

Breastfeeding Your Child: The Oketani Method (桶谷式とは)

Copyright©2008.All rights reserved.

This has been translated from Oketanisiki no Bonyu de Sodateru hon (Breastfeeding Your Baby by The Oketani Method), published in 2002 (Syufunotosya, Tokyo, Japan, translated in English by Ms. Amy Willison).

The Oketani Method for breastfeeding, started through Ms. Sotomi Oketani, is a very useful method for lactating mothers. It is neither easy nor simple to accumulate scientific proof of the method's efficacy.

However, we are currently undertaking a process of verification using empirical methods.

We wish to extend our sincere gratitude to Ms. Amy Wilson for her excellent translation work of The Oketani Method. We also wish to thankfully acknowledge her extensive encouragement and effort with our work.

(Masayo Awano: Oketani International Project Team)

## Index

1 The Wonders of Breastfeeding (original: pp16-23, 7 pages)

1 - 1 Human Milk for Human Babies

1 - 2 The Changes in Fat

1 - 3 Lactose, Which Makes Breast Milk Sweet

1 - 4 Special Proteins

1 - 5 Breast milk: A Living Organism

2 Any Breast Can Produce Milk (original: pp25-34, 9pages)

2 - 1 Humans are Made to Hold their Babies to Nurse

2 - 2 Everyone's Breasts are Different

2 - 3 The Structure of the Breast

2 - 4 How Breast milk Comes Out

2 - 5 The Function of Hormones

2 - 6 Feel Your Body's Rhythms

2 - 7 The Soft, Pliable Breast

3 The Correct Form for Holding and Nursing your Baby (original: pp58-70, 12 pages)

3 - 1 Preparing to Nurse

3 - 2 Expressing milk

3 - 3 Various Ways to Hold Your Baby while Nursing

3 - 4 How to Nurse Successfully

4 Breastfeeding: The First Crucial Month (original: pp74 - 79, 5 pages)

4 - 1 Babies are Made to Cry

4 - 2 The Correlation Between Crying and Breast Milk

4 - 3 Changes in the Mother's Body

4 - 4 The Role of the Family

5 Your Baby Is Born! The Time for Breastfeeding Has Come!

5-1 Breastfeeding - The First Time

5-2 Changes in the Breast

5-3 The Flavor of Colostrum

- 5-4 The Physiology of the Newborn
- 5-5 Problems During the First Week
- 5-6 When Problems with Your Nipples Make Nursing Difficult (乳頭痛)
  
- 6 A Monthly Guide for your Baby's Growth and Starting on Solid Foods (original: pp136-147, 11 pages)
  - 6-1 The First Two Months
  - 6-2 The Third Month
  - 6-3 Three to Six Months
  - 6-4 Six Months to One Year
  - 6-5 One Year to Two Years
  
- 7 For Those Who Feel They Are Not Producing Enough Milk (分泌不足感) (original: pp83-93, 10 pages)
  - 7-1 A Seeming Lack of Breast Milk
  - 7-2 Amounts of Breast Milk
  - 7-3 Evidence Indication You are Producing Sufficient Breast Milk
  - 7-4 How to Produce Large Quantities of Delicious Breast Milk
  - 7-5 For Those With a True Lack of Breast Milk
  - 7-6 Returning to Nursing
  - 7-7 For Babies with 'Tongue-Tied Syndrome'
  
- 8 When to Wean Your Baby (original: pp164-166, 2 pages)

The Wonders of Breastfeeding (original: pp16-23, 7 pages)

#### 1 - 1 Human Milk for Human Babies

As is indicated by the word 'mammal', mammals are unique in that they raise their children on the breast milk of their mothers. In nature, the elephant's baby receives the breast milk of its elephant mother, the lion baby that of its lion mother. This is necessary in order for the baby to receive the necessary nutrients to become an elephant or lion, respectively. In the same manner, human babies should be fed with the breast milk of their mothers, but in recent Japan, roughly two-thirds of newborn babies are fed with formula made from cow's milk. Could it be that there is something with the human mothers' breasts that make milk production difficult? No, that is not possible; until very recently, the human species developed without any problems into what it is today by feeding human babies breast milk, all without any problems.

Human breast milk is made to be the optimal nutritional sources for human babies, but even more, for each individual child, the breast milk of its mother is best. For example, mothers of premature babies produce milk that will enable their babies to grow and become healthy more quickly, and mothers who have been infected with a virus will secrete antibodies in their breast milk, which will serve to protect the baby. In reverse, the same thing happens if the baby becomes ill. By nursing the baby frequently, the germs will be transferred to the mother, where antibodies will be produced and be once again transferred to the child. Thus, even though the mother is not aware of it, she is changing her milk everyday in order to meet the needs of her child. The formula of each maker is all the same, both in flavor and in nutritional content, but breast milk, just like people, is different from person to person, and is the most perfect substance for the baby it is being produced for and there is nothing else exactly like it.

One can see the day to day changes in the breast milk by noticing the change from the colostrum, to the transitional milk to the mature milk. In the beginning, the yellowish creamy milk slowly turns white, and then almost blue as it turns into the very watery MATURE MILK. Just as the color changes, the nutritional content also changes. In the colostrum, there is a great deal of antibodies to protect newborn babies from the vast number of viruses. The amount calories in this milk is also very high, so that is will provide enough nutrition for newborns even though they can drink very little, as well as being a bit salty in order to purge the meconium as quickly as possible to prevent jaundice.

If you pump the breast, the milk that is produced appears weaker than formula. This is because breast milk is approximately 90% water. Of the remaining 10%, one can find fat, protein, lactose and other nutrients. In other mammals, for instance, the seal, milk is over 50% fat, and has the consistency of

butter. This is in order for these newborns to develop layers of fat as quickly as possible in order to stay alive in their cold habitat. In addition, the difference in the makeup of the milk also leads to a difference in the way it is fed. Seals and whales are fed breast milk very high in fat, and even though they are only nursed 2 to 3 times a day, they grow very quickly. Monkeys and humans, on the other hand, whose breast milk is comparatively low in fat, babies must be fed more often and for a longer period of time. Thus, each animal produces the kind of breast milk necessary for its species to survive... But what is it that is most necessary for humans?

The human brain is a very uniquely developed organ. Thus, human breast milk has evolved to provide the necessary nutrients to allow the brain to develop most effectively.

#### 1 - 2 The Changes in Fat

The most actively changing ingredient in human breast milk is fat. Both the amount and the make-up of the fat changes in relation to the development of the baby drinking, and it even changes during the day, with the highest levels of fat found in morning milk and lower levels during the evening. It even changes during a single nursing session - the amount of fat increases towards the end of the nursing. Finally, the factor that most greatly affects the levels of fat in the mother's milk is the mother's diet itself (see p101, 'Mother's Diet during Nursing').

The essential fatty acids found which make up part of the fat in breast milk are necessary for the proper development of the nervous system. In addition, breast milk contains high level of cholesterol. While this is considered to be a problem for adults, it is said to be necessary for babies who are maturing extremely rapidly. These things provide the necessary ingredients for the development of the brain and nervous system, as well as providing energy, but they are also hard to digest. Thus, breast milk also contains 'lipase', an enzyme that promotes the digestion of fat, thus making the breakdown of fat in the intestines of the baby easier. These essential fatty acids, cholesterol, and lipase are all abundant in the human mother's breast milk, but are almost nonexistent in cow's milk.

#### 1 - 3 Lactose, Which Makes Breast Milk Sweet

Let's compare the taste of breast milk and cow's milk...Breast milk tastes just slightly sweet and delicious. Human breast milk contains 1.5 times the amount of lactose as cow's milk, which is more than of animals other than cows. Lactose can only be produced naturally by the mammary glands, and is the 'sugar of the breast', which provides the baby not only energy, but is also another essential nutrient for the proper development of the brain and nervous systems. In addition, lactose facilitates the absorption of calcium contained in breast milk, thus providing the

necessary amounts for the rapidly growing baby's bones and teeth.

Besides lactose, breast milk also contains Oligo saccharin, which along with lactose promote the development of *Bacillus Bifidus* in the intestines, which reduce the breeding rates of harmful bacteria which cause diarrhea. This is the cause of the unique smell of bowel movements of babies who are breastfed. Finally, lactose has the unique property of breaking down at a steady rate, thus preventing a sudden increase in the amounts of sugar in the baby's bloodstream, thus even if a baby were to drink large amounts of breast milk, no harm could be caused.

#### 1 - 4 Special Proteins

The lactation from both breast milk and cows milk is made up of two types of protein - casein and whey protein. In the baby's stomach, the casein mixes with the stomach acids to form 'curd', a semi-solid substance similar to tofu. In comparison with the curd produced by breast milk, which is soft and easily digested, curd produced from milk is larger and harder and thus is more difficult to digest. Thus babies who drink milk requires more time to fully digest it.

The other protein, whey protein, is made up of amino acids and various other substances, which help to protect the baby from disease. One of these amino acids is taurine, which is crucial for the formation of the brain cells and retina. Another, lactoferrin, protects infants from various diseases. For example, the colitis germs which cause diarrhea in infants try to use the protein in breast milk for nourishment to increase, but lactoferrin latches on to these proteins more quickly, thus decreasing the rate of reproduction of the germs.

In addition, breast milk is similar in make-up to blood. There are white blood cells and lymph cells in breast milk just as in blood, both of which also serve to protect the baby against disease. Secretory immunoglobulin IgA (SIgA) works directly on the mucous membranes of the infant's intestines, bronchial tubes, mouth, nose and ears to prevent invasion of various viruses, allergens, and bacteria, thus babies who are raised on breast milk show fewer incidents of bronchitis, tympanitis (ear infection), and intestinal catarrh. SIgA is particularly abundant in the colostrum, at levels equal to twenty times that found in adult blood serum, thus breastfeeding a newborn is like giving your child pain-free immunization shots. These substances are not only present in the colostrum, but continue to be secreted in breast milk throughout the time the child is nursing, though in less concentrated amounts, so it is said that children who nurse are strong and healthy. These substances are either nonexistent or are present only at very small levels in cow's milk, and thus are produced and added artificially, but cannot reproduce exactly the naturally produced human mother's milk.

## 1 - 5 Breast milk: A Living Organism

Finally, vitamins and minerals are found in breast milk, and always at levels that are necessary and digestible for the child, so there is never an insufficiency or overabundance of these nutrients. If one compares the levels of vitamins and iron in breast milk and formula, one may feel unsure that the small levels in breast milk will be sufficient for one's child. But it is not a case of the levels being too low – it is just the amount that can be absorbed effectively by the infant. It is not a case of 'the more, the better', in fact, if overabundant, these nutrients can be a burden on the baby's intestines and kidneys.

It is obvious that breast milk is not only the best food for an infant, but that it also protects the baby from disease. In addition, when compared to the formula-fed infant, we now know that breast milk enables a sick child to recover more quickly, it is less likely to cause Sudden Infant Death Syndrome (SIDS) (the number of formula fed infants dying from SIDS is 4 times that of breastfed infants), it is more difficult to become overweight, the development of the jaw and teeth is better, there are fewer incidences of heart conditions and cancer as adults, etc. But not only from a stand point of physical health, but also from a standpoint of mental health, there are various merits such as emotionally stability, that can be pointed out in children who are breastfed .

For the brain and emotional development which is so crucial for the human infant, the use of the cleverly designed breastfeeding system provides the base for the child to live as a human being. The mother's milk is greatly effected by the mother herself. Climate, physical well-being, diet, sleeping patterns, daily life, and other numerous factors all effect one another and finally the nutrients and flavor of the breast milk change on a minute-to-minute basis. Breast milk is a living substance. It stimulates the baby as it makes the mind and body of the child.

The advantages of breast milk are not only for the baby, but for the mother as well. The hormone used in the production and expulsion of milk from the breast promotes the rapid recovery of the uterus, and at the same time, relaxes the mother and creates the mothering instinct which causes women to feel affection towards their child. This helps the mother gain confidence and feel satisfaction in her child-raising methods. In addition, the increased production of these hormones also raises the immunity levels of the mother, and helps her to feel healthy and happy. Furthermore, breastfeeding serves as a sort of natural diet, and the condition of their skin will improves, thus the reason that so many people say that breastfeeding mothers look beautiful.

In addition, one should not overlook the fact that breastfeeding for a long period of time can help protect the mother from various diseases. Breast cancer, cancer of the uterus and ovaries are effected by genetics, environment, nutritional habits, and number of pregnancies, but it is said that women

who breastfeed for long periods of time have fewer chances of contracting these forms of cancer. Some people worry that breastfeeding too long can result in weakening of the bones, but research results show that it actually leads to lower percentages of broken bones and osteoporosis. Thus, it can be said that breastfeeding is a very important factor in women's health.

There are also social advantages to breastfeeding. The fact that both mothers and their babies are healthier when breastfeeding is not only advantageous to individual household budgets, but also to the national health budget as well. While the production of formula requires precious resources and energy, there are no wasteful by-products to breastfeeding and no pollution of the environment, thus breastfeeding is good for the planet as well. Even though it is said that the research into formula has resulted in it becoming much more similar to breast milk, there are limits to man-made substances. Only a mother's breast can make such a wonderful substance as breast milk.

## 2 Any Breast Can Produce Milk (original: pp25-34, 9pages)

### 2 - 1 Humans are Made to Hold their Babies to Nurse

One woman once said, 'It's so hard to believe that my tiny breasts created this big and strong body my son has!' Another mother said, 'After breastfeeding, I finally understand why I have two breasts!' Raising child in the uterus through the placenta, then enabling it to grow even further after birth through the production of milk by the breasts... women's bodies are very cleverly made!

Compared to other animals, most of which have nipples on their stomach, the human breast is both comparatively large and located high on the chest. It is said that this is because humans stand and face each other in order to communicate, or that this is so that the baby is at just the right height to focus on the mother's face. One thing is sure, though - compared to other animals who can move themselves to their mother's breast to feed right after birth, babies cannot walk at birth, and thus must be held in order to feed. Until the human baby is ready to walk at about one year or more, the mother has held the baby upwards of 3000-4000 times. Holding one's baby to breastfeed it is one of the most fundamental building blocks of the 'Basic Trust Relationship' that a human needs to live. In being held, a baby feels 'I am being protected and loved', 'the world is a place that I can trust' in his whole body. The breast is a very important organ, attaching the hearts of the mother and her child.

But just what exactly are the breasts made up of?

## 2 - 2 Everyone's Breasts are Different

Both the size and shape of everyone's breasts is different. Even the size and shape between one person's two breast can vary dramatically. The size of the breast is determined by the amount of fat stored up in the breast . This fat acts as a cushion around the mammary glands and ducts which produce milk in the breast. As breast milk is produced in the mammary glands, there is no relationship between the size of the breast and the amount of milk produced. Thus, there is no need to worry that having small breasts will result in a lack of breast milk, or that large breasts are 'all show and no power.'

Besides the two breast that all women have on their chests, some women also have small breast on their chest close to the armpit or in the armpit area, called 'accessory or supernumerary breasts. After birth, when the breast become engorged, it has been known for these accessory breasts to leak breast milk, but if they are iced, they will dry up naturally and shrink in size.

Also, the size, shape and color of the nipple and areola is, like the human face, different from person to person. Whether the nipple is large or small, flat or 'pushed in', whether the areola is wide or narrow, pink or black, whatever the size or shape, a mother can produce breast milk and nurse her child.

We at Oketani call the half-sphere of the breast the 'mammary body'. In roughly the middle of this body, we can find the areola and nipple. On the areola are small, white bumps, called 'Montgomery Glands', which are secretory glands producing a substance to lubricate the breast and prevent it from drying out and hardening after frequent feedings. Also, between the nipple and areola is what we call the nipple neck and areola around, which extends in length when the baby feed, enabling the nipple to reach deep into the baby's mouth. If this doesn't lengthen properly, the nipples can become chapped and cracked. Both the nipple and areola are darker than the rest of the breast. It is said that this is to enable the newborn to find the breast more easily, and the color gradually fades back to its original pinkish color approximately two months after childbirth.

## 2 - 3 The Structure of the Breast

The breasts are on top of the greater pectoral muscle which covers the rib cage. The structure of the inside of the breast is much like that of a cauliflower, Imagine the heads of each stalk as the mammary glands Each gland is like a tiny balloon, with a net-like mesh of blood capillaries and myoepithelial cells, which expand and contract, covering the surface of each balloon. Between ten and a hundred of these balloons-like glands are gathered together on one stalk, and

there are about fifteen to twenty of these stalks in each breast. Each of the ducts leading from each gland and carrying the milk is called the mammary duct, and looks much like the stalk of the cauliflower. The mammary ducts become larger at one point near the nipple, an area called the 'lactiferous sinus', which controls the flow of the milk to the tip of the nipple, where it is secreted. Some people may see small spots on their nipples, but generally, as the milk ducts are very small, they are impossible to see with the naked eye. Most people have about ten ducts on each nipple, although some have as many as twenty.

Most baby bottle nipples have just one hole, easily visible to the naked eye, a quite simple structure, which is quite different from the mother's breast. The mother's breast is quite structurally complex and delicate. The baby adapts to these differences when it drinks, therefore the way a baby nurses is quite different from the way it feeds from a bottle. When both nursed and fed with a bottle, some babies become confused and try to drink from the breast in the same way as a bottle, which can lead to misshapen or crushed nipples, or nursing too high on the nipple, which can injure it

In this manner, breast milk which is produced in the mammary glands flows through many tiny ducts to join together, eventually pouring like a shower into the baby's mouth.

## 2 - 4 How Breast milk Comes Out

A female's breast are preparing for their future in nursing from a time a girl enters puberty (see figure above). Upon entering puberty, the secretion of hormones rises, the mammary glands begin to develop, and the breasts begin to swell in size. During pregnancy, the secretion of hormones increases again, causing further development of the mammary glands and swelling of the breasts. During this time, both hormones to promote the development of the breast and those to promote the production of milk are being secreted from the brain, but at the same time, the placenta is secreting a hormone to tell the body 'I don't need milk yet,' so milk is not secreted from the breasts. When the placenta leaves the body at birth, the hormone preventing the secretion of milk leaves with it, and milk production begins in earnest.

In this way, from the time a woman becomes pregnant, her breasts are preparing for nursing, and it is just a matter of 'flipping the switch' after birth. The newborn baby's latching onto and sucking the nipples as what acts as this switch. The lips and tongue of the baby stimulate the nipple, and when this stimulation goes through the spinal cord and reached the brain, the hormone prolactin is secreted from the anterior pituitary gland in the brain. Due to the secretion of prolactin, the capillaries surrounding the mammary glands become engorged with blood, and

the mammary gland cells produce milk, which is then secreted into the balloon-like parts of the mammary glands. It is said that for each 10 milliliters of milk, 500 milliliters of blood must pass through the breasts. At the same time, the hormone oxytocin is also secreted from the posterior pituitary gland in the brain. This oxytocin induces the myoepithelial cells around the mammary glands to contract, thus forcing the milk produced in the 'balloon' out into the milk duct, where it reaches the sinuses, is pulled into the nipple and out into the baby's mouth and down its throat. This process is repeated continuously (see picture at left). The hormone prolactin is secreted when the baby stimulates the nipple by sucking on it. By nursing the baby frequently just after birth, a great deal of this hormone is produced. Having the baby latch on to suckle and stimulate the nipple is the most important thing for initiating milk production. Thus, after birth, you should nurse your child as quickly and as frequently as possible. This is the best way to facilitate your milk production.

#### 2-5 The Function of Hormones

The hormone prolactin, which promotes the production of milk, and the hormone oxytocin, which directs the milk towards the baby's mouth, are both very important hormones for the nursing process. However, it has recently been discovered that they serve functions other than just milk production.

Prolactin is said to be the hormone which produces the 'mothering instinct', making the new mother feel as such and develop the desire to care for and protect her child. It also relaxes her during nursing and makes her feel drowsy. Prolactin is secreted in greater amounts at night, thus nursing at night is very important for encouraging milk production. Therefore, while one must wake up several times to nurse at night, prolactin has the unique and delicate function that it makes it easy to both wake up and fall back to sleep after each nursing.

Oxytocin, at the same time it is pushing the milk out into the mammary ducts, is also contracting the muscles and uterus after birth, which leads to a faster recovery. In addition, oxytocin is known as 'the love hormone', because it makes the mother feel that her child is the cutest in the world without bounds, and naturally brings out feelings of affection.

In contrast with prolactin, which is secreted when the baby latches on to nurse, oxytocin is produced when the mother thinks of the child or hears it crying. In reverse, if the mother is upset or in pain, or feels nervous or stress, oxytocin production ceases. However, there is already milk produced in the breast, and when the mother feels relieved, the milk will once again be pumped out.

In this way, the process of raising one's child naturally and easily on breast milk is aided by the effects of various hormones. Besides prolactin and oxytocin, corticoid and thyroxin (thyroid hormone) are produced more actively during breastfeeding, which helps build energy and power in the mother. By breastfeeding your baby, you are able to increase the production of hormones which enable her to approach child rearing in a positive way and treat your child with deep affection naturally and easily.

#### 2-6 Feel Your Body's Rhythms

Most women feel a sort of aching feeling in their breasts just about the time of nursing. This is easier to feel when the baby is not latched on, rather than when it is nursing. This feeling is produced by oxytocin, and is the feeling of the milk produced in the mammary glands being pumped out towards the nipples, with a feeling of 'welling up' or 'springing forth'. In the Oketani Method, this feeling is called the 'lactogenic sensation', and is felt differently in each person.

When you feel this 'lactogenic sensation' when the baby is latched on, look at the way the baby is nursing. You will see the baby go from a relaxed sucking to a dynamic, deep drink movement. A baby who nurses well can drink from 50 to 100 milliliters a minute during this time. The period, however, does not last forever, but usually only about thirty seconds to a minute, after which some babies go back to their relaxed sucking. After both the breast and the baby relax for a few minutes, the feeling comes once again, and the baby drinks deeply once more. This cycle is repeated about three times at a single nursing, thus allowing natural adjustment for the baby's stomach, rather than causing it to expand too rapidly by pumping out continually. When the lactogenic sensation in the mother becomes synchronized with the desire to nurse in the baby, the two feel as one, and nursing gradually settles into a two to three hour pattern. At this point, the mother and child both will develop a feeling of wellness in mind and body. In reverse, when this feeling becomes too sharp, or disappears, the milk-producing function in the breast diminishes, the mother's health declines, and she can feel great stress. In this way, one can say that the lactogenic sensation is a barometer of the mother's body and breast condition.

#### 2-7 The Soft, Pliable Breast

You most likely understand by now that the most important thing for producing milk is to have the baby nurse correctly and frequently, and for the mother to relax when nursing her child. Also, you should keep your breasts soft in order to be able to produce a large quantity of milk. Ms.

Sotomi Oketani, the originator of the Oketani Technique, discovered that in order to produce large quantities of milk, it is important that there be a proper amount of looseness at the base of the breast and the pectoral muscles, and termed this area the 'base' of the breast. People who cannot produce milk at all, or have other troubles when nursing, often find this area hard and stiff, without the normal looseness of nursing mothers. In addition, with the recent dramatic change in modern Japanese dietary habits and lack of exercise, many work using the shoulder and chest areas, and the 'base' can become stiff easily. By using the Oketani Technique, this area softened, which in turn makes the whole breast area feel like a freshly-pounded rice cake (or marshmallow?), and enables the neck of the nipple to stretch more fully, all of which make it easier for the baby to nurse effectively. In addition, it increases the flow of blood to the whole breast area, relaxes the shoulder and back muscles of the mother, and generally refreshes the whole body. Of course, these all make for the production of delicious breast milk. Other forms of breast massage focus on pressing, kneading or massaging the mammary gland system, but this is made up of tiny glands, capillaries and nerves crowded together in a netlike fashion. No matter how much fat surrounds these, it is a very delicate area. The Oketani Technique protects this area while focusing on the base of the breast in order to increase the flow of blood and the function of the lymph nodes.

The condition of the base often reflects the mother's constitution and condition, her eating habits, her overall lifestyle, and the baby's manner of nursing. For example, if the mother is not nursing at night, the stored up milk will put pressure on the base of the breast, causing it to harden up and making it more difficult for milk to be pumped out. In this case, one would use the Oketani Technique to improve the condition of the foundation, thus improving the flow of milk again, but if left with milk stored there, the breast's condition will deteriorate again. For this reason, it is very important to have a baby nurse frequently in order to keep the breasts as soft as fresh rice cakes (marshmallows).

### 3 The Correct Form for Holding and Nursing your Baby (original: pp58-70, 12 pages)

It is very important to master holding and feeding techniques in order to continue to nurse your child smoothly. Understanding the basic techniques for both, and practicing them correctly, is the easiest route to success.

#### 3 - 1 Preparing to Nurse

Cut your fingernails to a short length

Wash your hands thoroughly. There is no need to wipe or disinfect the nipple before nursing, as wiping the Montgomery Ducts can lead to dryness and cuts or splits in the nipple or areola.

Wear clothes easy to nurse in. Wear clothes in which it is easy to expose both breasts. Breastfeeding is the most important form of skin-ship, so enjoy the feeling of the baby's skin against your own. It is not necessary to wear button-up clothing. A long elastic hair band can be used to hold up clothes for easy nursing (see picture).

Nurse in a place where you can relax and get comfortable. One of the best things about nursing is that you can do it anytime and anywhere. The production of breast milk increases when the mother is relaxed, so find a place where you can get in a comfortable position and nurse at your own pace. Using a cushion or pillow can also help you to nurse more comfortably (see picture).

Express some milk before nursing. In order to make it easier for the baby to nurse, soften up the nipple by squeezing some milk out. The goal is not to get a great deal of milk to come out. Observe your nipples closely to see where the milk is expressed. When your nipples are soft, you are ready to nurse. For mothers with hard nipples or areolas, or mothers who produce so much milk that their baby gags on it, the pre-nursing expression of milk is particularly important. Mothers with a heavy flow of milk should pre-nurse until the flow lessens a little, making it easier for the baby to nurse.

#### 3 - 2 Expressing milk

- 1) Wash your hands.
- 2) Place your thumb and index finger approximately 2-3 centimeters (1 inch) from either side of the nipple at the edge of the areola (on the border of the areola)
- 3) With your fingers, press on the areola so that it opens lightly (Figure 1), then bring the pads of your fingers together in a rhythmical manner (Figure 2)
- 4) Do this at various angles. Do not twist, pull, stretch, or pinch the nipple, as it can lead to damage and make it difficult for the baby to nurse. Express your milk gently, so as not to cause discomfort.

When special pumping is necessary:

If a child is born prematurely or if for some other reason the mother cannot be with it, if the mother has concave nipples and the child cannot latch on well at first, or if the mother cannot nurse the child due to her work schedule, pumping becomes necessary. There are several important points concerning this:

Disinfect an easy to use container with boiling water. It is not necessary to disinfect the nipples.

Try to pump by hand if at all possible, as mechanical pumps can pull too hard at the nipple and areola, causing damage to the mammary system behind.

Pump alternatively on the right and left breast. When the amount of milk coming out of one breast lessens, switch to the other.

It is better to pump several times in a short period than to pump once for a long time.

Refer to 'Breastfeeding for Working Mothers' (page 182) for ways to freeze your milk.

### 3 - 3 Various Ways to Hold Your Baby while Nursing

With a newborn baby, it is not unusual to nurse more than ten times a day/ If the mother is tense or holds herself too stiffly, it can result in sore shoulders or tendonitis, etc., so you should try to get in as comfortable a position as possible to prevent this.

Also, it is said that too frequent nursing can lead to cracked nipples, but it is actually the way a child is held or nursed that is what causes this. For a mother and her child, nursing is the first joint effort that they undertake together. The mother should try to act as 'leader', and be careful to hold the baby in a manner in which will not put a burden on the child.

Here are two basic methods for holding your child. When the child becomes larger, you can arrange your holding position to suit him or her.

#### (REGULAR HOLD)

When nursing from the right breast:

- 1) Hold the baby so that the mother's and the child's stomachs press against each other. Rest the child's head in the crook of the right elbow, and hold it there by wrapping the arm lightly around it. The same arm should then run down the baby's back, and the hand should support the bottom. Make sure that it is not only the neck facing inward or face down by keeping both the head and baby facing the mother.
- 2) Bring the baby's mouth to the height of the nipple. When the child is small, place a pillow or cushion on your lap to adjust the baby's height.
- 3) Make sure that you are not leaning in too far forward, and release the tension in your shoulder muscles.
- 4) With the left hand, cup the breast to support it. When nursing, be sure to bring the baby to the breast, not the breast to the baby.
- 5) For the left breast, repeat the same process with the opposite arm.

#### (REVERSE HOLD) (Football Hold)

When a child cannot nurse well in the regular hold, or the nipple is misshapen or crushed, try nursing with the baby in the Reverse Hold (see picture, next page). Also, when breast milk builds up on the outside half of the breast, making it hard or stiff, this is a good position for enabling the baby to nurse the milk out of that area more effectively and relieve your discomfort. In holding the baby in the reverse hold, if the nipple and the areola don't stretch enough, the nipple can become misshapen, and for some breasts, the breasts can become pulled back, causing the breast to be pulled to the outside and making it difficult for the baby to nurse, so one should pay careful attention when nursing in this position.

When nursing from the right breast:

1) Put the baby's body on the right side of the mother with the mouth at the same height as the nipple by placing cushions or pillows under the mother's right armpit. Keep the right hand under the back of the baby's head to support it. Make sure that the baby's back and head are aligned.

2) Cup the right breast with the left hand to support it, and have the baby latch onto the nipple.

3) When nursing from the left breast, reverse the position of each arm.

### 3 - 4 How to Nurse Successfully

Watch carefully how the baby's mouth moves as it nurses. Is the baby opening its mouth widely enough and taking the nipple in deeply enough that its mouth almost completely covers the areola? Is the baby's tongue coming out beyond the lower gums to grasp the nipple firmly, and moving in a wave-like motion while the baby drinks? If the baby is holding the nipple lightly in its mouth as if sipping from a bottle, it is not nursing efficiently. If the baby makes a clicking sound while nursing, it might be holding the nipple too lightly (or shallowly) in its mouth. This is often the cause of cracking, so you should remove the nipple and have the baby latch on again. Also, when newborns shake their heads back and forth before nursing, it is not because they are refusing to nurse, but because they are searching for the breast. The mother should help them to find and latch on to the nipple correctly.

#### How to Insert the Nipple Correctly (Latching on)

When the baby latches on, make it open its mouth widely, after which you should direct your nipple straight into the back of the mouth, or along the roof of the mouth. When doing this, if you are careful to NOT bring the breast to the baby, but bring the baby to the breast and lay the nipple on top



of the tongue, it will be easier for the child to latch on and drink correctly.

Once the baby is latched on, observe carefully how the baby opens its mouth. Are the baby's lips pouting outward, in the shape of a morning glory?

It is necessary for the baby to have the lactiferous sinus part below the areola in its mouth. If the baby's lips are folded inward towards the gums, the mother should use her finger to release the baby's hold on the nipple and have them latch on to the breast again so that the lips are pouting outward.

Also, while you can't see the lower lip well when the baby is nursing, by putting your finger on the baby's chin and pulling gently downward, the baby's mouth will open wide and its lips will naturally pout outwards. Try to do this in rhythm with the baby's nursing, but if it doesn't work the first time, you can always start again at the beginning.

#### Nurse Back and Forth on Both Breasts

In order to keep both breasts in the same condition and enable an equal amount of milk to be produced by both breasts, you should alternate. However, if nursing from one of your breasts is painful, one of your breasts is engorged, or the baby disfavours one of your breasts, you should start on that side. But no matter how many problems you have with one or the other breast, you should not always start on the same side, but sometimes start from the breast that is in better condition. This is because the baby can nurse most strongly at the beginning of the nursing period, so that if you always start from the same side, the amount of milk produced on that side will increase. In order to keep the breasts producing at equal levels, try to start nursing equally from both.

#### Observe Your Nipples

When your baby has finished nursing and releases its hold on the nipple, look immediately at its shape. If the baby is nursing correctly, the nipple will be round in shape. Look carefully to see if it is crushed, or the top of the nipple is pointed. If the nipple is misshapen, it can lead to chapping or cracking or even mastitis, so one should try again to change the baby's way of nursing by making it take the nipple in more deeply, holding the baby in a regular or reverse hold or a combination of the two, changing the direction of the baby's mouth, and making sure that the baby nurses all the milk out of the breast by having it nurse from various directions.

#### Nursing in Sync with the 'Lactogenic Sensation'

Once the baby is nursing correctly and the mother's breast are producing to capacity, the mother will

begin to feel the 'lactogenic sensation'. The mother can begin to nurse in synchronization with this feeling (see p. 32, 'Feel Your Body's Rhythm'). The baby will start nursing by sucking on the nipple for a few seconds, and then stop and be still for a short period. It is waiting for the prolactin and oxytocin to be secreted and the breast milk to begin pumping forth after the stimulation of the nipple. After this short period, the baby will begin to move their mouth vigorously, as well as their head and body, as they drink down the milk that has sprung forth. At that time, you may feel a sort of aching sensation from the lactogenic sensation in the breast that is not being nursed from. There are some people who also find that this breast leaks milk while the baby is gulping down the milk from the other breast. After a period generally lasting thirty seconds to a minute, your baby will stop gulping down the milk and start drinking at a more moderate pace. Some babies even stop drinking and drowse off during this period. After a few minutes, the lactogenic sensation will return, and you should nurse from the opposite breast this time. Some babies fall asleep after drinking from only one breast. If this occurs, you should change breasts at an earlier interval so that the baby drinks from both before falling asleep. During one nursing period, most women feel the lactogenic sensation between two and three times, but no matter how many times, it is important to nurse your child from both breasts.

#### Releasing Your Child's Hold on the Nipple

If you release your baby's hold on the nipple by simply pulling it off, it could cause damage to the nipple. Do not pull forcefully, but place your hand next to the baby's mouth and stick your index finger into the corner of the baby's mouth between the gums and the tongue, and the baby will naturally release the nipple (see picture).

#### Burping & Spitting Up

Babies who are nursing correctly do not have a great deal of problems with burping. However, babies who nurse with a sound of air being swallowed along with the milk, or babies who are holding the nipple too shallowly in their mouths can swallow air and must be burped.

#### Breastfeeding Frequency

If your child seems to want to nurse more even though you have just finished nursing it, you should allow it to do so for as long as it likes. For women who are not producing enough milk yet, nursing frequently provides the stimulation necessary to promote the secretion of prolactin and increase the amount of milk being produced. Once the milk production is in full swing, the mother's lactogenic

sensation and the baby's desire to nurse will come into sync, and the nursing cycle will begin to take on a rhythm.

For babies whose sole nourishment is breast milk, other forms of nutrition or liquids are not necessary. There is no need to give your baby boiled water after taking a bath; nursing it is fine. It is also not necessary to have your baby drink fruit juices or tea before one starts on solid foods. Should your baby develop a fever, or have diarrhea or constipation, simply increase the frequency of nursing. Should it be necessary to give your baby formula, or if you have flat or convex nipples so it cannot latch on to the nipple directly, the mother must feed her baby. In this case, it is best to feed your child with a spoon or small cup rather than using a bottle. While your baby may not be able to nurse well at first, and may spill a lot, it will eventually learn how to use its tongue to wrap around the nipple and take it in deeply in order to nurse correctly.

#### Using a Spoon

Fill a teaspoon or baby spoon with breast milk or formula up to one third full, and place it on your baby's lower lip (see picture). When it opens its mouth widely and sticks its tongue out beyond the gums, tilt the spoon and have the baby drink from the spoon by licking it. This will help you teach your baby how to use its tongue, so keep practicing little by little.

### 4 Breastfeeding: The First Crucial Month (original: pp74 – 79, 5 pages)

#### 4 - 1 Babies are Made to Cry

The sound of a newborn crying can be quite effective in making all the adults around feel flustered, and wonder what it could be that is causing it to cry. Particularly in the first month, it is impossible to understand the meaning of their cries, whether they want to nurse, they want their diapers change, etc., no matter how hard one listens.

Is it true that newborns do nothing but cry or sleep? It is said that newborns have two levels of sleeping, and four levels of conscious awareness when they are awake. The sleeping levels consist of deep sleep and light sleep. When they are sleeping deeply, their arms and leg muscles are completely relaxed and you can poke their cheeks, make a loud noise, or do virtually anything else and they won't wake up. The other level of sleep is light sleep, in which they will move their mouth as if nursing, smile, and sometimes move their arms and legs. If you look closely, you will also notice that their eyes are moving as well. This is an indication that they are in the REM level of sleep, in which it is possible to see dreams. Adults only spend 15 to 20% of

their sleep time in REM sleep, but babies spend up to 50% of their sleep time in this level. Thus, even though it seems as if babies do nothing but sleep all day, they are actually moving in and out of these cycles at 30 minute intervals or so. Adults can fall off into a deep sleep almost immediately, but babies can only reach the level of deep sleep after going through this REM level of sleep. Often, just after a baby has nursed, it seems to have dropped off to sleep, so the mother puts it down gently, only to have it wake up crying immediately with its eyes wide open. It is necessary to hold and rock your baby to sleep for twenty to thirty minutes before putting it down, so it will fall into the deep level of sleep. Why is it that babies enter this light stage of sleep every hour? This is because the baby itself is stimulating its brain in order to promote its development. It used to be said that a child that was restless right up until falling into sleep is intelligent, and it could be said that this stimulation is the reason.

As for the four levels of awareness when awake, the first level is that half-asleep time when the child lies very still as if hypnotized, and doesn't even respond much when spoken to. The next level is when the child is completely awake, and focuses on its mother with bright eyes and a look upon its face that seems to say 'I understand everything!', 'I can do anything!'. It is true that at this time, your baby is taking in many things. In particular, babies can see best in the 20 to 25 centimeter range (8 – 10 inches), which is just the distance of the mother's face when nursing. It can also hear very well, and is very sensitive to both smell and taste. It is the most sensitive to touch, though, and loves to be touched and stroked.

If the child is held during this period of awakening, the time it spends in this level will increase, however, if it is not paid enough attention to, it will enter the next level and begin fuss, waving its arms back and forth, moving more violently, and preparing to cry. Which is the final of the four levels, when the baby stiffens all the muscles in its body and opens its mouth and lets out a cry that seems inconceivable for such a small body. The baby has no idea why it started to cry by the time it reaches this level. Even in order to nurse, it is necessary to hold and rock the baby until its crying lessens. If the mother cares for the baby by nursing and changing the baby's diapers before the child reaches this level, she will not have to hear her child crying heavily too often. However, if the baby does reach this level, what should the mother do? First, hold your child, then nurse it, and finally change its diapers. In general, these three things fulfill most babies' needs. As you can see, babies are in many more states than just sleeping and crying.

#### 4 - 2 The Correlation Between Crying and Breast Milk

When a child cries, many new mothers worry that they might not be producing enough milk.

However, most babies these days will drink energetically from a bottle even if they are perfectly satisfied with the amount of breast milk they just drank. This is because the primal instinct to suck on anything that touches their tongue lasts until approximately one month after birth, so a baby will continue to drink from a bottle even if it has already nursed sufficiently. It is not because the amount of breast milk being produced is insufficient.

There are also other babies who sleep a great deal. They can sometimes sleep for three hours, nurse, and then go right back to sleep, which may be a blessing for the first month for those mothers. However, for children who continue to sleep for up to five or six hours at a stretch, it is necessary to awaken and feed them at regular intervals, or the baby's weight will not increase and the mother's breast milk production will lessen. Even the child will not wake up no matter what you try, you should express the milk yourself.

#### 4 - 3 Changes in the Mother's Body

It takes about four to eight weeks for the uterus to return to its original size after childbirth. While it is true that for mothers who breastfeed their children, this return to normal is faster and better than those who don't, it is important to take it easy during this time. The first three weeks after childbirth should be spent in pajamas, and the mother should lay down every time the baby goes down to sleep. Some people feel pain in the pelvic area or from the cuts of cesarean section, which make it difficult to sit down, hold their child or move around freely, but this pain will recede gradually.

Also, mothers should be careful not to watch television or read small print for long periods of time after childbirth, as this tires not only the eyes but the whole body as well. While it is true that childbirth is not an illness, new mothers should try to leave as much of the housework as possible to other family members, and rely on the help of family members while they concentrate on nursing their child.

#### 4 - 4 The Role of the Family

In order for a new mother to nurse her child successfully, the cooperation of the whole family is essential. For first time mothers, the worry about whether they are producing enough milk is a big one, and careless comments about such things at this time by members of the family can make these worries expand rapidly. Fathers and grandmothers who see the newborn child crying tend to say such things as 'Is it getting enough milk?', 'Shall I feed it some formula?'. While they are only doing their best to help, these comments just discourage the nursing mother. During the

first month after childbirth, the newborn child and its mother are working furiously to try to get to know each other and develop a rhythm together, so the people around them should just envelop them with warmth and care.

At the same time, it is also important to see to the environment of the mother and her changing body after childbirth. During the 'lying-in', or puerperal period, new mother's bodies and minds are both dramatically different than normal due to sudden changes in hormones. For years, the saying of 'three weeks in the sickbed' was used for women who just gave childbirth, which is because not only have there been incredible changes in the mother's bodies, but also in their psychological makeup, and they are very sensitive during this period. It is very easy to fall into 'maternity blues' during this period, start crying at the slightest thing, or feel unfit as a mother and become depressed. No one is a perfect mother from the very beginning. Raising a child is also 'raising' yourself – you mature along with it. Right now, you probably have your hands full with just nursing your baby, but your baby is maturing even so, and the days when taking care of your child becomes fun will come for sure. People around telling the new mother that she must 'grow up and take on this new responsibility' create the risk of sending her into even greater depression, so again, it is important to take all other work away from the mother and let her just focus on nursing her child during this period.

#### 5 Your Baby Is Born! The Time for Breastfeeding Has Come! (授乳開始)

Congratulations of the birth of your child. You must feel joyous to finally meet your beautiful baby face to face. This chapter explains when you should start nursing, how your breasts and the baby will change in the first few days, and how to settle into a nursing routine.

#### 5-1 Breastfeeding – The First Time

The first thing a baby puts into its mouth after birth should be its mother's breast. This is becoming more and more common in hospitals these days. Try to have your child place the nipple in its mouth as soon as possible after childbirth, even just to hold it there without sucking. This is just to help it learn, 'This is my mother', so sucking is not important.

Once the first hour of the newborn's alert period is over, it will go to sleep, and the

mother should also rest then as well, to start recovering from childbirth. Then, once it opens its eyes again, nurse the child once more.

If both the mother and child are healthy, you should try to keep them together during their stay in the hospital. On the night of childbirth, even though the mother is tired, quite often she is also excited and thus cannot sleep, so it is helpful to have the baby by her side, where they can relax and get some rest together. Having the mother and child together in the same room is a very natural style.

When the baby moves its mouth in a drinking motion or cries out, try to nurse. This stimulation of the nipples will send signals to the brain to initiate breast milk production. The more the baby tries to nurse the better, so don't worry about how much time has passed – just feed the child whenever it seems to want to nurse. However, if it is nursing improperly, the nipples can become painful, so be sure to hold the baby in the proper position.

If it is impossible for the mother and child to be in the same room, ask that they call you or bring the baby to you whenever it cries out.

However, if the mother is very tired and is worried about the infant being with her, or she feels emotionally or physically incapable of caring for it, she should call for the midwife or nurse to take the baby away and get some rest.

## 5-2 Changes in the Breast

Just as everyone has a different face, they also have different breasts – large, small, long nipples, short nipples, etc. In addition, some mothers start producing milk very quickly while others take more time, and some produce a lot while others produce only a small amount. When nursing in the hospital with other new mothers, one cannot help but compare, but remember that everyone is eventually able to produce breast milk, so just keep working at it.

Each newborn also has its own special characteristics – those who nurse well and those who don't, those who suckle strongly or weakly, those who drink a lot and those who are satisfied with a small amount. Some babies are large, some small, some have impetuous personalities while others are more easy-going, some cry a great deal and others not at all – from the time they are born, everyone is different. But they too will be able to nurse eventually, so just relax and enjoy their progress.

For the first couple of days after childbirth, there is little change in the breast, and

only a small amount of breast milk is secreted. Even expressing it oneself only produces a tiny amount of clear, yellowish colostrums. You may worry that your child is hungry, but babies at this age physiologically do not need to nurse yet. Some babies at this time cannot latch on or nurse correctly, or sleep or nurse constantly, or are continuously crying to be held and it is difficult to set a nursing rhythm yet. Just approach this period as a time for both you and your child to practice nursing, and let your child nurse whenever it seems to want it.

After about the third day, the mother's breast will start to feel engorged. The mammary glands have become active and have begun to produce the yellowish colostrums in earnest now, but it is still only in small amounts.

By now, the baby as well has probably started to nurse more strongly, and sometimes may fall asleep contentedly after nursing. During this period, the excretion of fluids from the body is greater than the amount taken in, and it is quite normal for most babies to temporarily lose weight. Jaundice can also be seen in many newborns by this time (see p.50, 'The Physiology of Newborns').

You still may not have settled into a routine yet, and should continue to let your child nurse as often as it wants to. If it sleeps for more than three hours, wake it by changing its diapers and nurse it then. If it still won't wake up then, expel your breast milk by hand, so as not to leave it in the breast, which could slow production.

By the fourth or fifth day, some mothers will start to feel the lactation sensation periodically. Breast milk production has further increased, and the breasts may continue to feel hard and engorged even after nursing. At this time, the colostrum begins to change into a slightly whiter substance. The baby should slowly becoming better at nursing, but this is the period in which they lose the most weight and their jaundice can become stronger.

By the sixth and seventh days, breast milk production is usually in full swing and many new mothers can feel the lactation sensation, but their breasts are still usually engorged. The breast milk changes from colostrums to transitional milk to mature milk during this time, getting more and more white. The baby is nursing more strongly and it may have begun regaining weight, but it still may be jaundiced. While you still may not have a nursing rhythm yet, be sure to nurse your baby no less than every two and a half to three hours.

This is a rough explanation of the first week after childbirth, but it is important to

remember that everyone is different, so don't get worried or upset if things are different for you. Just be sure to nurse your child whenever it wants it, and you will eventually discover your own pace.

Many mothers say that their breasts feel 'engorged', but this is not necessary for nursing. In fact, when the breasts are engorged, the nipples become hard and don't lengthen as easily, making it more difficult for the baby to nurse correctly. Try to nurse before your breasts become engorged.

Also, some mothers aren't able to produce much milk in the first week, but their production will pick up eventually, so they shouldn't give up.

#### 5-3 The Flavor of Colostrum

Colostrum is full of immunity components. Try tasting it – you will find that it either has no flavor at all, or that it is slightly salty, but that there is no sweetness to it. The salt is an important element, necessary to speed the expulsion of the meconium from the baby's body.

After about three or four days, when the mother's milk production increases, there will be a slightly sweet flavor to the breast milk. This milk will slowly change to the light sweetness of mature milk.

#### 5-4 The Physiology of the Newborn

For an infant who has just spent ten months in the womb surrounded by amniotic fluid, birth brings about a dramatic environmental change. The first week for a newborn is the period in which it must adjust itself to life outside the womb. Let's take a look at the changes that occur in the baby during this time:

##### [Loss of Weight]

A baby's weight is 75 to 80% water, however, just after birth, they lose a great deal of fluids through urine, bowel movements, tears and sweat. Because the mother's breast milk does not reach full production levels until three or four days after childbirth, babies will naturally lose weight during this time.

If the child was delivered normally, it should have approximately three days worth of fluids and nutrition 'saved up' when it is born, and can thus wait until the mother's breast milk reaches normal levels of production. Thus there is no need to supplement

the baby's diet with formula during this time because they are losing weight.

The average weight loss for a baby is approximately 10% of its total body weight, but there are some babies who lose even more. If the baby seems healthy and its weight returns to the birth weight within two weeks of birth, there is no need to worry.

##### [Neonatal Jaundice]

Red blood cells in the blood are broken down by the liver into bilirubin and excreted as bile through the digestive tract. In a newborn, because there are a great deal of red blood cells and because they have a short life span of only 60-90 days (as compared to an adults 120 days), bilirubin is produced in large amounts. However, because the liver is not fully functioning yet, this bilirubin can be excreted into the bloodstream, causing jaundice. This condition can be found in most newborns, and is usually temporary.

Usually by the fourth day or so, the liver's functions improve and the bilirubin is actively expelled, and thus the jaundice will go away. If it persists longer than normal, or is more severe, the baby may need treatment by a physician, but the mother can still nurse. There is also something called 'Breast milk jaundice', in which the jaundice persists longer than usual because the mother is breastfeeding, but there is no need to stop nursing. However, there are a few cases in which a newborn's condition may lead to a situation in which the mother is advised to stop breast feeding temporarily. Once the child's condition improves, you can go back to nursing, so be sure to continue to express milk during this time.

##### [Meconium]

The first stools of the newborn are called 'meconium'. They are very dark green and sticky, but by nursing the baby often, you are feeding it the colostrums, and the meconium will be expelled more quickly, also improving the baby's jaundice.

Next the baby should have yellowish-green 'transitional stools', after which they will turn to the yellowish watery stools associated with breast milk. A baby can have anywhere from 1 or 2 stools all the way up to 10 stools a day.

#### 5-5 Problems During the First Week

##### [Sudden Swelling of the Breasts]

Some women find that their breasts become very hot and painful with the sudden

swelling after childbirth. When this happens, express milk by hand or through nursing. If the breasts become hot, put a cool compress lightly on the affected area. Considering the direction of blood flow into the breast, cooling the area from the upper breast to the area close to the armpits is most effective. In using cold compresses, it is important to not cool the breast constantly, and to nurse or express milk every three hours or less. Also, using ice or ice packs directly on the breast is too cold and will make the mammary glands become even harder, so wrap the pack in a towel and cool the breast down gradually. When using a glue pack, wrap it in a handkerchief to prevent the affected area from becoming cooled too rapidly.

By avoiding high calorie foods and nursing frequently, this sudden swelling should slowly go down. It can also be prevented by keeping the mother and child in the same hospital room so that they can nurse every three hours or less to keep the mammary ducts open and promote the flow of breast milk, and by avoiding high calorie foods.

#### [Lack of Sufficient Breast Milk]

It is difficult to tell whether the mother has a lack of breast milk in the first few days after birth. If the baby is being nursed regularly, the mother's milk production should start by the third or fourth day, but there are some women who take even longer to start producing. Even after a week, it is still too soon to tell whether a woman is having problems producing breast milk. The most important thing during this time is to continue nursing your child directly from the breast, and try to avoid giving it formula as much as possible.

#### [For Women Who Have Had A Caesarean Section]

There is no reason why women who have had a caesarean section cannot nurse their children, so you should have the baby brought to you to nurse as soon as possible after its birth. You should be able to move from left to right, so have someone help you to lie the child down next to you and have it practice taking the nipple into its mouth, even if only to lick at it. Again, it is only necessary that the child begin to understand that 'these are its mother's breasts' at this time.

Each hospital has its own policies, but having your child in the same room as soon as possible and nursing it as often as it wants is the fastest way to promote the production of one's breast milk and becoming able to nurse one's child smoothly.

Should the baby put painful pressure on the incisions on your stomach, hold it in an inverted position or put a cushion between the mother and child, or continue to nurse it lying down. Children born through caesarean sections have not had to go through a great deal of stress at the time of birth, and thus sometimes are not adequately aware that they have exited the womb. This may result in the child not trying to nurse very often, but don't give up – just continue to practice as much as possible.

#### [Problems After the First Week]

Most hospitals in Japan discharge mothers and their children after four to six days. At this time, a mother's patterns are still not very regular, and often the mother is still not producing much breast milk yet. Many women are not used to their new motherhood and can become very anxious at this time.

But don't worry. You will slowly become accustomed to your new life with your child, so the important thing is to try to relax and approach child rearing with an unstrained attitude.

The most important thing about raising your child on breast milk is to continue to nurse it often. Believe that childbirth makes the production of breast milk possible for everyone and continue to practice.

And finally, should you feel worried or anxious, do not try to struggle through is alone. Go to a lactician specialist or see a midwife at an Oketani Workshop and feel free to discuss any problems you might have!

#### 5-6 When Problems with Your Nipples Make Nursing Difficult (乳頭痛)

##### Convex and Flat Nipples

'My nipples are flat, and I'm not sure whether or not my baby will be able to latch on,' 'My nipples are convex, and I don't know how to nurse my child.' These are some of the worries that many new mothers have. Just as every person has a different face, each mother has different nipples. Large, small, flat, convex – often the left and right nipples on the same woman are different. But none of these things should prevent you from nursing your child. Look at a child who is nursing well. They always open their mouth very wide and not only take in the nipple, but the whole areola. When they do this, their upper and lower lips are puckered out like a morning glory (see picture). Thus, even if

your nipples are small or convex, if a baby opens its mouth widely this way, they can take in a large amount of the tip of the breast and are thus able to nurse properly.

In order to make this possible, you should try to nurse your infant as soon as possible after birth, when the nipple and areola are still soft and supple. If you wait until the breasts have become engorged, the nipples will become too firm and be difficult to latch onto, so you should consult with the hospital and arrange with the staff to nurse immediately after delivery.

At first, it may be difficult to nurse successfully and the newborn may do little more than lick at the nipples, but that is fine. The most important thing is for the baby to become accustomed to the mother's breasts, so be sure to do this as soon as possible.

In the case of flat or convex nipples, it is helpful to express some milk manually before nursing in order to soften up the nipples. To start nursing, cup the breast loosely and guide the tip towards the baby's mouth. Tap the mouth gently with the nipple and when the baby opens its mouth widely, insert the nipple deep into the back of the mouth until the areola has disappeared. The breast may slip out, or the areola may not be fully inserted. In this case, repeat the procedure as many times as necessary until the nipple is correctly inserted.

For children who don't open their mouths wide sufficiently, use the Pigeon 'Nursing Workshop' Bottle to make the baby practice opening its mouth widely. Once the baby has become accustomed to this position, gently try to switch it back to the breast (see p. 58, 'Correct Ways to Hold and Nurse').

There are times when the baby is crying so hard that its tongue rises up from the floor of the mouth and the baby is unable to latch on to the breast correctly. If this happens, use previously expelled breast milk or formula and feed a little to the baby with a spoon to calm it down, after which you can return the baby to the breast.

It is not necessary for women with convex nipples to massage their breast or use a suction cup to try to bring them out during pregnancy. In addition, some suggest that these women should wear breast shields to protect their nipples, but not only is there no proof that they are helpful, they can actually put pressure on the developing mammary ducts, which will result in the hardening of the breasts, and thus are not recommended.

During pregnancy, it is enough to simply clean the nipples when bathing every night and to go without a brassiere occasionally to allow the breasts a chance to come into direct contact with the air.

It is more important to try to correct a problem with convex nipples after childbirth than to try to do something about them during pregnancy. The first thing to do is to make sure your child does not use a pacifier or bottle with a small nipple. Because the child can hold onto and drink from either nipple without having to open its mouth widely or move its tongue, it becomes used to them very easily. If it is absolutely impossible to have the child nurse directly from the breast, feed it with a spoon or a small cup. Even a newborn can drink from these skillfully.

The second thing necessary to enable the child to nurse successfully is to express milk every 3 hours or less and keep the breast in good condition for the baby. Using improper massage techniques or an electric breast pump in order to try to increase the production of breast milk can damage the nipple and areola, so you should only express milk gently by hand. Using a nipple shield continuously can also cause the nipple to become hard and cause a disruption in the production of breast milk, and should only be used following proper instruction. With Oketani Massage, the convex nipple feels as if it is resulting from the ligament supporting the breast being strongly pulled by the foundation of the breast. Through massage, this ligament becomes lengthened and the nipple comes out, thus making it easier for the child to nurse.

When a child is unable to latch on and nurse correctly, many mothers become depressed. Both time and perseverance are necessary at this time in order to enable the baby to nurse successfully from the breast. The family should try to be as cooperative as possible, and enable the mother to spend her time and energy focusing on her child.

#### When Nipples Become Cracked and Painful

For some women, the nipples may develop blood or water blisters, which then break open and form scabs, or the areola has cracks that are extremely painful when nursing. In some cases, these cracks may actually start bleeding, taking the joy out of nursing and making it an extremely trying experience.

These problems can be caused by a baby who latches onto the tip of the nipple or a mother who holds her child incorrectly, which can cause the nipple to be crushed as the baby nurses from an incorrect angle. If this happens, change the way you are nursing the child in order to enable it to take in the nipple deeply. In addition, if the breast is engorged and the nipple has hardened, it will be difficult for the child to latch on deeply, so express a bit of milk before nursing to soften the nipples. You could also continue to

express milk long enough to get the lactation sensation and then quickly have the baby latch on, which will also help to lessen the pain. Furthermore, you can change the position of the child so that the portion of the nipple that is injured is inserted into the side of the child's mouth.

If it is just too painful to nurse at all, you may have to stop for a short time, but you must be sure to express milk at least every 3 hours or less. Without this stimulation, your milk production will drop.

One of the common causes of injury to the breast found in new mothers is caused by wiping down or disinfection of the nipple. When the breast is wiped for disinfection, the natural oils protecting it are also wiped away, leaving chafed skin that is more easily injured. The nipple and areola have naturally existing bacteria which keep them clean, and the mother also has white blood cells and lymph cells in her breast milk which kill bacteria, so there is no need to sterilize the nipple before nursing.

In very rare cases, the nipple can be injured and become inflamed. The whole nipple and areola area develops a burning sensation and a stinging pain, and becomes red as if the skin had peeled off. This is most likely caused by candida bacteria. If the baby has oral candidiasis (white mouth) or a severe diaper rash caused by candida, it is necessary to treat the condition using medicine in both mother and child simultaneously. One should see a pediatrician or a gynecologist in this case.

When a baby is very young, they sometimes object to the flavor of the mother's milk by pulling on the nipple, twisting their bodies around, or biting, all of which can also be the cause of injury to the nipple. Also, some babies bite when they begin teething. When this happens, do not think it is a sign to stop nursing altogether. If you are bitten, release the child's hold on the nipple immediately saying, 'Don't bite, or you won't be able to nurse anymore.' Also, be sure to be careful of what you eat in order to ensure that the flavor of your milk is good.

There are also some babies who bite to signal the end of each nursing session. These children always look at their mother before they finish, so observe them carefully and use your finger to release their hold on the nipple before they bite.

In any case, an injury caused by a bite will always heal, so don't give up nursing altogether. However, should you find it difficult to nurse your child correctly and have an injury that doesn't heal, getting an Oketani Massage can soften the foundation of the breast, areola and nipple, and enable the tip of the breast to stretch more, thus easing

the pain and speeding the healing process, so please don't suffer alone.

## 6 A Monthly Guide to Nursing (各月のアドバイス)

### 6-1 One to Two Months

After the first month after birth, your baby's face will have become more expressive, and you will feel it is even cuter than it was when it was born. Some first-time mothers may still not quite be used to caring for their children yet, and may not have developed their feelings of affection fully yet. Also, some mothers may become worried when, at their baby's one-month check-up, they find out that their baby's weight is below average. However, this is not necessarily due to an insufficiency in breast milk. Not all babies of mothers who produce a great deal of milk gain a lot of weight.

The Oketani Method conducted a survey of mothers who had raised their children solely on breast milk, and discovered that the height and weight of these babies were slightly lower than the average of that of the Ministry of Health and Welfare's data, which measured babies raised on breast milk alone, breast milk and formula, and formula alone. In addition, they found that babies raised on breast milk had slightly larger head and chest measurements, and to have more solidly-built body types (see p.138, Changes in the Weight of Nursing Babies). Nursing requires the use of muscles throughout the body, thus improving the circulation and the health of the baby.

Looking at each child individually, we find that one child may start small but begin to grow suddenly at about 12 months, while another may grow rapidly until three months and then taper off, each child growing in a manner which is best for them. This is the most healthy method, thus you need not be concerned about the differences in sizes of yours and other babies.

Sometimes you may find that even though you have nursed and changed your baby, it is still very fussy. This often happens in the early evening, just as you are beginning preparations for dinner, which can cause you a great deal of stress. This fussiness is due to the development of the nervous system, and is common to most babies during their sudden growth spurts. They may cry unless they are held, and some may even continue to cry when they are held, making the mother fret about what could be wrong. When this happens, try taking the baby outside for some fresh air. Both the mother and the



baby will enjoy the change in scenery and feel more refreshed.

There are also cases in which, even though it has nursed sufficiently, the baby will not release the nipple, sucking furiously when the mother tries to release the baby's grip, or crying when the nipple is taken away. Although it may be difficult at times, try to let the baby nurse until it is fully content. A baby feels most content when being held by its mother and nursing. There is no need to worry that it will become dependant on being held at all times. Holding and nursing your baby until it is fully content during this period is the fastest way of developing the basic relationship of trust between mother and child and encouraging the development of the baby's emotions.

#### 6-2 Two – Three Months

In the past, people called the first 100 days after birth the 'seedling period', and considered it a period in which all one's efforts must be put into the care of the newborn. "The 100-Day Cry" or "the 100-Day Holding of Happiness", the hundredth day was considered to be a turning point for the newborn. It does indeed seem that after the 100<sup>th</sup> day, the baby is able to play by itself a bit during the day, and caring for your child becomes noticeably easier. Even though it still needs to be held most of the time, the baby begins to answer the mother with gurgles of its own. Try to talk to your baby as much as possible now.

It is about this time that the mother's lactogenic feeling and the baby's desire to nurse become synchronized, and nursing falls into a schedule of about every 2-2.5 hours. In particular, once the baby's weight exceeds about 4.8 kilograms, it begins to be able to drink more effectively, and your breasts will thus become softer. Though you may feel that your breasts should feel full for them to produce adequate amounts of milk, it is from this time on that the breasts actually change to produce only at scheduled nursing times or when the baby is actually nursing.

There are also babies who begin to sleep long hours during the night by now. It is often said that babies that sleep well grow strong more quickly, but if one does not nurse at night for a continuous period, the mother's milk production will go down, and in some cases, menstruation may resume. If this happens, the flavor of the breast milk may become bad, and the baby may give up nursing altogether. Try to retain a regular pattern of nursing, and return to it as quickly as possible if some change in it occurs. At

night, you can try to wake the baby to nurse when you get the baby up to change its diapers during the night. If even that doesn't work and the baby continues to sleep, you should pump yourself. Even a small amount of pumping is sufficient. The most important thing is to not let more than three hours pass between each nursing or expression of milk.

At this stage, many babies will bring their hands to their mouths often. Many start by sucking their fists or knuckles, but will often change to sucking their fingers. This is a normal part of an infant's development, and is not an indication of hunger. Do not feel that you must nurse your baby every time they suck their fingers.

As they grow, the baby's bowel movements will also change. The watery bowel movements which occurred several times a day until they were about a month old will lessen in frequency to about one or two times a day, and some babies may start to go three to four days without one, sometimes even up to a week. Mothers should also be aware of their bowel movements, and care for their bodies so that it does continue. Should your baby become constipated, one way to solve this is to breastfeed more frequently. When fed infrequently, the baby is drinking breast milk that has been sitting in the breast for long periods of time, which makes it easier for them to become constipated and have to really push to get their bowel movements out. When this happens, massaging their stomachs or giving them stimulate with cotton swab can be effective. If that doesn't work, a regular enema should be given. Eventually, as the baby learns to turn over and begins to eat solid foods, this constipation should end.

#### 6-3 Three – Six Months

As the baby's neck gets stronger and stronger and it learns to turn over, its horizons begin to expand dramatically. Once it can hold its head up, it can be carried in a carrier on the back. Try to use this and take your baby out more often.

After about three months, your baby will become even better at nursing, and will be able to nurse large amounts of milk in a short period of time. It has also probably stopped crying and needing to nurse as frequently. You may also find that there are times when the baby won't nurse as often as other times. On one day, the baby may nurse lightly and then play cheerfully, while another day, it might nurse for over an hour at a time. In particular, some babies may want to nurse for long periods of time before bed at

night. Mothers should try to accommodate their children during this period, nursing them as long and as often as they feel the need to. There is no need to feel that you should reduce the number of times or amount of breastfeeding you have done until now because they have reached this age.

During this period, the mother's breast will again become smaller and softer, but there is still no reduction in the amount of breast milk being produced.

A child's development is also progressing quite rapidly during this period, but each child progresses at different speeds. The steps or levels written in child-raising books provide a certain measure, but please don't try to compare your baby to everything written in them. There is a certain order to development, and each child must progress through that order at their own pace. There is no need to make them practice things. Please just help them to progress naturally.

#### 6-4 Six Months to 1 Year

With the development of their ability to move, your baby will progress from turning over to crawling to standing and walking during this period. In addition, its face will become continually more expressive. Watching a mother and her child exchanging gazes during this period is one of the most beautiful things in the world.

Mothers usually begin to feel the fun of child raising as well during this period. It is generally thought that all women have the 'mothering instinct', and with the onset of pregnancy and childbirth, this instinct kicks in and they are able to adjust to being a mother easily, but this is not true. Bringing up a child is also bringing up oneself, and with the nursing of your child, you will slowly become closer to feeling like a mother, as the hormones released during nursing bring you naturally into the will to care for and raise your child

Breastfeeding is not something which one person instigates themselves. As the mother feel her milk flow and the baby stimulates the breast during nursing, the mother and child's rhythm become synchronized. They begin to feel as one, and child raising begins to become enjoyable during this period.

It is also during this time that most babies begin to show teeth. Babies who are teething often have bad moods or a fever or other physical maladies. When nursing a baby, it is very easy to tell whether or not the baby has a fever. The first time the child has a fever, the mother may panic. Until this time, your child has been protected by the

immunities they received from the mother while in the uterus, but after about six months, this natural immunity weakens. There is still some present in breast milk, however, so you should make an effort to not allow excessive time to pass between feedings. Breast milk is especially important when the baby is sick. By breastfeeding to overcome illness, the baby slowly builds up its resistance to further disease.

At about six months, mothers should begin feeding your baby solid foods, while still continuing to breastfeed. Some may feel they should stop breastfeeding because their child doesn't eat much, but actually the baby will not eat more if you stop, and will actually be losing all the nutrients they were getting from nursing, so please do not stop nursing your child.

Some mothers experience problems with crying during the night, due to the baby's bad dreams or for other reasons. When this happens, you should first try nursing your child. This usually calms them down and stops their fussing. Holding your child is the best way to relax and reassure them.

#### 6-5 One to Two Years

A mother will never forget the first time her child stands and takes those first few steps with a surprised look on their face. Learning to walk is the first step towards independence. Though most other mammals are able to walk shortly after born, because human babies are not fully developed at birth, it takes roughly a year for them to take their first steps. Thus, in order for a child to become fully human, it is necessary for them to continue to receive breast milk, which serves as a sort of 'second placenta' after birth.

The Oketani Method says that once a baby can stand on two legs and walk, it has become a human being and can thus be weaned. Roughly half of all babies can walk at 12 months, but there are variations of anywhere between 8 and 16 months. This is influenced by the child's muscle development, sense of balance and personality, among other things. One should take into account these differences and use the guideline of 'walking steadily' as a guideline for weaning your child. However, regardless of walking ability, weaning before the age of 12 months is not recommended. Conversely, premature babies and nannies who have had an illness may not walk until later, and nursing is important for building their strength.

There are also some babies who, even though they are over 12 months old and eat

solids well, continue to nurse vigorously, sometimes even nursing more than previously. Wanting to nurse often, or to touch their mother's breasts are developmental steps show that the child is close to 'graduating' from nursing. During this period, the child uses their mother as a sort of 'base camp', separating for short times to explore their world.

In the course of a lifetime, the period during which a person nurses is very short, however, this very short one to two years holds great importance, something which breastfeeding mothers understand well.

To all mothers who have been nursing your baby for over a year, just how many liters of breast milk might your child have drunk during this time? And how many times have you nursed them to create those strong, healthy bodies? It is certain that along with all the breast milk, a mother's love has also flowed to your child. For just a short time longer until they are ready for weaning, continue to nurse your child freely.

## 7 For Those Who Feel They Are Not Producing Enough Milk (分泌不足感)

### 7-1 A Seeming Lack of Breast Milk

Many mothers ask, "Can I really raise my child on breast milk alone?", and worry that it won't be possible. Even after telling oneself that human beings are mammals and have raised their offspring on breast milk along since the beginning of their existence on earth millions of years ago, when it comes to actually nursing your own child, many can't help but worry.

People lose confidence in breast feeding for a variety of reasons: they feel their breasts are too small, their breasts don't become engorged with milk, their breasts don't leak, their baby cries very soon after nursing as if hungry once again, their child remains latched onto the breast for long periods of time, their baby doesn't gain much weight, etc, etc. Approximately half of all mothers who come to Oketani Breastfeeding Workshops have these kinds of anxieties. While there are a few women who actually do produce an insufficient amount of breast milk, the large majority of these women have breasts which would be fully capable of producing enough milk to raise their children on. Quite often, it would simply be a matter of educating them a little more about breastfeeding, and they wouldn't have to feel anxious, mix nursing with formula, or switch to formula altogether.

Even though they have breasts which are fully capable of producing enough milk to raise their baby on that alone, many women worry that they are not producing, and add formula to their feeding schedule, which actually results in a loss of production which they themselves have created.

In order to distinguish this type of lack of breast milk with the actual condition of being unable to produce sufficient amounts of breast milk, we have termed this seeming lack as 'Perceived Lack of Breast Milk'. Most mothers worrying about their milk production fall into this category.

### 7-2 Amounts of Breast Milk

How can one measure the amount of breast milk they are producing? With a bottle, it is quite simple to see how much milk or formula has been consumed, but it is more difficult when nursing. Some babies fall asleep during nursing, or want to nurse more often after only a short period of time, making it harder to measure.

In research done on the amount of breast milk drunk by babies raised on breast milk alone, the amount drunk at one sitting ranged from as little as 5 gram to as much as 200 gram. This is a great deal of variation in what amount of breast milk a child drinks each time it nurses. This variation is quite natural, particularly in newborns, as they do not nurse correctly every time. Those people who measure how much breast milk their child drank (by measuring the difference in the baby's weight both before and after nursing), often continue to do so at home to prevent becoming anxious or worried. Although the amount of breast milk a baby drinks may vary, the total amount of breast milk consumed per day is fairly consistent, thus one should not supplement each nursing with formula, or the child will not nurse sufficiently at later sittings, thus leading to an overall lack of milk production later and require further additions of formula, thus continuing the vicious cycle. Weighing your baby after each nursing simply adds to a mother's worries, and causes her to feel stress, which in turn suppresses hormones which promote milk production. Remember, no other animal weighs their child after nursing!

There are also some women who say, 'I tried expressing my milk every 30 minutes, but was only able to get a very small amount, so I must not be producing enough milk,' but this is another misconception, as the amount of milk that can be expressed by hand is different than that which is drawn out by a nursing baby. Because breast milk is

actually produced when a child nurses, even a person who is extremely skillful finds it difficult to express an equal amount of milk as when an infant nurses. In addition, because breast milk is digested more easily than formula, a small amount is sufficient. So, just how can you check to see whether your child is getting a sufficient amount of breast milk?

### 7-3 Evidence Indication You are Producing Sufficient Breast Milk

The best ways to be sure your child is getting a sufficient amount of breast milk are to study the child's appearance and observe how it is nursing. Check to see that the baby is overall in a good mood, with healthy skin color, moving its arm and legs frequently and cries vigorously, and that it is nursing at least 8 times a day. Also if a baby is not nursing properly, it may not be receiving enough breast milk, so refer to "Correct Holding and Nursing Positions" (p. 58) to be sure that it is nursing correctly.

The next indication is the amount of urine the baby produces. While the amount of urine excreted does not equal the amount of breast milk consumed, one can get a feel for the amount of breast milk being consumed this way. If the baby is fully wetting 6 or more diapers a day, it is getting enough breast milk. Also, for the first month, the baby should have between 2 and 5 bowel movements a day of watery, yellowish stools, after which it should start to come out less frequently and in more quantity.

Another indication is the baby's weight. At the one month checkup, mothers whose babies weight had not increased by a kilogram, or 30 grams a day, are often told that their child's weight gain is insufficient, but according to world averages released by the World Health Organization, babies raised on only breast milk usually gain only 500 grams or so in the first month.

To say that a baby's lack of weight gain is due to an insufficient amount of breast milk is untrue. There are many babies who are small regardless of the amount of breast milk they consume. The most important thing is for each child to grow at a rate which suits him or her. Besides weight, it is equally important to track the changes in body length and head circumference as well. If a child's body length is rapidly increasing, the child weight may not increase notably, but if both body length and head circumference are increasing regularly, there is no cause for concern.

In what ways can the mother's breasts signify a sufficiency of breast milk, or lack thereof? For example, most people feel that if their breasts become engorged with breast

milk, they are probably producing a sufficient amount. However, by waiting until they become engorged before nursing every time, the mother's body interprets this as, 'There is probably enough breast milk, so there is no need to produce any more,' and will cease to produce hormones. Or, if you continually miss or are unable to nurse during the night, the milk remaining in the breast will put weight on the 'foundation' of the breast and make it more difficult for the breast to pump the breast milk out. Particularly at about 2 and a half months, many mothers stop becoming engorged and they begin to worry that their production has gone down, but this is a misconception. Mothers who nurse frequently have very soft breasts, but they are actually producing sufficient amounts of breast milk. The best breast milk is not that which is stored up, but that which is produced as a child nurses, so rather than storing up one's milk, it is better to have breasts which can produce fresh milk each time you nurse.

In particular, women with small breasts cannot store large amounts of breast milk in their breasts, so they are always producing milk as they nurse. In this way, they are providing their children with fresh breast milk, and as the children nurse frequently, they become able to produce even more milk. In Japan, small breasts have long been considered to be optimal for the production of milk, so even those women with small breasts should approach nursing with confidence.

Just after childbirth, a woman's breasts become engorged and enlarge easily, but after about two months, they usually cease to do so. It is at this point that the breasts begin to produce milk due to the stimulation of the baby's mouth latching onto the nipple. Thus, the mother's breasts become soft and supple, and though smaller, are still able to produce the same amount of breast milk as always. Even if your breasts do not become engorged, if you feel a sort of Morse code-like series of twinges or pangs in the breast opposite that which the baby is latched onto, you can be sure that you are producing breast milk.

Also, pay attention to the sounds of your baby nursing. If you can hear it gulping or swallowing quickly, you will know that it is nursing sufficiently.

### 7-4 How to Produce Large Quantities of Delicious Breast Milk

In order to prevent a lack of breast milk and enable yourself to raise your children on breast milk alone, please be careful about the following things:

1) Nurse your child frequently (at least 8 or more times a day). The number of times a

child is nursed and the manner in which it nurses are the two factors which most effect breast milk production. Because the breasts produce milk due to the stimulation provided by the baby's nursing, having the baby nurse correctly and often is the best way to ensure an increase in milk production. If you are using a pacifier, the amount of time the baby uses it is just that much time that it could be nursing instead, so you should stop using it.

2) A baby wants to nurse even at night. In addition, the hormone which promotes the production of breast milk is secreted in greater amounts at night, so you should definitely nurse your child then.

3) If there is some reason shy you must feed your child formula right now, be careful not to feed it too much. If a child sleeps too long and there is too much time between nursing, a mother's milk production will go down. Be sure to use only the amount of formula that will enable you to nurse your child every two and a half hours or less.

4) Do not worry about time when you nurse. There is no rule that you must be finished within a certain number of minutes. Both the flavor and the nutritional content of the milk change dramatically between the beginning and the end of one nursing, so it is important to give your child enough time to enjoy all the flavors and receive all the nutritional benefits of breast milk.

5) A mother's nutrition and rest are also very important. Be sure to eat nutritious meals at regular intervals, take care of one's overall health, and be sure to get enough rest and sleep.

6) Nurse your child in a relaxed atmosphere. If a mother is feeling frustrated, her whole body will become tense, and her blood circulation will worsen. This feeling of frustration will then be transmitted to the baby. The best thing to do is to relax and enjoy watching your child's development at each nursing.

7) Having the support of one's family is extremely important. A new mother is putting every effort into raising her child on breast milk alone, and having someone ask, "Don't you think it hasn't nursed enough?" or "Let me feed it some formula for you", even said with good intentions, can cause the mother great stress. Please be cooperative with the new mother, and put her feelings first.

8) Get enough exercise. With the convenience of modern day living, it is becoming more and more difficult to get enough exercise. It is recommended that you do some light calisthenics and do enough walking to refresh you every day.

9) Get Oketani Breast Massages. They not only help to increase milk production and prevent mastitis, but also improve the mother's blood circulation in the whole body, thus helping her to stay in good health.

#### 7-5 For Those With a True Lack of Breast Milk

If one follows all the above guidelines, is it still possible to have a slight, or even total lack of breast milk?

At the 'Baby Friendly Hospitals' designated by WHO and UNICEF, nearly 100% of all new mothers are able to nurse their children at the time of release from the hospital. Thus, it would seem that nearly all women are capable of raising their children on breast milk alone.

However, there are differences in the amount of breast milk each is able to produce. Also, there are some children who suck strongly and others who can only suck weakly, so depending on the combination of mother and baby, there are some women who must nurse up to twice as often as normal. Should you find that your child has not started gaining 125 grams a week or 500 grams a month by the third month, or that its weight is not increasing even after increasing the number of times you nurse, and it is constantly sleeping and nursing less often or in lesser amounts, it is not active or it has little urine and few bowel movements, there may be something wrong with the child, and it should be seen by a pediatrician.

On the mother's side, women who were heavy smokers, used oral contraceptives, or have problems with their thyroids often have problems with their milk production. In addition, mothers who have lost a life-threatening amount of blood during childbirth and have received blood transfusions often can produce only small amounts of breast milk until their overall condition improves, but if a mother only has a slight anemia, there is generally no difference in the amount of the content of breast milk compared to other women.

There are some cases however, in which the placenta has not been fully flushed from the body and some remains in the uterus, which has led to a lowered breast production.

In addition, some mothers who have had plastic surgery on their breasts may have done damage to the nerves or mammary ducts. In some cases, no matter how hard the baby suckles on the breast, the signal is not transferred and the breast milk is not produced. However, it is impossible to tell whether or not this damage has occurred

until one nurses one's child, so you should try nursing as much as possible in the beginning.

What about the case in which a mother has a special disease or condition? There are some cases in which a mother is on medication, or the sickness itself causes the breast milk to be released more slowly, but nearly all mothers can still nurse their babies. Please discuss these issues with your physician. There are even many women who have had mastectomies that have raised their children on breast milk.

#### 7-6 Returning to Nursing

For those of you who want to nurse your children but have found yourself giving them mostly formula, or mixing nursing with giving formula more often than you intended and want to return to nursing, don't give up. Try to get back to nursing again. For those mothers whose babies are able to latch onto their breasts, it is simply a matter of nursing them frequently. By doing this, you will begin to produce more and more delicious breast milk, and your baby will begin to prefer this over formula. If you still must feed them formula, be sure to nurse them first, and only give them a small amount of formula that they will be able to nurse again in two and a half hours or less. Be sure to nurse your child at least 8 to 10 times a day. Once you are able to nurse your child a sufficient amount, slowly reduce the amount and number of times you give it formula, keeping track of the amount of urine excreted all the while.

For mothers whose babies who have become too accustomed to the bottle and are no longer able to latch onto the nipple, it is important to both express milk and have the baby practice latching on and nursing at least 8 times a day in order to keep up the production of fresh breast milk. At the same time, mothers should have these babies practice drinking formula from a cup rather than the bottle to which they have become too accustomed in order to get them to change their way of latching on. Once they have accomplished this, you can gradually reduce the amount of formula the baby drinks and nurse more frequently.

During this time, going to Oketani Workshops can be very beneficial, not only because you can receive expert advice, but also because there are many other mothers who have experienced similar problems and can help you work through them.

#### 7-7 For Babies with 'Tongue-Tied Syndrome'

One cause of a mother's lack of breast milk production is the inability of the child to latch on correctly. Should you have chapped or cracked nipples that don't heal, if you have continual recurrences of mastitis or the baby never seems to gain any weight no matter how often you nurse, look carefully inside the mouth. You will notice that there is a tendon or flap of skin which connects the underside of the tongue to the lower jaw. This is called the 'lingual frenulum'.

If the baby's tongue protrudes beyond the lower lips, they are capable of nursing correctly. But if their tongue is held back into a heart-like shape or cannot protrude beyond the gums, the baby often cannot nurse correctly. This condition is called 'tongue-tied syndrome'. In this case the lingual frenulum connects the tongue all the way to the tip, or it is too short and the tongue cannot reach out to wrap around the nipple well enough to nurse.

Nearly all cases of 'Tongue-Tied Syndrome' clear up as the child grows. Receiving Oketani Style massages, and following the directions in "Correct Ways to Hold and Nurse Your Child" (p.??) are also helpful. Should neither of these prove helpful and it seems too difficult to nurse your child, seek the professional help of an otologist, an oral surgeon or a pediatrician.

#### 8 When to Wean (断乳のころ)

Since birth, your baby has enjoyed spending time close to its mother, being held in your arms and nursing frequently. During this time, the baby has grown larger and developed a sense of complete trust and a feeling of safety in its mother, who takes care of all its needs and wants. In addition, while receiving love from its mother through her touch and voice, it has learned the basic human traits of loving and trusting others and has begun controlling its movements. The relationship of trust between a mother and her child becomes the basis for the child's ability to trust others and its ability to feel close to others

One mother said the following about deciding to wean her child, 'I absolutely loved nursing my child. I felt true happiness when I nursed. But at about 18 months, my child was able to speak quite well and suddenly became much stronger and more independent. I felt like it might be time to wean it, but I didn't do it at that time. When my baby fell or something happened to upset it or it felt cranky, it would try to tell me

what happened or what it needed with words or body language, but I always just pulled it close and nursed it. Every problem seemed to be easily and quickly solved by nursing. But by the time my child reached the age of two, I began to wonder if my nursing the baby was delaying its independence, and thus I finally weaned it. Had I stopped nursing earlier, I would probably have listened to my child much more. I should have weaned my child at 18 months, when I first felt my child might be ready for it.'

This comment suggests several things. First, it indicates that the weaning method prescribed by the Oketani Method is not one in which you are unilaterally denying the child the ability to nurse, but a process in which, at the appropriate time, you are changing the child's perception of the breast from that of being a single tool there for their purpose into two separate objects. Once the child can stand upright and walk, it has become a complete human being, and after being weaned, will be able to make the effort to understand and make itself understood to other human beings through the communication tool unique to humans – words.

Through nursing, a mother and child develop a deep bond. This bond remains in the child as a feeling of complete trust. It is because this bond was developed through nursing one's child that one can wean it completely and suddenly, and enable the child to go on to the next step in its development.

Weaning one's child is similar to giving its back a push out of the nest. It is a natural process, like a piece of fully ripened fruit falling from the tree. Thus, it is not something which is done at a predetermined age. It is important that both mother and child should nurse to their full satisfaction, and both should be fully ready to "graduate" when the time comes.

One mother weaned her child on its first birthday. Her milk production was low and she had to nurse the baby every hour during the night. She said, "I don't feel it's too early to wean my child. I have been nursing my child twenty, sometimes thirty times a day, so this child has had the same amount of nursing that an average child has had in three or four years. I think it has nursed enough by now." After drawing faces on her breasts and showing them to her child, it stopped nursing immediately and completely. One would never have thought that it had been nursing twenty times a day up until the day before.

After weaning one's baby, a mother will probably feel lonely and left out for awhile. They will begin to miss that period of becoming exhausted at her child's crying every day,

and may even attempt to try to nurse once more. That feeling of loneliness is important, because not only does the child begin to gain independence from the mother through weaning, but the mother is also learning to 'let go' of the child as well. It is just as important that the mother recognize her child's newly found independence as it is that the child actually gain it. This is an important step in development for the mother as well.