

PJ PRACTICE CHECKLIST

INFANT FEEDING

Pharmacists need to be able to offer advice on infant feeding. The front of this card outlines some key points about breast feeding and the types of problems that can arise. On the reverse is a discussion of infant formulae

WHY BREAST FEEDING SHOULD BE PROMOTED:

breast milk is a unique and complex fluid, providing energy, all essential nutrients and protection against infection and allergies. It is always recommended as first choice unless there are good reasons not to breast feed, eg, HIV-positive mothers. However, the incidence of breast feeding has remained at around 60 per cent for the past 15 years. Also, over 40 per cent of mothers who start breast feeding have changed to bottle feeding by the time the baby is six weeks old.

HOW BREAST FEEDING WORKS:

The key to successful breast feeding is regular and complete removal of milk from the breast. Milk is produced in response to infant suckling, which stimulates maternal secretion of prolactin the key hormone for initiation of milk production, and oxytocin, which contracts myoepithelial cells and forces milk into the ducts as part of the milk ejection or milk "let-down" process.

POINTERS TO BREAST FEEDING

SUCCESS: *Frequency of feeding*—Feeding "on demand" is the best way of establishing breast feeding.

Position of baby—Mother and baby should be comfortable, the baby not pulling at the breast and the baby's head supported. Most of the areola (the dark area surrounding the nipple) must be in the baby's mouth, otherwise milk is not released.

Try to empty at least one breast at each feed—

During a feed the fat content of breast milk increases 4 to 5 fold. A baby who is switched to the other breast before the first is "emptied" will have a feed that is too high in lactose and too low in fat. This may lead to relative lactose intolerance and make the baby "colicky" and possibly unsettled. *Collecting and storing breast milk*:—Milk can be expressed by hand or breast pump into a sterilised container and stored in a fridge for 24 hours or in a freezer for three months. Breast milk should not be heated as there is a risk of destroying enzymes present.

DIETARY REQUIREMENTS FOR BREAST FEEDING MOTHERS:

A breast feeding mother needs a mixed and varied diet with an increase in total intake to satisfy additional energy needs. There is no need to omit particular foods from the diet. However, if a mother suspects that something she is eating is upsetting the baby, this food can be avoided for two weeks to see if it helps. Mothers with diabetes should be advised to eat extra carbohydrate.

DRUGS IN BREAST MILK: Only essential drugs should be given to breast feeding mothers. Drugs and other chemicals in a mother's systemic circulation can pass into the milk and reach levels that are potentially toxic for the baby or may affect the suckling reflex (see BNF appendix). If drugs are necessary, they should be taken

during or immediately after a feed to minimise the amount in breast milk.

CONTRACEPTION DURING BREAST FEEDING:

For the first six months of fully breast feeding her baby, a mother has around a 98 per cent level of contraceptive protection. However, breast feeding does not provide full contraceptive protection. For mothers who wish to take oral contraceptives, the progestogen-only pill does not affect lactation and can be started three weeks after birth.

CONCERNS ABOUT THE BABY:

Not enough milk—The main reason for giving up breast feeding is that the mother believes she has insufficient milk. This is rarely a physiological problem but is based on emotional and psychosocial factors. If the baby is breast feeding regularly and thriving, the mother must be listened to sympathetically, reassured and encouraged to continue. Giving complementary feeds with formula milk may reduce the chance of breast feeding success.

Stools—The stools of breast fed infants are more frequent and looser than those of formula fed infants.

Diarrhoeal disease—Breast feeding should be continued as well as giving oral rehydration fluids.

PROBLEMS THAT MOTHERS MAY HAVE:

Sore/cracked nipples—This may be caused by not placing the baby correctly at

the breast. A range of lotions, sprays and creams are available but have little proven basis for use.

Breasts too full—Engorgement can occur in the early stages when milk supply is plentiful but the baby is not able to empty the breasts, which become full and tender. Milk let-down may be affected. Removal of milk by hand or breast pump can help and warmth may help relieve the pain.

Leaking—Small amounts of milk may leak from the breasts between feeds or drip from the other breast when the infant is feeding. Breast pads can be positioned to help soak up any leaks.

Tired, upset, anxious, embarrassed or tense—These are all factors which can inhibit let-down of the milk and can lead to the mother giving up breast feeding.

SUPPORT FOR BREAST FEEDING:

A number of voluntary organisations, such as the National Childbirth Trust, La Leche League and Association of Breast Feeding Mothers, provide help for breast feeding mothers by way of support groups and trained counsellors.

INFANT FORMULA: The high incidence of mothers changing from one formula to another and the growing range of infant formulae available make it essential that pharmacists are knowledgeable about formula feeding, especially as pharmacies increasingly become centres for distribution of baby milks and foods.



COMPOSITION: Standard infant formulae are based on cow's milk that has been extensively modified to suit human infant requirements. There are two types, varying in the proportion of whey and casein (curd) protein. Whey-dominant brands are: Aptamil with Milupan, Premium, First Milk and SMA Gold. Casein-dominant brands are: Milumil, Plus, Second Milk and SMA White. Whey-dominant brands have a 60:40 ratio of whey to casein, ie, similar to human milk. They are suitable from birth. Casein-dominant brands have a whey-casein ratio that is similar to cow's milk. Manufacturers claim that casein-dominant brands are more "satisfying" for the older infant. However, there is no good evidence to support this claim and some health authorities recommend whey-dominant formulae be used throughout until weaning.

Attention has recently been focused on the importance of long chain polyunsaturated fatty acids (LCPUFAs), eg, arachidonic acid and docosahexaenoic acid, for growth and development. These LCPUFAs are synthesised from their precursors, linoleic acid and alpha-linolenic acid, a process requiring enzymes that may be absent in the preterm and young infant. All infant formulae contain linoleic acid and alpha-linolenic acid and some, eg, Aptamil with Milupan, now contain the specific LCPUFAs. There is growing evidence to support the inclusion of these preformed LCPUFAs in formulae for full-term infants.

SOYA-BASED FORMULAE: Soya-based formulae were developed for infants with cow's milk intolerance. They have a

nutritional content similar to traditional formulae, but are free of lactose and cow's milk protein. The protein source is soya and the carbohydrate source is usually sucrose or corn syrup solids. Cow's milk intolerance may cause a variety of symptoms, eg, gastrointestinal or respiratory tract symptoms, skin reactions, behavioural symptoms or failure to thrive. However, as these symptoms may have a variety of causes, a full investigation is required to establish an association with cow's milk and the products should only be used on medical or dietetic advice. There are no other routine indications for use of soya-based formulae.

ELEMENTAL MILK FORMULAE: These nutritionally complete formulae may be recommended on medical or dietetic advice for infants with proven food intolerance, or where the digestive and absorptive functions of the gastrointestinal tract are impaired. In addition to being lactose-free, the protein has been hydrolysed so that it is non-allergenic. The formulae are designed to have a low osmolarity so that feeding tolerance is rapidly achieved.

FORMULAE FOR LOW BIRTH WEIGHT AND PRETERM INFANTS: These formulae have been designed to suit the needs of low birth weight or premature infants who have higher nutritional needs and developmental immaturity compared with full-term infants. They are available as complete formulae and also as breast milk fortifiers for addition to the mother's own expressed breast milk. Infants are continued on this type of formula until they have reached the desired level of maturity or weight gain. They are chiefly used in the hospital setting, but some babies may need to continue to take these formulae at home.

FOLLOW-ON MILKS: Follow-on milks are intended for the older infant, as a nutritious drink component of a mixed diet. They are not recommended as replacement for breast milk or infant formula before six months. They are prepared according to EC guidelines and contain more vitamin D and iron than cow's milk or breast milk.

COWS MILK: There has been a recent change in expert opinion as to when cow's milk should be introduced into the diet. Breast milk and infant formulae, as well as being the sole source of nutrition for the first four to six months, are now recommended as the main drink in a mixed diet throughout the first year of life and longer. There are major compositional differences between cow's milk and breast milk; cow's milk proteins are also more allergenic than breast milk proteins and cow's milk is a poor source of iron.

PREPARATION: It is essential that mothers appreciate the need for cleanliness and hygiene in preparing infant formulae, know how to sterilise feeding equipment, how to make up the formula according to the manufacturer's instructions and about storage of the formula once prepared. The importance of using the manufacturer's scoop for measuring the amount of powder needed and of not compacting the powder in the scoop must be emphasised. Using too much powder or adding an "extra" scoop will lead to weight gain, fat deposition and obesity in the infant.

COMMON CONCERNS: The early settling-in difficulties encountered with a new baby are often blamed on the brand of formula, and brand swapping is a frequent but unjustified occurrence with bottle-feeding mothers. *How much and how often*—Demand feeding is again recommended, although there are

guidelines on frequency and volume of feeds on all products. Over-feeding is a greater risk than under-feeding. Once the infant is fed, the feeding bottle should be removed. The practice of leaving the bottle with the infant, especially older infants who can hold a bottle and feed themselves, can encourage dental decay. *Possetting*—Regurgitating small amounts of food is common in babies and should only be a cause for concern if it is occurring excessively or there is discoloration of posseted milk. *Diarrhoeal disease*—If a bottle-fed infant develops diarrhoea, the procedure is to stop giving formula for 24 hours (this fasting period may be unnecessary if the infant is not dehydrated) and to give oral rehydration fluids. Full-strength formula can then be re-introduced, provided the infant has regained an appetite and is fully rehydrated. A low lactose formula (HN25 Special Formula) is available for use in infants with gastroenteritis.

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