

THE BREAST IS BEST!

By Daphne Ferdinand, RN, and Tayari Kwa Salaam (1979)

Breast milk is the best baby food. The Committee on Nutrition of the American Academy of Pediatrics states that “human milk has special characteristics matched to the infant’s nutritional needs.”¹ They recommend that human milk be fed as the primary nutrient for the first year of life.

However, the “widespread availability of safe, easily prepared artificial infant formula has led to a marked decrease in breast feeding in industrialized societies.”²

This article will discuss the reasons many mothers may choose not to breastfeed or do not even consider breastfeeding. Secondly, we will present the physical and social benefits of breastfeeding for both mother and baby, and finally, offer an outline on how to breastfeed.

WHY WE DON'T BREASTFEED TODAY

Most of our beliefs about breastfeeding are the result of now we have been raised in modern America, the advertisements we see on television and in the print media, and the "advice" we get from doctors and other medical personnel. Seldom do we stop to question these "authorities."

This profit hungry and sexist society has bred alienating attitudes towards breast feeding which discourages others from encouraging mothers to nurse.

Some mothers also place their own individual desires over their new baby's basic need for breast milk, a nutrient which ensures proper growth and development. They mistakenly believe that breastfeeding is detrimental to their physical appearance and figure. Even if this were the case, we shouldn't allow vanity to rise above our children's health and well being.

Also, we have been taught to view breastfeeding as dirty, derogatory, and embarrassing. The female breast has come to be regarded primarily as a sexual object and is sometimes even associated with the genital organs thus inducing feelings of shame because genital organs are not supposed to be exposed in public. To show the breast in nursing and allow the infant to suck from it almost implies an act of perversion

for some women. Also, breast milk may be viewed as excrement thus transforming breast feeding into an unclean act to be performed, like elimination, only in private.

It is truly unfortunate that so many of us have been "brainwashed" by this society to degrade the natural and healthy act of breastfeeding

PHYSICAL BENEFITS

Our babies can receive no better food than breast milk ! New mothers, whether animal or human, are equipped to provide the best food for their newborn. Widely used "cow's milk" is not nearly as healthful as breast milk for new born babies. "Cow's milk was intended for a calf whose purpose is to develop a lot of muscles because it has to stand and walk from birth. The human newborn's purpose is not to stand and walk because it is not going to do that for many months; it is to get it's brain and nervous system developed in preparation for walking, talking, and thinking... human breast milk is perfectly attuned to this need."³

The protein content of human milk perfectly meets these protein requirements for maintenance of body composition and growth in human infants. Before giving your baby any other type of milk it would be to you and your baby's benefit to compare the contents of the substitute milk to human milk.⁴

Colostrum, the thick yellow substance rich in protein and produced in the breast during the first week after birth, gives our babies the vital foundation for life. Colostrum acts on the baby's bowels and cleans out fetal meconium. It also provides a degree of immunity against disease and infection.

Breast milk is always clean, fresh, and easily available at the correct temperature. This saves both time and labor. The mother's body also produces milk in the proper amount to meet the demands of the baby.

Breast fed babies are healthier not only as infants but throughout childhood, and some researchers believe that benefits extend into adulthood. They develop less allergies than babies who drink cow's milk because cow's milk may lead to absorption of foreign substances and predispose the infant to such allergic disorders as atopic eczema and bronchial asthma, especially if there is a strong family history of allergies.⁵

Cow's milk has a higher sodium(salt) content than human milk and may contribute to high blood pressure in later life. Also, breast fed babies are more resistant to colic infection, and are less prone to constipation, eczema irritability, anemia, asthma, other bronchial troubles, and gastro-intestinal infections.

Furthermore, breast fed babies are physically stronger and better developed because it requires more exercise and energy to nurse at the breast than to nurse from a bottle. The breastfeeding infant has to work head, jaws, and neck muscles, and also breath deeply during nursing periods.

Physical benefits for mothers are equally advantageous. Nursing aids in uterine contraction, thus hastening the separation of the placenta and the closing of blood vessels which helps prevent excessive bleeding. It additionally helps shed weight which may have been picked up during pregnancy.

One of the greatest benefits of breastfeeding is that it significantly lowers the risk of breast cancer, one of the most dangerous and dreaded diseases common among women today.⁶

Yes, there are a few obstacles to overcome in breast feeding, better care must be taken with diet. Occasional social discomfort and embarrassment of onlookers must be tolerated. However, the rewards greatly offset the difficulties.

SOCIAL BENEFITS

Calmness, security, alertness and strength are the characteristics of the breast fed baby. Breastfeeding with its physical contact is the normal and natural continuation of the sequence of events in human reproduction and development. Going from nine to ten months inside the womb, immediately to isolation and ingestion of non-human milk is a severe shock to the new born baby.

"The new born baby has only three demands. They are warmth in the arms of its mother, food from her breast and security in the knowledge of her presence. Breast feeding satisfies all three. The child therefore develops upon natural food and becomes familiar with the comfort of being cuddled in soft warmth while it feeds, as well as the strong, possessive, and protective arms of its mother. In this way the earliest foundation

of mental stability of the child is laid which is discernible in the ease with which it adapts itself to the new environment of extrauterine life."⁷

Breast feeding enhances the development of maternal-infant bonding. Nursing your baby as soon as possible after delivery produces early eye and skin contact between mother and infant. This is important in both the long term biological and psychological development of the infant.

In her book, Male and Female, Margaret Mead, outstanding anthropologist, asserts that bottle feeding leads to serious difficulties in social relationships in later life. By giving the baby a bottle - a thing, an object - rather than a part of herself, the mother establishes in the baby's mind the idea of material things having as much worth as successful human relationships.⁸

The nursing baby also offers positive and psychologically reinforcing feedback to the nursing mother, thusly producing a strong sense of adequacy in the mother. "The baby's greed is flattering, his blissful enjoyment is contagious, his drunken satiety is a comical compliment"⁹

Nursing offers peace and tranquility to busy mothers. It offers a welcomed break from job, family, and daily routine.

HOW TO SUCCEED AT BREASTFEEDING

Without factual knowledge as your foundation it will be difficult to be committed to breastfeeding. We women must recognize the fact that many of us have lost the art of nursing our babies and need to relearn what we should have known as a natural part of our lives.

First, read and study. There are many books about nursing your baby. These books are recommended for beginning study : Childbirth Without Fear : Principles and Practice of Natural Childbirth by Grantly Dick-Read, M.A.,M.U., Harper and Row; Nursing Your Baby by Karen Pryor, Harper and Row; Be A Healthy Mother, Have A Healthy Baby by Rodale Press Editors, Rodale Press Inc.; The Complete Book Of Breastfeeding by Marvin S. Eiger, MD and Sally Wendkos, Bantam Books.

Second, find reinforcement in your family and among your friends so that when you need help and support, it will be there. Educate them about the vital value of

breastfeeding and impress upon them how important it is to both your baby and you. The La Leche League International (9616 Minneapolis Ave., Franklin Park, IL 60131) is an organization of nursing mothers who provide educational and emotional aid to women who wish to breastfeed. Consider forming a support group of women in your city or neighborhood to encourage women to breastfeed.

Third, be strongly committed to breast feeding and the belief that you are capable and will succeed. "It is encouraging to note that those mothers who really want to nurse their babies are nearly uniformly successful--even when the baby is Caesarean, even when there is an Rh factor, even when the 'baby' is twins, and even when the baby is premature. The big hurdle is overcoming the apathy and indifference of those who advise and counsel you. In today's society, when doctors, nurses and promotions for baby bottles all mitigate against a real effort to breastfeed, the mother who wants to ensure her child the best possible start in life may have to fight for the right to nurse her baby. It's a right that is well worth her best efforts."¹⁰

HELPFUL HINTS AND TIPS

Diet. The mother's milk will always be of a high quality for baby's first six months regardless of what she eats, but it is her health that suffers if she is not aware of the nutrients her body is using to produce milk. Breastfeeding mothers should -

1. Eliminate junk foods such as soft drinks, candy, "munchies," overly processed foods and other foods that do not build up your body. Also, stop smoking.
2. Choose a well balanced diet containing a. protein foods to fight against fatigue, excessive weight loss and lowered resistance to minor infections. These foods include cheese, eggs, legumes (peas and beans), whole grains, primary and brewer's yeast. b. fresh foods to meet your vitamin and mineral (especially calcium and iron) requirements. Vitamin and mineral rich foods include turnips, cauliflower, okra, the colorful vegetables (e.g. beets, carrots, squash), fruits such as apples, oranges and apricots, raisins, and figs.
3. Drink lots of liquids, particularly clean water, and fresh juices. You should schedule your liquid intake by drinking a glass of water each morning, mid-day, and evening, as well as each time you nurse.

4. Eat slowly. Enjoy meal time. Stop before you are "full," for it is the "quality" and not the quantity of food that keeps you healthy, quiet activities such as reading for fifteen minutes after eating is important for proper digestion.

5. Be active but also rest. If possible, take a daily daytime nap with your baby. Clothing. Clothing best suited for breast feeding are tops which unbutton, untie, or are side-slitted. The ideal is the pull-up top, blouse or shirt which covers your breast while nursing. The baby will conceal your exposed midriff. Also, choose fabrics and colors which will not show wet spots should milk leakage occur.

Nursing bras, with flaps in the cups which can be lowered for breastfeeding, are convenient although not necessary. However, bras should be used during breastfeeding because they give support, improve circulation, and provide comfort when your breasts are full of milk. A good fitting bra is not tight nor does it sag in the front or fit high in the back. During lactation you can expect to be one full cup size larger than normal.

Breast Care. Desensitizing nipples and keeping them supple are the most important concern of lactating mothers because sore nipples can possibly force a mother to stop breastfeeding.

In preparation for breastfeeding, nipples can be desensitized by rubbing them gently with a damp towel or exposing them to your outer clothing by cutting a small circle in the cup of your bra.

Alcohol, popular soaps, and other such agents harden and dry out your nipples rather than soften and moisten them. There are natural oils secreted by your skin during pregnancy and lactation that help the nipple and areola stay supple. These secretions are also mildly anti-bacterial for your baby's protection. Therefore, avoid using soap on your nipples. Water soluble oils and creams, even though harmless, are not necessarily helpful.

Check your intake of vitamins A and D. A mild deficiency in these vitamins may cause sensitive skin. Plain warm water during baths and clean clothing are all you need to keep your nipples and areola clean.

If your nipples do get sore, persevere! This will pass. Support healing by exposing your nipples to fresh air, and if possible, direct sunlight on nipples if especially good.

BE CONFIDENT

Be steadfast with medical people who may not know anything about breastfeeding. They may even create trivial and non-existent reasons for you to stop. Breastfeeding is "peculiar" and unknown to many doctors, so do not be surprised if your doctor tries to talk you out of breast feeding or does not offer you any support.

Some doctors may erroneously suggest that breast fed babies need supplemental formula. Breast milk alone is entirely sufficient for at least the first six months of life. Additionally, giving the baby a formula supplement cuts down on the amount of breast milk the child will demand and, therefore, cuts down on the amount you will produce. Supplementing breastfeeding is actually the first step toward weaning your child off the breast.

The anti-breast feeding beliefs of some doctors and other medical personnel are not based on medical research. Science is on the side of breast feeding. Also, large baby food companies, who make handsome profits from baby formulas and baby foods, are always busy propagandizing medical people and the public about the need for "their" formula and baby food. Breastfeeding holds no economic advantage for these companies and the medical personnel associated with them. The effects of their advertisements are another obstacle you may have to overcome.

Feelings of inadequacy, shyness, fear, and doubt can cause serious difficulties for prospective breastfeeding mothers. But through serious study, practical results and knowledge gained from breastfeeding, and the encouragement of helpful family and friends, a mother can experience the joys and benefits of breastfeeding for her baby and herself.

Just remember, the breast is best!

SCIENCE IS ON THE SIDE OF BREASTFEEDING

Human breast milk is the optimal food for human infants. It has special characteristics matched to an infant's nutritional needs for optimal growth, development, and maturation.

For the first year of life, infants grow, develop, and mature at a more rapid rate. Proper growth of the body and development of the nervous system requires specific essential

nutrients and calories. At the same time, infants are unable to tolerate deviation in food intake due to the immaturity of those organs which play a key role in food breakdown (i.e., liver, kidney, endocrine glands).¹¹ Thus, nutritional requirements are most critical during this period.

We, therefore, believe that human milk is superior to any other food for meeting needs of infants.

The second part of this paper will examine, first, the differences in nutritional constituents in human milk, in cow's milk, and in infant formulas. Second, there will be an explanation of the immunological benefits of breast milk. Third, the aspects of early introduction of a mixed food diet and its implication will be explored followed by a discussion of when to introduce solid foods.

NUTRITIONAL CONSIDERATIONS

Advances in technology and newer knowledge of nutritional and physiological needs of infants, have made possible developments of infant formulas which try to provide similar characteristics of breast milk. "However, there are still differences between infant formula and breast milk, and many expert physicians believe human milk is nutritionally superior to formulas"¹² for the following reasons.

Fat and Cholesterol. About 50 percent of the calories in human milk is provided by fat which constitutes the major source of energy for the infant. This high fat content is present in breast milk early in the morning and at the end of each feeding. Fat is a nutrient essential for development of the nervous system.

Breast milk has a higher fat concentration than cow's milk. The fat in breast milk is better absorbed by the baby than the fat of cow's milk. This is so because cow's milk contains predominately saturated fatty acids, while human milk contains unsaturated fatty acids. The formula companies remove the butter-fat or saturated fat in infant formulas. Then the saturated fat is replaced with vegetable oils which are unsaturated fat.

When this unnatural process occurs most of the cholesterol in cow's milk is removed. Human milk contains more cholesterol than cow's milk. The high concentration may be partly responsible for enhanced fat absorption in breast fed

infants.¹³ Authorities feel cholesterol may play an important role in the early feeding of babies. " Even though humans synthesize cholesterol efficiently, some authors have suggested that exogenous cholesterol (received outside the body) for formation of nerve tissue or for synthesis of bile (bile aids in absorption of fats) may be useful to the infant.¹⁴

A study done in the Boston area showed that 30-year-old adults who were exclusively breast fed for at least two months had significant low blood cholesterol levels than those breast fed less than two months.¹⁵ This is an ongoing study that needs continued research. The effects of cholesterol intake in breast milk may hold important implications on heart disease and other such significant disease conditions in later life.

Protein. The protein content in human milk and cow's milk differs quantitatively and qualitatively. Quantitatively cow's milk has twice as much protein as human milk. Most infant formulas for full term and preterm infants (premature) are based on cow's milk protein.¹⁶ Therefore, the protein requirements for premature infants and full term infants may be too high because they are based on cow's milk protein rather than on human milk protein.

Qualitatively protein in human milk surpasses cow's milk protein. Casein is the main protein (80%) in cow's milk. When casein comes in contact with stomach acid it forms hard curds in the stomach which are difficult for young babies to digest. Whey proteins comprise 70% of the protein in human milk. Whey is more digestible than casein. The ratio of these two proteins found in human milk is approximately 30% casein to 70% whey; in cow's milk the ratio is approximately 80% casein to 20% whey.

Artificial formulas have been treated to provide a casein / whey ratio similar to that in breast milk. Formula companies know breast milk is the best food for the babies, this is why they go to great lengths to remove (head-treat) and replace constituents in cow's milk to make it similar to breast milk. Also, protein constituents in breast milk is best suited to the needs of the newborn infant, especially those of the premature infant whose liver is inefficient in converting some protein constituents (amino acids) into other types of amino acids which can be utilized by the body.¹⁷

Also present in breast milk is the amino acid taurine, which is absent in cow's milk. Some evidence suggest this substance to be a major nerve transmitter necessary for optimal brain growth.¹⁸

A condition called infantile colic is a common disorder that affects some breast fed infants due to mother's ingestion (taking in) of cow's milk. Eighteen mothers of seventy-nine breast fed infants with infantile colic were put on a diet free of cow's milk protein.¹⁹ The colic disappeared promptly from thirteen and reappeared in twelve when mothers returned to drinking cow's milk. Mothers may want to consider excluding cow's milk from their diet when breast-feeding.

Carbohydrates. The carbohydrate source in human milk and cow's milk is lactose. Human milk has about 6.8% lactose and cow's milk has about 4.8%. Lactose and other carbohydrates present in breast milk promotes the growth of lactobacillus bifidus, the predominant organism of the gastro-intestinal tract (digestive tract) of breast fed infants.²⁰ Lactobacillus bifidus plays a very important role in protecting the breast fed baby from devastating infections. Again, for most infant formulas to be similar to breast milk, lactose is added to them.

Minerals. The sodium, potassium, chloride and calcium concentrations in cow's milk is three times greater than that in breast milk; the phosphorus content found in cow's milk is six to seven times greater.²¹ This is the result of the high phosphorus level in casein, the predominant protein in cow's milk. Breast milk's low mineral content is most advantageous during the new-born period since the kidney is unable to handle such a high mineral load. Artificial formula's mineral content is lower than that of cow's milk, however, none of them are as low in mineral content as breast milk.

The iron content of human milk is lower than the iron content of cow's milk. However, there is some evidence that breast fed infants rarely have iron deficiency anemia. This low iron content may be beneficial to babies because two bacteriostatic (stop bacterial growth) proteins in human milk - lactoferrin and transferrin - lose their protective properties when saturated with iron. This iron content in breast milk may indeed have some definite implications in the incidence of infection. Lactoferrin is lower in cow's milk than in human's milk due to the fact that its bacteriostatic properties are lost in processing formula. Data suggest that about 50% of the iron in human milk is

absorbed while the iron is less well absorbed in pasteurized cow's milk.²² "Dr. Millan, et al, recently reported that the iron in human milk is sufficient to meet the iron requirements of the exclusively breastfed, full term infant until the birth weight has tripled."²³ This is usually about one year of age. The better availability of iron in breast milk may be related to the high lactose and vitamin C and low phosphorus content of human milk.

Infant formulas are heat treated to improve iron absorption. The infant fed pasteurized cow's milk too early in life is prone to iron deficiency. This is partly because this milk is a poor source of iron and partly because improper heat treatment of cow's milk causes significant gastro-intestinal blood loss in some infants who drink it.²⁴ This implies that cow's milk is not a satisfactory replacement for human milk during the first 12 months of life. Thus breastfeeding should be extended at least to the end of the first year of life.

Zinc, an important nutrient in an infant's diet, is found in human milk. Colostrum contains a very high content of zinc. Deficiencies in zinc can result in stunted growth rate, delayed sexual maturation, and skin and intestinal disorders. These conditions are rarely seen in breast fed infants. Because cow's milk is an inadequate source of iron, it would also be an inadequate source of zinc because zinc and iron are readily available from similar foods. Therefore, feeding of cow's milk is highly inefficient to meet the required needs of infants.

In reviewing the nutritional conditions of human milk, cow's milk, and infant formula; human milk proves to be the best food in meeting the nutrient needs of an infant for at least the first twelve months of life.

PROPERTIES OF IMMUNITY

There is increasing evidence that newborn infants can acquire from breast milk certain important protective elements against a range of infections. Babies are developing their own immune system while receiving additional protection from mother. Heat treated formula and cow's milk lack these factors contributing to immunological protection.

Breastfeeding has played an extremely critical role in prevention of an infection of the digestive tract (gastroenteritis) in infants, and especially in developing countries. The protective properties of breast milk are lifesaving when environmental conditions and poor hygiene increases risks of infections.

Breast fed babies are reported to be less susceptible to respiratory and gastrointestinal infection, ear infection, meningitis, necrotizing enterocolitis and other conditions inflicted by harmful bacteria like E. coli and klebsiella.²⁵ These harmful organisms are very uncommon in the intestine of the breast fed baby. Also, necrotizing enterocolitis, a frequently fatal infection of the intestines, is rare in the premature breastfed newborn. The frequency of this condition is increased in premature infants fed hypertonic formulas.²⁶ Bacteria grow more readily in the intestine of artificially fed infants than breast fed infants. The lacto-bacillus bifidus organism is an influencing factor in protecting the baby from infection since it predominates in the intestine of the breast fed infant. That is why it is of utmost importance to breast feed our babies, especially immediately after delivery because then, the levels of protective immunity are significantly higher in colostrum.

EARLY INTRODUCTION OF MIXED DIET AND ITS IMPLICATIONS

Breast milk should be the sole article of an infant's diet for the first six months of life, encompassing the infant's total diet during this time of life. Breast milk should be used as the primary or major source of nutrients during the second six months of life. After six months, solid foods judiciously introduced offer a wide range of calories, and essential nutrients. Solid foods are recommended as a secondary source of nutrition for the baby age six to twelve months.

Mothers often introduce solid foods too early within the first six months of life. This does not help and can possibly harm the baby. These foods (cereals, baby foods and also cow's milk) supply dietary excess and cause deficiencies during this early part of life which may exert undo stress that can negatively influence growth and development. Feeding cereals during this time subjects the baby to an excess in protein, salt, and caloric intake. Feeding cow's milk to our babies puts them at a risk of developing iron, vitamin C and copper deficiencies.

These excesses can increase calorie intake as high as 15% above the recommended amount during the first twelve months of life.²⁷ Also, the protein intake can rise to 100% by the end of one year of age. The sodium content that infants can receive from solid foods and cow's milk may be as much as 600%.

Some mothers consider early feeding to be an important milestone in the development of their babies. The commercial food industry provides a tremendous variety of solid food items (560)!²⁸ It is really astonishing that the food industry believes a baby so young would find 560 food items appealing. On the other hand, isn't the food industry appealing to the mother's taste buds rather than the baby's? Many mothers lack knowledge of proper feeding practices and pediatricians lack the guidance of educating mothers on correct infant nutrition.

We must look at the developmental level of babies and its influence on early feeding practices. At birth and some months later the nerve-muscle development of infants is appropriate for sucking and swallowing liquids. "The indicators of developmental readiness for semi-solid foods are the ability to respond to a spoon by recognition and the ability of the tongue and swallowing mechanism to deal with non-liquid foods."²⁹ This developmental stage occurs between four and six months of age, although there are individual variations in rate of developmental.³⁰

Obesity is a less common finding in breast fed infants than in bottle fed infants. Maybe this is due to one or more reasons. The breast fed infant discontinues nursing when it is adequately satisfied, therefore, baby makes the decision to stop feeding. However, the mother of the formula fed baby may see some formula left in the bottle and induce the baby to consume more; therefore, mother decides when baby is satisfied. In addition, the high fat concentration present in human milk at the end of a feeding may act as an appetite suppressant.

Current feeding practices of introducing excess foods into the infant's diet predisposes them to possibly long term degenerative diseases in adult life.³¹ Excessive food intake can cause obesity. Bottle feeding and misuse of solid food can readily contribute to overfeeding.

Atherosclerosis, another degenerative disease, may also begin in infancy.

Atherosclerosis is related to fat and cholesterol concentration in the blood. These are

influenced by genetic factors and dietary intake of saturated fat and cholesterol. Although this subject is controversial to some authorities, it is possible that early diet modification in infants and children may be one method in primary prevention of atherosclerosis in adults.³² Sources of cholesterol in an infant's diet arise from solid foods. Such foods like infant meat preparations, eggs and egg-based custards are high in cholesterol and saturated fats. The cholesterol and fat content in infant meat dishes is similar to that in adult meat diets. Cow's milk which is high in saturated fat, often replaces breast feeding and infant formulas as early as three months of age. This can also predispose the infant to atherosclerosis.

High salt feedings during infancy may be a factor in the development of hypertension. The salt or sodium content in cow's milk is three times that of breast milk. Skim milk is eight times greater than breast milk. Also, early introduction of solid food increases the sodium intake by as much as thirteen times. Hypertension is related to genetic and environmental factors. We can't change the genetic factors. However, we can change environmental factors such as sodium intake.

At the other extreme, infants can suffer from deficiencies. Many mothers who discontinue breast feeding and replace it with cow's milk, skim milk or 2% low fat cow's milk, run the risk of developing iron, vitamin C, copper, and zinc deficiencies. Cow's milk, being high in sodium and protein, increase the risk of depleting the infant's water reserve and over taxing kidney ability. Mothers feed skim milk or low fat milk to their infants for economic reasons. They believe it's cheaper when compared to the high cost of formula. Many mothers also use low fat milk for their infants because they are under the assumption that the infant is too fat and are concerned about cholesterol and the fat intake.

To correct inappropriate diets, we recommend the lactation (breast feeding) period extend to at least one year of life with breast milk comprising the total diet from birth to six months and as the primary nutrient from six months to twelve months.

WHEN TO START SOLID FOODS

The time to start solid foods is when your baby begins to show an increased demand for nursing that continues for several days. This occurs between five and six

months of age. Some solid foods offer a wide range of calories and a variation in essential nutrition. Poor selection can result in inadequate nutrition.

Solid foods should come from a natural source. Our babies should eat fresh, untreated, chemical-free foods. They should be freshly prepared in the home. In the beginning, foods should have a semi-solid consistency. Semi-solids are taken well by about six months of age. At nine months of age, babies have the ability to swallow lumpy foods.

Diluted juice made from fresh fruit juice is a good food to begin with before starting solid foods. The juice should be diluted with water in the beginning and gradually decrease the water as the baby gets older. Apple or orange juice are good to begin with.

Fresh fruits or whole grain natural cereal is usually baby's first semi-solid food. Babies like the taste of fruit, and bananas would be an ideal first choice. The banana given to the infant should be fully ripe with dark spots, tan colored and soft on the inside. Mash the banana with a little water to form a semi-liquid consistency. Offer 1/4 to 1/2 teaspoon to start, increasing gradually as baby becomes used to it. This is a new and strange experience for baby and she/he needs time to adjust to solid food in her/his mouth. Introduce babies to one food per week. Avocado is also a particularly good first fruit. Others to add in succeeding weeks are apples, peaches, apricots, pears; all should be ripe and pureed.

Millet is a good first cereal. Cook it until soft and puree it in the blender or food mill or you may ground it first in a blender then cook it to a pasty consistency. Mix this nutritious paste with spring water before offering it to your baby. Remember, introduce one food per week. If allergies arise you will be able to detect the food which causes it. You can prepare other cereals, e.g. rice, oats and barley, the same way. Wheat should be delayed in diet because of its allergic properties. These grains your baby eats should be natural whole grains which have not gone through a refinement process.

The next food to introduce to baby is vegetables; mild flavored ones should be given first : carrots, beets, potatoes, string beans, peas, squash, spinach, and tomatoes. Once baby has become accustomed to these vegetables you can add those vegetables that have pungent flavors which may be averse to baby if given at an earlier age: kale,

greens, turnip tops, cabbage, broccoli, brussels sprouts. As your infant grows, less and less water is needed to dilute baby's food. Vegetables should be steamed (preferably in a steam basket or pressure cooker) and not boiled as boiling allows vital vitamins and minerals to escape into the water. After your baby is eating a variety of foods she/he may be fed one or two of them each day.

Feed the baby solid food after nursing. Your baby will be more likely to accept the new experience if she/he is not hungry. When feeding the baby, put the spoon, with a small amount of food on it, on the middle of the tongue, not so far back that she/he may gag and not so far in front that she/he can spit it out.

Cow's and other non-human milk can produce allergies in infants and children; some adults especially Black people have a lactose intolerance and can't digest milk at all. This may raise many doubts about the ultimate value of other milks even though Americans have been led to believe milk is an indispensable and perfect food. Human milk is the only perfect milk for humans.

Eggs also can cause allergic reactions and should not be introduced before twelve months of age.

At about nine or ten months, your baby is probably ready to accept chunky foods. Finger foods are very popular with infants of this age. They would surely enjoy an apple, orange wedges, and whole grain crackers to nibble on. The move towards eating more of a solid food leads to eating foods from your dinner table.

Avoid adding salt or sugar to the baby's diet. Sugar contributes to early tooth decay. All the salt the infant needs can be derived from the foods made by the mother. By one year of age, most healthy infants have developed the machinery in the intestine, liver, and kidney to handle a more complex diet.

Our babies should eat the natural nutritious way, not the processed commercial way. Mothers can feed their baby a better diet for a lot less money with a blender or a food mill.

CONCLUSION

Infant nutrition is a foundation of infant and adult health. Breast milk has been documented to be superior in quality than any other food that babies receive. Human

milk provides all the nutritional requirements sufficient enough to adequately nourish normal infants. Although artificial formulas have been "humanized" to simulate breast milk, formulas lack important immunological benefits, a vital defense system for protecting the baby from infections.

Mother should understand the importance of regulating and moderating the introduction of solid food and cow milk into the infant's diet. Early introduction of these foods into baby's diet can result in nutritional excesses and deficiencies which may be capable of exerting a significant amount of stress on the baby's body and cause an alteration in growth and development. Inadequate nutrition in infancy may have a direct effect on adult health by inflicting degenerating disease such as heart disease, high blood pressure and obesity.

We recommend that breast milk comprise the total diet of a baby age birth to six months of age and be a primary source of nutrition for six months to twelve months of age. Solid foods offer considerable nutrients to infants after six months of age. The best foods mother can give babies are foods prepared at home and not ready made "baby" foods in the jar or can. The first foods given to babies should be fresh and natural to insure that they contain vital nutrients essential to baby's health.

Many pediatricians do not tell us how to properly feed our children because they don't stay informed on current medical research with regards to infant nutrition. Therefore, it is up to mothers to investigate, read, study, and practice proper methods of feeding our babies.
Better foods make better babies !

Footnotes

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