for the mother. The problem is usually temporary, the cause may never be determined.

Causes may include:

- Irritable baby from a traumatic delivery.
- Delayed let-down reflex.
- Poor or incorrect positioning of baby.
- Heavy maternal smoking.
- Engorgement causing difficulty with attachment.
- Fast milk flow.
- Congenital abnormality of the baby.

### *Physiological Jaundice*

This occurs in almost half of all babies irrespective of the mode of feeding. An early first feed with unrestricted feeding day and night has a beneficial effect on physiological jaundice.

If the baby requires phototherapy breastfeeding should continue. The baby can be removed from the lights and breastfed. The time interval between feeds should be approximately 3 hours for the lights to be beneficial.

If the baby becomes sleepy or requires additional fluids, encourage the mother to express breastmilk to supplement feeding.

Phototherapy should not interfere with the mother and baby remaining together. The lights can be placed alongside the mothers bed.

## *Sleepy Babies*

In the period immediately after birth the neonate progresses through a predictable behaviour pattern characterised by sleep and wakeful states.

After this initial wakefulness the neonate becomes progressively quieter and eventually enters a sleep phase. This period may last up to 8 hours and it is during this time that difficulty may be experienced in waking the infant or initiating breastfeeding.

Gradually the infant awakens and enters a second period of wakefulness which lasts about 2 to 4 hours. After this time the newborn settles into a less dramatic routine of sleep, including wakefulness interrupted with periods of crying.

The neonate may be sleepy for other reasons in the early post natal period such as jaundice or as a reaction to drugs given to the mother during labour.

With patience and the support of an knowledgeable health professional breastfeeding will be encouraged.

The following suggestions may help to initiate breastfeeding in a sleepy baby:

- Expressing some colostrum onto the nipple for the baby to taste.
- Before feeding unwrap the baby.
- Talk to the baby, stroke the baby.
- Dull the lighting; this may encourage the baby to open it's eyes in the dim lights rather than in the bright lighting.
- Encourage mother's let down.

If the baby is a healthy, full term baby with normal blood sugar levels it will usually be of no harm to delay breastfeeding until wakeful phase.

In the older baby unusual sleepiness may indicate illness and should be investigated by the appropriate health professional.

## *The Unsettled Baby*

Babies have a wide range of behaviours that are considered normal. Sleep and waking patterns will vary.

### *Before the milk comes in:*

Reassure the mother it is normal for her new baby to demand feeds frequently in the first 24 hours. These frequent feeds help in the establishment of lactation.

### *After the milk has come in:*

- Ensure the baby is correctly attached, and having adequate milk intake.
- Ensure the baby is at the breast long enough to finish the feed. Some mothers will take the baby off the breast when the feeding slows.
- Ensure the baby is sucking properly. It may be necessary to sit with the mother throughout the entire feed.
- Discuss the mother's expectations of how frequently her baby will feed. She may have unrealistic expectations.
- Is the baby lonely? Does the baby need physical contact? Try a baby sling.

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## Caring For The Mother

### *Maternal Diet*

Maternal diet when breastfeeding should include all 5 of the essential food groups ie. dairy products, cereals, meats, fruit and vegetables and fats.

Fluid intake should be according to the mother's thirst.

Some mothers report that some foods may cause unsettled babies, "colic" and/or nappy rash. The following foods are some which have been reported as causing difficulties:

oranges, tomatoes, pineapples, raw vegetables such as broccoli, cabbage, onions, green peppers, cauliflower and chocolate, eggs, shellfish, nuts and spices.

Other substances reported as causing difficulties include; soft drinks, tea and coffee, synthetic vitamins given to either mother or baby.

It is suggested that the suspected substances or foods be eliminated for a period of 2 to 4 weeks and then be reintroduced one by one as a challenge to determine if symptoms reappear.

If foods are eliminated it must be ensured that the diet remains adequately balanced. A dietitian should be involved if there is any doubt.

### *Smoking*

Mothers should avoid smoking while breastfeeding. If the mother is unable to stop smoking, cigarettes should be kept to a minimum.

Inform mothers about the importance of a smoke free environment for the baby. Smoking is not a contra-indication to breastfeeding. Mothers who smoke should be encouraged to breastfeed because of the immunological qualities of the breast milk.

### *Alcohol*

Alcohol is best kept to a minimum. The alcohol content of breast milk is found to be higher than that in the maternal circulation.

*Contraception  
and  
Breastfeeding*

Lactation itself has a contraceptive effect. High levels of prolactin are associated with the suppression of ovulation. Frequent demand feeding (day and night) stimulates high levels of prolactin and causes the return of ovulation and menstruation to be delayed.

Stimulation of the nipple may also help to block ovulation by inhibiting the secretion of gonadotrophin releasing hormone and luteinising hormone. This contraceptive effect varies greatly from woman to woman and can not be considered 100% reliable as a form as contraceptive.

After the first six months it is likely that ovulation will occur prior to the first period. It is advised that lactating women commence another form of contraception prior to six months after delivery.

*Combined  
Hormonal  
Contraceptives*

This form of contraception adversely effects the quantity and quality of breast milk and should not be prescribed to breast feeding women.

*The Mini-Pill*

Most studies show that the mini-pill has no effect on milk supply and only an extremely small transfer of hormone to the mother's milk occurs. Some women report a noticeable reduction in milk supply and "fussy" feeding associated with the commencement of the mini-pill. It is recommended that the mini-pill be commenced 4-6 weeks after delivery to prevent any possible interference with lactation establishment.

The mini-pill is associated with abnormal uterine bleeding in many lactating women. If this occurs barrier methods are recommended.

*Barrier  
Methods  
(Condoms,  
diaphragms)*

There is no effect on milk production or supply when barrier methods of contraception are used. Barrier methods are recommended for use during lactation.

Diaphragms need to be fitted or refitted six weeks post delivery to ensure that uterine involution is complete.



### *Intra-uterine Devices*

These are inserted six to eight weeks post delivery and have been shown to have no effect on lactation.

### *Natural Family Planning*

This method may be used successfully during lactation but the woman may need professional instruction to learn her basic infertile pattern. This method requires a high level of commitment and cooperation by both partners.

### *Sterilisation*

This procedure can be performed at any time during lactation. Sterilisation between days seven and fourteen post delivery is associated with a temporary drop in milk volume.

### *Sex and Breastfeeding*

Most women accept breastfeeding as a nurturing experience. Some women find breastfeeding a pleasurable, elating experience that may give them some sexual arousal. It is normal for some women to feel intense physical pleasure from breastfeeding. This needs to be explained to breastfeeding women to help prevent feelings of guilt or shame.

Some women do experience a reduction in libido whilst breastfeeding, this may be due to:

- Lack of energy from tiredness.
- Altered body image.
- Lack of time for sexual activity.
- Reduction in circulating oestrogens.
- Reduction in vaginal lubrication from high prolactin levels.
- Tender nipples or uncomfortable breasts.

It is normal for the let down reflex to be initiated during orgasm due to the surge of oxytocin which may cause an involuntary milk ejection. This should be explained to breastfeeding women.

Sex and the breastfeeding mother, a book from NMAA is worth recommending to new parents.

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## Hospital Breastfeeding Protocols

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Queen Alexandra Hospital, Hobart.

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Royal Hospital for Women, Melbourne.

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# Recommended Reading List For Health Professionals

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