



Government of the Republic of Trinidad and Tobago
Ministry of Health



Breastfeeding & Beyond:

A Guide to Infant and Child Feeding

Copyright: Ministry of Health, Government of Trinidad and Tobago
September 2021

This book was produced by the National Breastfeeding Coordinating Unit, Directorate of Women's Health, Ministry of Health of Trinidad and Tobago, in collaboration with the Pan American Health Organization/World Health Organization.

Copyright © 2021 by the Ministry of Health of the Government of the Republic of Trinidad and Tobago. All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means without the prior written permission of the Government of the Republic of Trinidad and Tobago.

Message from the Honourable Minister of Health, Terrence Deyalsingh

“Breastfeeding is one of the most effective – and cost effective – investments nations can make in the health of their youngest members and the future health of their economies and societies. By failing to invest in breastfeeding, we are failing mothers and their babies – and paying a double price: in lost lives and in lost opportunity.”

UNICEF Executive Director Anthony Lake.



Terrence Deyalsingh,
Honourable Minister of Health,
Trinidad and Tobago

The Government of the Republic of Trinidad and Tobago is committed to protecting, promoting, and supporting breastfeeding. As a signatory to the Innocenti Declarations of 1990, it is the role of the Government to protect women’s and children’s health and nutrition by developing appropriate policies and programmes that support breastfeeding.

At the Ministry of Health, the National Breastfeeding Coordinating Unit (NBCU), a sub-unit of the Directorate of Women’s Health, has been working to enact change that will enable women to make the best decisions about feeding their children. In 2020, the NBCU launched the National Breastfeeding Policy, and the development of this document will support the implementation of this Policy.

The document is a result of continued collaboration with national, sub-regional, and international stakeholders. It will ensure that standardised and evidence-based breastfeeding information is disseminated to mothers so that they are empowered to make informed decisions on feeding their children, thereby improving the health of women of Trinidad and Tobago and the population.

Both the United Nations Children’s Fund (UNICEF) and the World Health Organization (WHO) have reiterated the critical role breastfeeding plays towards achieving the United Nations Sustainable Development Goals (SDGs). Breastfeeding improves nutrition, reduces child mortality, decreases the risk of noncommunicable diseases for both infants and mothers, and supports cognitive development and education. Improving these outcomes can therefore support the achievement of other SDGs such as ending poverty, promoting economic growth, and reducing inequalities.

The Government has identified the creation of a supportive environment for breastfeeding throughout the entire experience as a national priority. Creating this supportive environment from the first hour of a newborn’s life is a stepping stone towards a healthier, more prosperous, and sustainable Trinidad and Tobago.

Message from the Director, Directorate of Women's Health, Dr. Adesh Sirjusingh



Dr. Adesh Sirjusingh,
Director,
Directorate of Women's Health

Established in 2017, the Directorate of Women's Health's (DoWH) role is to identify shortcomings in the systems, processes, and procedures of maternal, perinatal, and neonatal health, and to develop and implement policies to address the shortcomings.

Over the last four years, the DoWH has made significant progress in improving the quality of both maternal and neonatal care, which includes the reduction of maternal and neonatal mortality and achieving the targets set by the United Nations 2030 Sustainable Development Agenda.

The UNICEF and the World Health Organization have reinforced that breastfeeding promotes better health for both mothers and children. Breastfeeding aids in birth spacing and decreases the risk of mothers developing breast cancer, ovarian cancer, type 2 diabetes, and heart disease. Increased breastfeeding could avert 20,000 deaths due to breast cancer annually.

Recognising the important role breastfeeding plays in reducing maternal, neonatal, and child mortality, the National Breastfeeding Coordinating Unit (NBCU) was created to improve breastfeeding practices in Trinidad and Tobago. The work of the NBCU is critical as data from the 2011 Multiple Indicator Cluster Survey indicated that only 21.5% of babies aged 0-5 months in Trinidad and Tobago were exclusively breastfed.

This document is therefore intended to be an educational tool to assist mothers and families with making informed decisions about their babies' nutrition by providing updated scientific information on breastfeeding. This is one of many interventions to achieve an exclusive breastfeeding rate of at least 50% in the first six months by 2025. Achieving this goal will be a practical step towards protecting the survival and health of babies and women, thereby sustaining Trinidad and Tobago's progress in reducing maternal and neonatal mortality.

Message from the Manager, National Breastfeeding Coordinating Unit Mrs. Debra Thomas




Mrs. Debra Thomas,
Manager,
National Breastfeeding Coordinating Unit

Breastfeeding is a non-polluting, non-resource intensive, sustainable, and natural source of nutrition and sustenance. Studies have shown that exclusive breastfeeding for six months and continuing up to two years or beyond is beneficial to both mother and baby. It reduces infant mortality due to common childhood illnesses and offers the mother protection against non-communicable diseases.

In accordance with the World Health Organization (WHO) and the United Nations International Children Fund (UNICEF) Innocenti Declaration of 1991 and 2005, Member States were encouraged to implement the revised Baby Friendly Hospital Initiative (BFHI). In compliance with these recommendations, the Ministry of Health established the National Breastfeeding Coordinating Unit (NBCU) in 2018. This Unit took the lead in intersectoral collaboration to implement sustainable breastfeeding initiatives throughout the country. The first National Breastfeeding Policy was launched in 2020 and all Regional Health Authorities were encouraged to adapt the Ten Steps to Successful Breastfeeding, mother-friendly care, and care for HIV infected mothers.

The WHO and UNICEF Global Action Plan advised that countries increase their Exclusive Breastfeeding Rates to 40% by 2022, 50% by 2025, and 70% by 2030. The NBCU continues to monitor and evaluate national breastfeeding activities. This information will be used for research, planning, improvement of mother-friendly care and enhancement of community breastfeeding support.

The education of mothers and other stakeholders is paramount to increasing breastfeeding rates. The NBCU has further bolstered the breastfeeding environment by publishing and providing updated breastfeeding educational material. These include brochures, flyers and posters. This activity is further strengthened by an ongoing Public Education Campaign that channels key messages through television, radio and social media platforms.



This document provides relevant, scientifically sound information critical to encouraging mothers to make the best nutritional choice for their infants. It also supports advocacy for full compliance with the International Code for the Marketing of Breast Milk Substitutes by all.

The NBCU hopes that this document will be used as intended - to offer a standardised teaching tool for pregnant women and their families, mothers, health care professionals, civil society groups, medical institutions and the private sector. Though the restrictions imposed because of the COVID-19 pandemic have created several challenges for sustaining breastfeeding, we must continue to support mothers and work towards elevating the breastfeeding rates.

Acknowledgements

The successful completion of this document was made possible by the hard work and support from the following:

- The National Breastfeeding Coordinating Unit, Directorate of Women’s Health, for the creation of the document;
- Health Education Division, Ministry of Health, for pre-testing and post-testing of the materials;
- Nutrition and Metabolic Department, Ministry of Health, for providing the information for complimentary feeding;
- Corporate Communications Unit, Ministry of Health, for technical support;
- The Regional Health Authorities for providing the photos within the document;
- Public Health Nutritionist from the North Central Regional Health Authority, for expert advice;
- The Pan American Health Organization/World Health Organization (PAHO/WHO), for technical support.

Executive Summary

Globally, the lives of over 820,000 children under 5 years could be saved every year if all children 0-23 months were optimally breastfed.¹ Breast-milk contains the perfect blend of nutrients that infants need.

In Trinidad and Tobago, the Baby Friendly Hospital Initiative is being implemented as a strategy to protect, promote, and support breastfeeding at all maternal and child health care units in the public health sector. The Ten Steps to Successful Breastfeeding, as explained later in this book, provides the guidance for health care professionals to prepare pregnant women and their families to make informed nutritional choices.

This book was created to equip mothers with the necessary tools to guide them through the process from exclusive breastfeeding to complementary feeding. Health care professionals will also benefit from this tool as it covers the various challenges that confront mothers who are breastfeeding. Each chapter contains information that is relevant, up-to-date, and evidence-based. The images used are an expression of who we are as a Caribbean people. Foods from the Caribbean's six food groups are highlighted also with a few recipes. This allows the users to experience the economical benefits of breastfeeding and preparing healthy meals at home.

The book educates mothers on what to expect during their visits to the antenatal clinics, labour, and in the postnatal period, as well as on breastfeeding support after discharge. Common areas of concern are addressed and easy-to-follow illustrations are used. Additionally, to assist the visually impaired, image descriptions are included in braille.

The National Breastfeeding Coordinating Unit of the Directorate of Women's Health, Ministry of Health, Trinidad and Tobago, is pleased to have collaborated with the Pan American Health Organization in the production of our first breastfeeding book.

1. World Health Organization. Infant and young child feeding. 2021. Available from: <https://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding>.

Table of Contents

Message from the Honourable Minister of Health, Terrence Deyalsingh.....	iii
Message from the Director, Directorate of Women's Health, Dr. Adesh Sirjusingh..	iv
Message from the Manager, National Breastfeeding Coordinating Unit, Mrs. Debra Thomas	v
Acknowledgements	vii
Executive Summary	viii

SECTION 1: Baby-Friendly Hospital Initiative 1

What is the Baby-friendly Hospital Initiative (BFHI)?	2
What is the Ten Steps to Successful Breastfeeding Framework?	2
Mother-Friendly Care.....	8
Human Immunodeficiency Virus (HIV) and Infant Feeding	8

SECTION 2: Breastfeeding 9

Why is Breast-milk Important?	10
How Soon Can I Begin to Breastfeed?	10
What Happens Right After I Deliver My Baby?	10
Kangaroo Care	12
What is kangaroo care?	12
Why is it called kangaroo care?	12
Are there benefits to kangaroo care?	13
Who is eligible for kangaroo care?	13
What are the Benefits of Breastfeeding to Babies?	14
Benefits of Breastfeeding to Mothers.....	16
Different Types of Breast-milk.....	18
What is breast-milk made out of?	18
Is it normal for breast-milk to be different in colour?	18
When will I start making milk?	19
Will I produce enough milk for my baby?	19
What is Exclusive Breastfeeding?	20
How long should I exclusively breastfeed?	20
What if the baby needs medication?	20
Alternative Feeding Methods – Cup Feeding	21
What is cup feeding?	21
What are the reasons for cup feeding?	21

How to cup feed a baby?	22
What are the advantages of cup feeding?	23
How can I get more information on cup feeding?	23
Sterilizing Feeding Equipment	24
How to sterilize feeding equipment	24
What to do after sterilization?	24
A Comparison Between Breast-Milk and Formula	25
Breast and Nipple Care	27
How to prepare the breast for breastfeeding?	27
How can I tell if my nipple is flat or inverted?	27
Treatment for flat or inverted nipples.....	27
Sore or cracked nipples.....	28
What are engorged breasts?	28
Blocked breast-milk ducts	29
What is mastitis?	29
Breastfeeding Positions.....	31
Which breastfeeding position is the best?	31
What if I have trouble with finding the right position for me?	33
Getting Your Baby to Latch	34
How do I get my baby to breastfeed?	34
How to know the signs of a good latch?	34
I have difficulties getting my baby to latch. What should I do?	36
Burping or Winding Your Baby	37
When should I burp my baby?	37
Which position is best to burp my baby?	37
What if my baby won't burp?	38
How to Safely Express Breast-Milk	39
What is expressing milk?	39
What are the benefits?	39
How do I express breast-milk?	39
Breast pumps.....	42
How to Safely Store Breast-Milk	43
How can I store breast-milk after expressing?	43
Should I fill the breast-milk storage bag?	44
How much milk should I store at a time?	44
What is milk-banking?	44
How do I defrost frozen breast-milk?	44
How do I warm breast-milk that was stored in the refrigerator?	44

What do I do with leftover, defrosted breast-milk after I feed my baby?	45
Can I reuse breast-milk storage bags?	45
Can I mix breast-milk with formula?	45
Breastfeeding Support	46
Contact Information for Breastfeeding Support	47

SECTION 3: Introduction to Solids 48

Introduction to Solids	49
Complementary Feeding	49
Safe Preparation and Storage of Complementary Foods.....	50
Frequency and Consistency of Meals	50
Feeding Recommendations from Infancy and Onward	51
Do I Need Special Equipment or Appliances to Prepare My Child’s Meals?	56
How Can I Get an Idea of Local Recipes for My Infant?.....	57
Getting the Texture Right.....	58
Balanced Diet for Baby.....	59
Using the Multimix	61
Portions, Portions, Portions!	62
Portion Guide	62

SECTION 4: Recipes 64

Baby’s Cornmeal Porridge	65
Baby’s First Fruit Puree	66
Baby’s Rice Porridge	67
Chicken Puree with Sweet Potato, Plantain & Carrot	68
Fish Puree with Green Fig and Green Peas	69
Fish Puree with Sweet Potato and Callaloo	70

Appendix 71



SECTION 1:

Baby-Friendly Hospital Initiative

What is the Baby-friendly Hospital Initiative (BFHI)?

The Baby-friendly Hospital Initiative (BFHI) was introduced by the World Health Organization (WHO) and the United Nations Children’s Emergency Fund (UNICEF) in 1991. This initiative is an international attempt to put into action certain practices that protect, promote and support breastfeeding.

The BFHI is guided by the Ten Steps to Successful Breastfeeding.

What is the Ten Steps to Successful Breastfeeding Framework?

The Ten Steps to Successful Breastfeeding is an extensive framework that guides the Baby Friendly Hospital Initiative. The steps were created by a team of international experts and consist of evidence-based practices that have been shown to increase the initiation and duration of breastfeeding.

The Ten Steps to Successful Breastfeeding

Step 1: Hospital Policies

Hospitals support mothers to breastfeed by:

- Having a breastfeeding policy that promotes, protects and supports breastfeeding within all facilities that provide maternal and newborn care or having a breastfeeding policy that is routinely communicated to staff and clients.
- Not promoting infant formula, bottles or teats
- Making breastfeeding care standard practice
- Keeping track of support for breastfeeding



IMAGE DESCRIPTION: A woman in a red suit is seated at her desk working on breastfeeding policies.

Step 2: Staff Competency

Hospitals support mothers to breastfeed by:

- Training staff on supporting mothers to breastfeed
- Assessing health workers' knowledge and skills



IMAGE DESCRIPTION: A Baby Friendly Hospital Initiative trainer conducts a training session with three health care workers about breastfeeding.

Step 3: Antenatal Care

Hospitals support mothers to breastfeed by:

- Discussing the importance of breastfeeding for babies and mothers
- Preparing women in how to feed their baby



IMAGE DESCRIPTION: A nurse dressed in white holding a doll demonstrates to a pregnant woman how to position her baby.

Step 4: Care Right After Birth

Hospitals support mothers to breastfeed by:

- Encouraging skin-to-skin contact between mother and baby soon after birth
- Helping mothers to put their baby to the breast right away



IMAGE DESCRIPTION: A midwife dressed in white smiles with a mother as she assists her and her baby to maintain skin to skin contact after delivery.

Step 5: Support Mothers With Breastfeeding

Hospitals support mothers to breastfeed by:

- Checking positioning, attachment and suckling
- Giving practical breastfeeding support
- Helping mothers with common breastfeeding problems



IMAGE DESCRIPTION: A midwife is wearing a MamaBreast and is demonstrating how to express breastmilk to a mother sitting with her baby in her lap.

Step 6: Supplementing

Hospitals support mothers to breastfeed by:

- Giving only breast-milk unless there are medical reasons
- Prioritizing donor human milk when a supplement is needed
- Helping mothers who want to formula feed to do so safely



IMAGE DESCRIPTION: A mother is seated in an armchair holding her infant in an upright position cup feeding. The mother is assisted by a female health care worker, standing next to her.

Step 7: Rooming-In

Hospitals support mothers to breastfeed by:

- Letting mothers and babies stay together day and night
- Making sure that mothers of sick babies can stay near their baby



IMAGE DESCRIPTION: A mother lying in a hospital bed is smiling and looking down lovingly at her baby who is lying in a cot next to her. The mother's right hand is touching her baby who is asleep.

Mothers are encouraged to observe their babies for feeding cues which are:

- Fists moving to mouth
- Head turning to look for the breast
- Becoming more alert and active
- Sucking on hands or lip smacking
- Opening and closing mouth

Step 8: Responsive Feeding

Hospitals support mothers to breastfeed by:

- Helping mothers know when their baby is hungry
- Not limiting breastfeeding time



IMAGE DESCRIPTION: Male midwife counsels about feeding cues, mother is sitting with her baby in her arms, smiling happily.

Step 9: Bottles, Teats and Pacifiers

Hospitals support mothers to breastfeed by:

- Counsel mothers on the use and risks of feeding bottles, teats and pacifiers



IMAGE DESCRIPTION: A mother and her baby receives support from a Breastfeeding Counsellor during her stay at hospital. The mother is sitting up in bed with the baby in her arms conversing with the Counsellor.

Step 10: Discharge

Hospitals support mothers to breastfeed by:

- Referring mothers to community resources for breastfeeding support
- Working with communities to improve breastfeeding support services



IMAGE DESCRIPTION: Three members of the health care (two female nurses and a male doctor) team prepare the mother for discharge from hospital. The mother is sitting comfortably listening with her baby in her arms.

Mother-Friendly Care

Mother-friendly care is an important step to note within the BFHI. It gives the mother some choice in the process of labour and delivery. It builds the mothers' confidence from early which can be transferred/translated into the whole act of breastfeeding.

Every mother is different and mother-friendly care empowers the mother to control her birth plans in a supportive environment with well trained, professional and accommodating staff. It focuses on:

- Allowing mothers a support partner of their choice during labour and delivery
- Allowing mothers to eat and drink light foods if desired
- Encouraging mothers to walk and move about during labour
- Allowing mothers to assume positions of their choice to give birth, unless a specific position is necessary and explaining the reason to the mother
- Caring for mothers in a safe manner without the use of instruments, unless necessary, and explaining the reason to the mother

Human Immunodeficiency Virus (HIV) and Infant Feeding

An HIV infected mother can pass the infection to her baby during pregnancy, during birth and through breastfeeding. By treatment with antiretrovirals (ARVs) and other clinical interventions and practices, this risk can be significantly reduced. The Ministry of Health recommends that if an HIV infected mother chooses to breastfeed, they are required to be under close surveillance, be fully compliant with the use of the approved ARVs during breastfeeding and follow all recommendations by their local health care provider, each case is individualized. This concurs with the advice from the WHO.



SECTION 2: Breastfeeding

Why is Breast-milk Important?

Breast-milk provides the ideal nutrition for babies and infants. It contains a perfect mix of nutrients needed for baby's growth. In addition to this, it contains antibodies which help your baby fight off viruses and bacteria.



IMAGE DESCRIPTION: A mother is bonding with her baby while breastfeeding, the baby is latched on to her breast feeding quietly.

How Soon Can I Begin to Breastfeed?

Ideally, if all is well with the baby and mummy, breastfeeding can begin within the first hour of the baby's birth.

Babies are usually alert right after birth, and will naturally seek the breast if left uninterrupted in skin-to-skin contact. Skin-to-skin contact means that your naked baby is lying on your naked chest, in other words, your baby's skin is touching your skin.

What Happens Right After I Deliver My Baby?

At all public hospitals, care right after birth is a priority. Health care professionals will encourage immediate skin-to-skin contact between mummy and baby and are ready to assist mothers to breastfeed.

Skin-to-Skin Contact

When the baby is born, mummies will be encouraged to have immediate skin-to-skin contact with their baby for one hour or more as long as there are no urgent medical needs.

The baby is dried and placed on the mummy's bare chest. Both of them are covered to keep warm for at least an hour or until the first feed.

Skin-to-skin contact helps the baby to feel safe and secure. During skin-to-skin contact, the hormone oxytocin is released. This helps mummy to naturally release breast-milk and helps the baby's brain to grow and develop.

Skin-to-skin contact also encourages the baby to look for the breast in order to feed. This process is called "the crawl".



IMAGE DESCRIPTION: Baby is bare skin and is lying on mother's bare chest to allow the crawl to take place and to initiate baby's first feed.

"The Crawl"

"The crawl" or "breast crawl" describes what happens when a newborn is placed on their birth mother's stomach or chest immediately after birth and is given time to find their mother's breast to feed on their own.

The baby will use their stepping reflexes to push against mummy's stomach and crawl toward the breast.

When they reach, they will grasp or lick the area until they find the nipple and begin sucking.



IMAGE DESCRIPTION: A newborn baby latches on to his mother's breast and feeds quietly.

Kangaroo Care

What is kangaroo care?

Kangaroo care is a method of holding a baby to your chest and this allows for “skin-to-skin” contact between you and the baby. As mentioned in the previous section, skin-to-skin contact is where the baby is placed skin to skin against their mother or father’s chest immediately after birth and as much as possible for an extended period of time over the next few weeks. For this method, the infant is placed in a prone and upright position; usually between the breasts with no clothing separating them. The infant is positioned with flexed arms and legs and head turned sideways. This form of care is especially used when the newborn has a low birth weight or is premature.

Why is it called kangaroo care?

The method was developed in Colombia in 1983 as an alternative to incubator care. It was initially defined by the World Health Organization (2003) as “the care of preterm infants carried skin-to-skin with the mother.” Now, studies have shown that this method can benefit sick and low birthweight babies by improving their chances of survival.

The key features of Kangaroo care involve early, prolonged skin-to-skin contact between mother and baby and exclusive breastfeeding. These are initiated at the hospital and continued at home. This form of care provides preterm and small babies the opportunity to be discharged early because kangaroo care is effective in providing the infant’s need for warmth, establishing and maintaining exclusive breastfeeding, protection from infection, stimulation, safety and love.

Kangaroo was referenced in the term due to the fact that they are a type of marsupial. Marsupials are mammals that carry their young in a pouch. The pouch provides warmth, protection, nutrition and skin-to-skin contact.



IMAGE DESCRIPTION: Mother is looking down at her baby held securely in a kangaroo pouch, baby is upright in a prone position and is smiling.



IMAGE DESCRIPTION: A Mother kangaroo is in a field on a bright sunny day. She is carrying her joey in her pouch.

Are there benefits to kangaroo care?

Benefits to kangaroo care for infants:

- Helps baby to adjust to new surroundings
- Helps to calm their breathing
- Keeps them warm and regulates their temperature
- Helps their brain to develop and for them to grow and increase their weight
- Helps to increase their immunity
- Helps to maintain their blood sugar levels
- Helps to minimize stress and separation anxiety in a newborn baby
- Increases time in quiet but alert state
- Increases time in deep sleep state
- Provides comfort which leads to less crying

There are also many benefits to kangaroo care for mothers:

- Helps with parent-child bonding
- Helps to initiate breastfeeding and encourages the baby's instinct to feed
- Increases exclusive breastfeeding rates
- Helps to stimulate the mother's milk supply
- Passes the protection of the mother's skin bacteria to the baby
- Reduces stress
- Promotes family-centered care
- Quickens readiness to take home baby

Who is eligible for kangaroo care?

All parents who are able to safely provide care-giving and babies who are stable enough to tolerate handling are eligible for kangaroo care.

Once the mother and baby are well enough, the baby will be dried and placed naked (diaper only) on the mother's or father's bare chest and covered with a blanket. The baby's head would be turned to one side and skin-to-skin contact would be encouraged for at least one hour.

Kangaroo care should be discontinued if the baby remains unsettled or is in a state of distress. It should also be discontinued at the parent's request. .

What are the Benefits of Breastfeeding to Babies?



IMAGE DESCRIPTION: A newborn baby dressed in a white vest and cap is latched on while breastfeeding on his mom's breast.

Breast-milk is free!

Artificial feeding is costly, however, breast-milk is free of charge.

It provides ideal nutrition

Breast-milk contains everything the baby needs for the first six months of life. During the first days after birth, the breasts usually produce a thick and yellowish fluid called colostrum. This fluid is high in protein, low in sugar and is loaded with beneficial compounds.

Colostrum helps the development of the newborn's digestive tract. Breast-milk also changes in composition to suit the needs of the baby. Since breast-milk requires no preparation, infants who breastfeed have a fresh food source that is clean and served at the right temperature.

Breast-milk contains important antibodies

Colostrum provides the infant with high levels of antibodies that protect your baby and even make vaccines more effective. When the mother is exposed to viruses or bacteria, she produces antibodies which are then secreted into the breast-milk and passed to the baby during feeding. Babies who breastfeed exclusively for six months are healthier.

Breastfeeding may reduce disease risk

It may reduce your baby's risk of many illnesses and diseases including:

- Middle ear infections
- Respiratory tract infections
- Colds and infections
- High blood pressure
- Gut infections
- Sudden Infant Death Syndrome (SIDS)
- Diabetes mellitus
- Childhood Leukemia
- Eczema
- Allergies

Breast-milk promotes healthy weight

Breastfeeding for longer periods reduces the risk of infants becoming obese later on in life. Breast-milk contains an ingredient that regulates appetite and fat storage. Therefore, infants who breastfeed develop healthy eating patterns.

Breastfeeding may make children smarter

Some studies suggest that there may be a difference in brain development between breastfed and formula-fed babies. Studies also indicated that breastfed babies have higher intelligence scores and are less likely to develop problems with behaviour and learning as they grow older. Breastfeeding also promotes healthy bonding with mothers. Bonding is the most powerful form of human contact.

Benefits of Breastfeeding to Mothers



IMAGE DESCRIPTION: Mother looks down lovingly at the newborn infant while breastfeeding.

Breastfeeding has a host of benefits to mothers. These include physiological, psychological, social and emotional benefits.

What are some of the benefits of breastfeeding to the mother?

1. Burns extra calories. Breastfeeding mothers lose weight faster than non-breastfeeding mothers.
2. Reduces anaemia as it helps post-delivery blood loss to reduce faster.
3. Helps the uterus (womb) return to its normal size faster.
4. It is convenient and it saves time, money and eases stress.
5. Lowers the risk of breast and ovarian cancer, especially if breastfeeding takes place for more than 12 months.
6. There is a reduced risk of developing other health issues such as:
 - a. Type 2 diabetes
 - b. Arthritis
 - c. Heart disease

- d. High blood pressure
 - e. Obesity
7. Mothers who breastfeed recover from childbirth more quickly and easily.
 8. Exclusive breastfeeding for the first 6 months after birth can delay a pregnancy. This is called the lactation amenorrhea method (LAM).
 9. It lowers the risk of postpartum depression. Breastfeeding produces the hormone “prolactin” that reduces stress and promotes positive emotions.
 10. Breastfeeding is one parenting activity that only the mother can do for her baby, which creates a unique and powerful physical and emotional connection. This often sets the health and psychological foundations for years to come.
 11. Family support for mother during breastfeeding can develop stronger family bonds.
 12. Mothers are able to read their infant’s cues which is important in shaping the behaviour of the infant.
 13. Healthier babies result in mothers taking less time away from work and spending less money on medical visits.
 14. There is no additional cost to purchase artificial feeds or related items and no preparation outside of the mother’s body.
 15. Travelling with a breastfed baby is much easier.
 16. As an added bonus, breastfeeding gives you a valid reason to sit down, put your feet up and relax with your precious newborn.

Different Types of Breast-milk

What is breast-milk made out of?

Breast-milk is mainly made up of water, protein, carbohydrates, fats, antibodies, vitamins, minerals, hormones, immune cells and healthy bacteria.

It is the ideal, complete meal of choice for the first six months of your baby's life. .

Is it normal for breast-milk to be different in colour?

Yes. The content of breast-milk changes to suit the development of your baby, which includes the colour as well. There are essentially three forms of breast-milk:

1) Colostrum

Colostrum is thick and yellowish in colour and is produced in the first few days after your baby's birth. It is very concentrated and is rich in nutrients and antibodies. It is the perfect food for newborn babies as it helps them to fight off infections and to grow. It is known as "liquid gold" because of its nourishing and protective capabilities. It is produced in very small amounts.



IMAGE DESCRIPTION: A breast-milk storage bag containing thick colostrum that was expressed from the breast.

2) Foremilk

Foremilk is the first milk drawn during a feed. It is watery in consistency but is rich in vitamins, minerals and protein. It has a lower fat content and satisfies the baby's thirst.



IMAGE DESCRIPTION: A breast-milk storage bag containing watery foremilk that was expressed from the breast.

3) Hindmilk

Hindmilk follows foremilk during a feed. It is richer in fat content and is high in calories. It has a thick and creamy consistency. This is important for your baby's health and continued growth.



IMAGE DESCRIPTION: A breast-milk storage bag containing a creamy, thick, rich hindmilk that was expressed from the breast.

When will I start making milk?

Hormones are produced by the body during and after birth, which tells your body to produce milk. Milk supply usually starts at approximately 3-5 days after delivery. After two to three days postpartum, a mother notices that her breasts feel full. This is when her milk supply increases and changes from colostrum. Skin-to-skin contact with your baby helps to stimulate your milk flow and your baby's natural feeding responses.

Will I produce enough milk for my baby?

In most women, your body is able to produce enough breast-milk at every stage during your breastfeeding journey. Small breasts and large breasts both contain about the same amount of glandular tissue, so they can both make plenty of milk. It is the fat and other tissue that give the breast its shape, and make most of the difference between large and small breasts. The size of the breast does not determine its ability to produce milk.

Occasionally, some women may find it difficult to produce breast-milk. For guidance, feel free to contact your Health Care Provider or speak with a Breastfeeding Counsellor at your nearest health facility.

What is Exclusive Breastfeeding?



IMAGE DESCRIPTION: A baby is seen latching on to mom's breast. The baby's hand is on the mother's breast. Mummy's arm supports the baby.

Exclusive breastfeeding is where the infant receives breast-milk only. No other solids or liquids are given, including water.

How long should I exclusively breastfeed?

The World Health Organization recommends exclusive breastfeeding the first six (6) months of life.

What if the baby needs medication?

Vitamins, minerals, supplements and medications are permitted while breastfeeding your baby. If your baby is ill or is in need of supplements, speak with your healthcare professional first before administering medications.

Alternative Feeding Methods – Cup Feeding

What is cup feeding?

Just as the name suggests, cup feeding is a method used to feed the baby using a cup. Any cup with a smooth edge that can hold milk will do. These include a plain cup, a tea cup or any utensil that will allow the easy flow of milk to your baby.

What are the reasons for cup feeding?

Cup feeding is an alternative feeding method used if a baby is having difficulty latching on to the breast. It can be used for babies who are able to swallow but cannot (yet) suckle well enough to feed themselves fully from the breast. It can be used to feed a baby even when separated from the mother. Premature babies can feed at their own pace. Generally, cup feeding is a method of supplementation.



IMAGE DESCRIPTION: A glass of expressed milk is displayed for use in cup feeding.

How to cup feed a baby?

Step 1: Ensure that you wash and dry your hands and that you are using a clean, sterile cup.



IMAGE DESCRIPTION: A pair of hands lathered with soap is over a white sink, under a tap running with water.

Step 2: Wrap the baby with a blanket or muslin cloth to prevent their hands knocking over the cup.



IMAGE DESCRIPTION: A baby is waiting to be wrapped in her blanket in step two of preparing to cup feed.

Step 3: Support the baby in a seated, upright position on your lap.



IMAGE DESCRIPTION: Mother is holding her baby in a sitting position on her lap, her hands supporting the baby's neck and back while positioning the cup for the feeding.

Step 4: Stroke your finger over the baby's lips to encourage mouth opening.

Step 5: Rest the cup gently on the lower lip and angle the cup just enough for the milk to touch the lower lip.

Step 6: Wait for the baby to lap the milk. Do not pour the milk into the baby's mouth.

Step 7: Gently increase the angle of the cup as the milk is swallowed so that milk always remains at the rim.

Step 8: Allow the baby to take short breaks but always keep the cup by the baby's mouth.

Step 9: The baby will stop when enough milk is taken



IMAGE DESCRIPTION: Baby is being fed using a cup, the cup is well placed between the baby's lips.

What are the advantages of cup feeding?

- Cups are easily available, inexpensive and easy to clean
- Baby can take increasing amounts of milk by lapping/slurping the milk
- Useful, short-term alternative to using a bottle and teat as it avoids confusion between the mother's nipple and a bottle's nipple (teat)
- It is a suitable option for premature babies as the baby can feed at their own pace

Please note that the following may occur during cup feeding:

- There can be some spillage, which causes some of the breast-milk to waste
- It is time consuming since it is a slower way to feed the baby
- There is a risk of choking if not done properly
- Long-term cup feeding can reduce the baby's sucking reflex

How can I get more information on cup feeding?

You can speak with a Breastfeeding Counsellor or the Breastfeeding Support Group at your nearest Regional Health Authority or the Breastfeeding Association of Trinidad and Tobago if you require more information on cup feeding. Contact information can be found at the back of this book.

Sterilizing Feeding Equipment

The immune system of a baby (newborns and infants younger than 1 year of age) is not as strong or as developed as an adult's. This means that babies are more likely to get illnesses and infections. Practicing good hygiene when feeding a baby is extremely important. All feeding equipment must be cleaned and sterilized before each feed to reduce the chances of the baby getting ill.

How to sterilize feeding equipment

Sterilization by steam (electric or microwave)

- Read the manufacturer's instructions to note how long you can leave the equipment in the sterilizer before it needs to be sterilized again

Sterilization by boiling

- Be sure to note whether or not the items you want to sterilize are safe to boil
- Boil the items in a large pot or pan of water for at least 10 minutes. Make sure that they all stay under the surface of the water. Ensure that this pot or pan is designated for sterilization purposes

What to do after sterilization?

After sterilization, be sure to:

- Wash and dry your hands before handling sterilized equipment. Sterile tongs are better to use once available.
- Carefully remove the items from the water and allow them to dry on a clean sterile surface;
- Once thoroughly dried, store in a clean/sterile container on a clean, sterilized surface.

A Comparison Between Breast-Milk and Formula

Although WHO recommends exclusive breastfeeding for 6 months and continued breastfeeding for up to 2 years and beyond, each mother/family/caregiver has the right to make an informed decision on how to feed their baby. A summarized comparison between breast-milk and formula follows.

Breast-milk vs Infant Formula	
<p>Breast-milk:</p> <ul style="list-style-type: none"> • Made for human babies • It contains water, fat, proteins, carbohydrates, vitamins, minerals, growth factors, enzymes, factors to support brain and eye development, anti-parasites, anti-allergies, anti-parasites, anti-viruses, hormones, antibodies and other important factors that support your baby's immune system • All-natural and cannot be replicated or reproduce 	<p>Infant Formula:</p> <ul style="list-style-type: none"> • Made from animal and plant-based substances which has been processed to make it suitable for babies • It may contain water, proteins, carbohydrates, fat, vitamins and minerals, soy protein, fish oils, and vegetable oils
Ease of Feeding	
<p>Breast-milk:</p> <ul style="list-style-type: none"> • Offers convenient feeding; which means that you can feed your baby anywhere and at any time • It is always at the right temperature • No preparation or sterilization is needed 	<p>Infant Formula:</p> <ul style="list-style-type: none"> • Not sterile; each feed must be made fresh • Can make baby sick if not mixed or handled properly • Must always be prepared correctly as prescribed by the manufacturer
Baby's Digestion	
<p>Breast-milk:</p> <ul style="list-style-type: none"> • Designed for your baby's developing digestive system: easily digested, easily absorbed 	<p>Infant Formula:</p> <ul style="list-style-type: none"> • Harder to digest so it sits on your baby's stomach longer • Baby is more prone to constipation

<ul style="list-style-type: none"> • It is a natural laxative, which means less constipation, it helps infants to pass their first stool and to control jaundice • Your baby's stool will also be mustard colour, very soft with a tolerable smell 	<ul style="list-style-type: none"> • Your baby's stool will usually be firmer and smellier
--	---

Health Benefits for Babies

<p>Breast-milk:</p> <ul style="list-style-type: none"> • Your baby is less likely to develop infections: gastro, chest, ear, urinary tract infections • It contains antibodies which further protects your baby: offers protection against some childhood cancers, sudden infant death syndrome (SIDS), pneumonia and heart disease 	<p>Infant Formula:</p> <ul style="list-style-type: none"> • It does not provide specific protection for your baby against illnesses • Care must be taken with preparation and storage of formula milk to reduce the risk
--	---

Health Benefits for Moms

<p>Breast-milk/Breastfeeding:</p> <ul style="list-style-type: none"> • Burns up to 500 calories a day • Womb shrinks to pre-pregnancy size quicker • Reduces the risk of developing certain cancers: uterus, ovaries and the breasts • Reduces the risk of developing osteoporosis • Less likely to develop Type II diabetes 	<p>Infant Formula:</p> <ul style="list-style-type: none"> • No benefits to mom
--	--

Obesity

<p>Breast-milk:</p> <ul style="list-style-type: none"> • Babies are less likely to be overweight than those fed on infant formula; stops feeding when full 	<p>Infant Formula:</p> <ul style="list-style-type: none"> • May be the foundation to being overweight • Babies may be encouraged to finish the bottle rather than stopping when full; adding cereal to infant formula and generally not using the product as directed also establishes unhealthy eating patterns
--	---

Breast and Nipple Care

How to prepare the breast for breastfeeding?

It is advisable that pregnant women join antenatal classes to learn more about breast care and breastfeeding.

The use of breast-cream and vigorous washing of the areola (dark part of the breast) is discouraged.

How can I tell if my nipple is flat or inverted?

You can tell if your nipple is flat or inverted by doing a “pinch test”. Gently press the areola (the dark area around the nipple) about one inch behind the nipple. If the nipple does not become erect, it is flat. If the nipple is sunken, it is considered to be inverted.

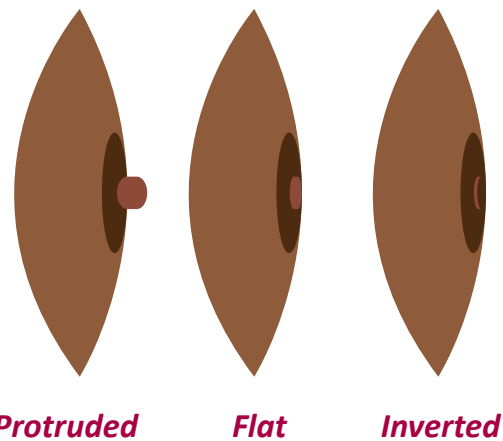


IMAGE DESCRIPTION: An illustration shows the different appearances of nipples when they are protruding, flat or inverted.

Treatment for flat or inverted nipples

Your newborn may have difficulties in latching on to a flat or inverted nipple. The following may assist:

Breast pump or modified syringe – An effective breast pump, or other device that pulls to elongate the nipple, can be used to draw out your nipple just before breastfeeding.

Nipple stimulation before feedings – If you can grasp your nipple, roll it between your thumb and index finger for a minute or two. Afterward, quickly touch it with a moist, cold cloth. This method can help your nipple become erect.

Sore or cracked nipples

Sore or cracked nipples when breastfeeding is usually a sign that your baby is sucking on the nipple and not attached well to the breast. The following may assist:

- You can rub the breast-milk generously on the nipples after feeding and allow it to dry and heal the cracks
- It is important to continue to breastfeed; rest the mother, not the breast
- Your health care provider can help with correct positioning and attachment

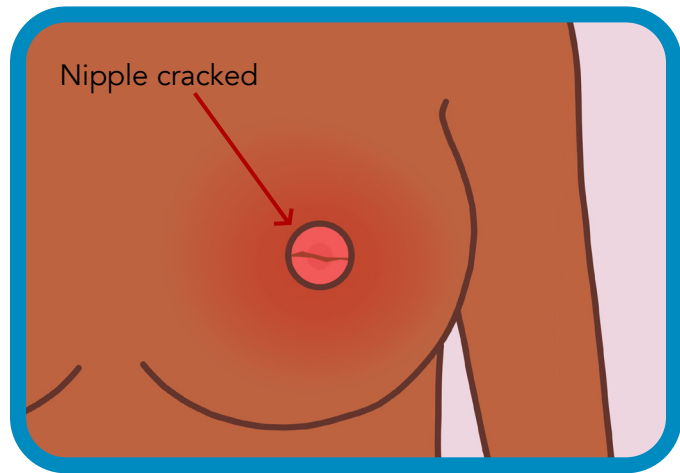


IMAGE DESCRIPTION: Sore, cracked nipples seen on this breast.

What are engorged breasts?

When your breasts become overly full, they may be described as engorged. They may feel tight, hard, and painful. This may be due to your milk coming in and your baby not feeding as often. If your baby is not well attached to the breast, it may be hard for them to feed when your breasts are engorged. Your nipples may become flattened and may be painful. To ease the discomfort, try expressing some milk by hand. Once the breast is soft again, the baby can breastfeed. The aim is to fully empty the breast.

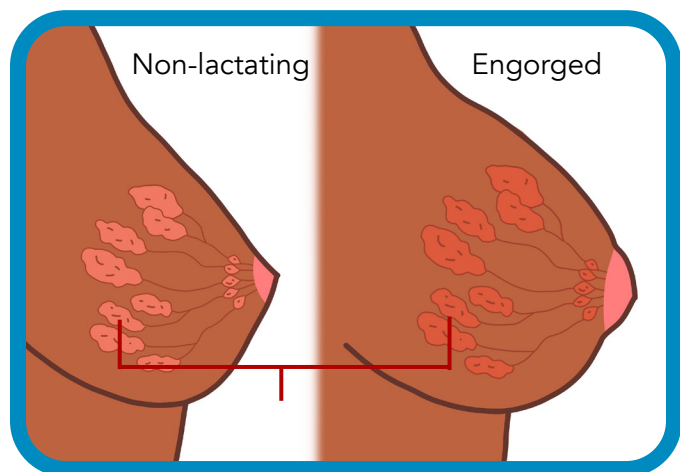


IMAGE DESCRIPTION: A lactating and a non-lactating breast are used to describe engorgement of the breast. The difference in the size of the milk glands and the size of both breasts is well illustrated.

Blocked breast-milk ducts

Your breasts have milk-making glands which are divided into segments. Narrow tubes, called ducts, carry milk from the segments to your nipple. If one of the segments isn't draining properly during a feed, a blocked duct can form. You may feel a small, tender lump on your breast. This may be relieved through breastfeeding and by massaging the lump.

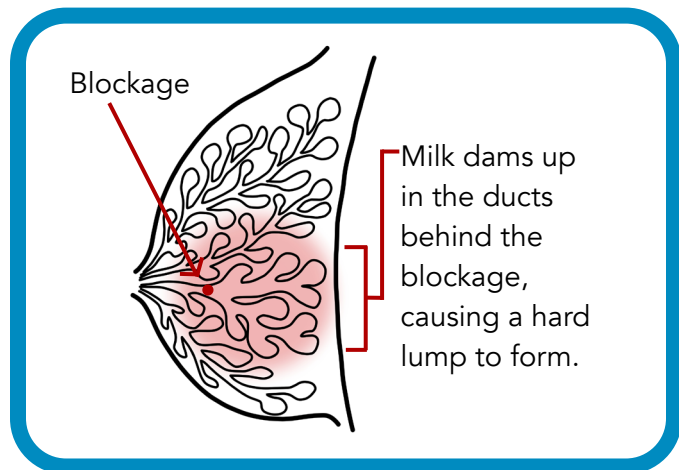


IMAGE DESCRIPTION: An illustration of a breast with blocked nipples depicts the breast-milk dammed causing a lump to form, in this image a coloured area is used to identify the lump formed in the breast.

What is mastitis?

When a blocked milk duct is not relieved, your breast may become inflamed. Your breast may be painful and can make you feel unwell

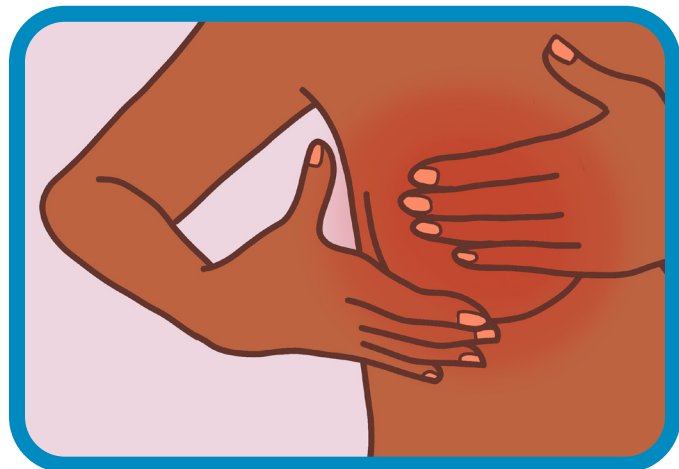


IMAGE DESCRIPTION: Two hands are used to highlight that the entire breast is inflamed and painful even to touch.

If you have mastitis, you will probably have at least 2 of these symptoms:

- A breast that feels hot and tender
- A patch of skin that is painful to touch
- Flu-like symptoms
- High-temperature fever

If you think you're developing a blocked duct or mastitis, try the following:

- Check your baby's positioning and attachment
- Check for tightly fitting bras that apply uneven pressure
- Continue to breastfeed, using the tender breast first
- Express milk by hand
- Since warmth can help with milk flow, take a warm shower or apply a warm compress on the breast
- If the existing condition worsens please seek medical advice, as antibiotic therapy may be necessary

Breastfeeding Positions

Which breastfeeding position is the best?

The best breastfeeding position is one that is the most comfortable for both you and your baby. Whichever breastfeeding position you choose, be sure to:

- Gather everything you will need to be comfortable before you start to breastfeed (e.g. a beverage, TV remote, mobile phone)
- Ensure that your baby is comfortable. Your baby should be well supported; baby's head, neck and spine should not be twisted

If you have problems with latching, seek support from a breastfeeding specialist at your public health facility or support group.

The following are four common positions used by breastfeeding mothers:

1) Football Hold (“Underarm” or “Clutch”)

- Support your baby's head by placing your thumb and fingers beneath your baby's ears and around the back of the neck (do not constrict head movement)
- Place your baby under your arm and position your baby so that the chin and chest face your breast



IMAGE DESCRIPTION: A mother is breastfeeding her baby in the underarm or clutch position also known as the football hold. Baby is well supported and is breastfeeding comfortably.

2) Side-Lying

- Place your baby on the side so that the chin, chest, and knees face your breast
- Baby's nose should be at the level of the mother's nipple
- Support your baby's head and back with your opposite hand



IMAGE DESCRIPTION: A mother is using the side lying position to breastfeed her baby. If necessary, use pillows to support your baby at the level of your breast.

3) Cross-Cradle

- Support the baby's head by placing your thumb and fingers beneath the baby's ears and around the back of the neck. Do not limit head movement
- Turn your baby on the side so that the chin, chest and knees face your breast
- Wrap your baby across your chest (Mummy's tummy to baby's tummy)
- If necessary, use pillows to support your baby at the level of your breast



IMAGE DESCRIPTION: This mother is breastfeeding her baby using the cross-cradle hold, the baby's head and body is well supported by the mother as she cups her breast while the baby feeds.

4) Cradle Hold

- Place your baby's head in the bend of your elbow (not too far into the space)
- The baby's lower arm is tucked around the mother's side
- Turn your baby on the side so that the baby's chin faces your chest, nose to your nipple, and your tummy to baby's tummy
- Support your baby's back with your arm and its bottom with your hand



IMAGE DESCRIPTION: A mother demonstrates the cradle hold, supporting the baby's head in the crook of one elbow while supporting the baby's back and bottom with the other arm as the baby feeds comfortably.

What if I have trouble with finding the right position for me?

Contact your health care professional if you have any difficulties with positioning or latching. They will guide you until you are comfortable with breastfeeding your baby.

Getting Your Baby to Latch

How do I get my baby to breastfeed?

Breastfeeding takes time and practice. It may take some time to find the feeding positions that feel most comfortable for you and your baby. Remember to offer your baby both breasts and to switch breasts for the following feed. .

How to know the signs of a good latch?

Your baby is latching well if you feel a pulling or tugging sensation on your breast and in the lower abdomen in the early stages post-delivery.

STEP 1: Hold your baby's entire body close, with their nose the same level as your nipple. .



IMAGE DESCRIPTION: A mother supports her breast while holding her baby close to her, her breast nipple is almost touching the baby's mouth as she prepares to latch the baby onto her breast.

STEP 2: Let your baby's head tip back just enough for their top lip to brush against your nipple. This will help your baby to make a wide, open mouth.



IMAGE DESCRIPTION: The process of latching continues as the breast nipple is used to lightly brush the baby's top lip.

STEP 3: When your baby's mouth is wide open, their chin should be able to touch your breast first. Their head should be tipped back so that their tongue can reach as much breast as possible.



IMAGE DESCRIPTION: The baby's mouth is wide open as the mother gets ready to latch the baby onto the breast.

STEP 4: Your baby's chin should firmly touch your breasts, their nose clear and mouth wide open. You should see much more of the darker nipple skin above your baby's top lip than below their bottom lip. As your baby feeds, the cheeks will look full and rounded.



IMAGE DESCRIPTION: Baby is on the breast and positioned to begin breastfeeding, a successful latch is a rewarding experience for mother and baby.

I have difficulties getting my baby to latch. What should I do?

There are qualified Breastfeeding Counsellors at all hospitals across Trinidad and Tobago.

Before discharge, ask your Midwife for a contact number of a Breastfeeding Counsellor. They will offer guidance and address any concerns so that you can be more comfortable with breastfeeding.



IMAGE DESCRIPTION: A baby is attached to the mother's breast, quietly breastfeeding.

Burping or Winding Your Baby

An important part of your baby's feeding routine is burping, or winding. While feeding, your baby may swallow lots of air. Air bubbles can become trapped in their tummy which can cause gas or discomfort. Burping or winding may help to prevent your baby from spitting up and ease their fussiness. While some babies find it easy to burp, others may need a helping hand.

When should I burp my baby?

You may realize that your baby is uncomfortable during a feed. Signs may include fussiness, excess spit-up, pulling away or crying. An excellent opportunity to burp your baby is when you change from one breast to the next. If you are bottle feeding and your baby is showing the same signs, stop feeding and allow your baby to burp. This will help prevent the build-up of trapped wind or gas before you continue to feed.

Whether your baby is breast-fed, cup fed with expressed breast-milk or infant formula, it is definitely suggested that you burp your baby during and after every feed. This is especially recommended before putting your baby down to sleep to prevent aspiration or choking.

Which position is best to burp my baby?

There are a few ways to burp your baby. You can try them all to see which works best for you and your baby:

Over your shoulder

With your baby's chin resting on your shoulder, support the head and shoulder area with one hand, and gently rub and pat your baby's back.



IMAGE DESCRIPTION: Mother positioned baby on her shoulder while rubbing baby's back, baby face is turned sideways.

Sitting on your lap

Sit your baby on your lap facing away from you. Place the palm of your hand flat against their chest and support their chin and jaw (don't put any pressure on the throat area). Lean your baby forwards slightly and with your free hand and gently rub or pat your baby's back.



IMAGE DESCRIPTION: Mother is holding this baby in a sitting position; one hand is under the jawline and the other is gently patting the baby's back.

Lying across your lap

Lie your baby across your lap face down. Supporting their chin and jaw (don't put any pressure on the throat area), use your free hand to gently rub or pat your baby's back. Keep your baby's head slightly higher than the rest of their body so that blood doesn't rush to their head.



IMAGE DESCRIPTION: A mother has positioned her baby on her lap, one hand is seen gently rubbing baby's back while the other is under the chest.

Whichever position you choose, make sure that your baby's head and neck are well supported. Also, make sure their tummy and back is straight, not curled, and gently rub or pat their back. After a couple minutes, your baby should release the gas.

What if my baby won't burp?

If stroking or patting doesn't help your baby to burp, Try placing your baby on their tummy and give a gentle tummy massage. Smooth the palm of your hand on their tummy in a circular, clockwise motion. You can also try moving your baby's legs in a back-and-forth motion, bicycle motion. If these methods do not work, contact your Health Care Provider for further assistance.

How to Safely Express Breast-Milk

What is expressing milk?

Expressing milk means extracting milk out of your breasts so that it can be safely stored and fed to your baby at a later date.

What are the benefits?

- If you are away from your baby (work, daycare, etc.), your baby can be fed your breast-milk
- Your breast will not be too full or feel uncomfortable
- Your partner can help with feeding the baby
- You can boost your milk supply
- If there are issues with latching, your baby can still be breastfed

How do I express breast-milk?

You can express breast-milk by using a breast pump or by hand-expression.

Expressing breast-milk by hand

Hand expression allows you to encourage milk to flow from a particular part of the breast.

STEP 1: Before you start, use soap and water to wash your hands, then dry.



IMAGE DESCRIPTION: A pair of hands lathered with soap is being washed in preparation for hand expression of breast-milk.

STEP 2: Have a sterilized storage container for the milk (e.g., bottles cleaned with hot water or breast-milk storage bags).



IMAGE DESCRIPTION: Breast-milk bags are displayed filled with breast-milk, ready for storage.

STEP 3: Feel the breast and identify the milk ducts. It feels like knots, just behind the dark area (areola).



IMAGE DESCRIPTION: The mother has both hands on her breasts, feeling for the milk ducts as she prepares to start expressing breast-milk.

STEP 5: Gently press fingers back towards your chest and then press thumb and fingers towards each other, keeping your finger and breast a few centimeters away from your nipple. Do not squeeze the nipple itself as it will become sore.



IMAGE DESCRIPTION: A mother has one breast exposed, her hand cups the breast while pressing it gently towards her chest.

STEP 6: Release the pressure, then repeat. Build a rhythm. Try not to slide your fingers over the skin. Repeat in a clockwise direction around the breast until you get all the ducts.

Drops should start to appear at first, then your milk will start to flow.

If no drops appear, try moving your finger and thumb slightly but still avoid squeezing the darker area of the nipple.

When the flow slows down, move your fingers to a different section of the breast and repeat.

Keep changing breasts until your milk drips very slowly or stops altogether.



IMAGE DESCRIPTION: A drop of milk is seen on the breast nipple as a mother massages the milk ducts, her thumb is above the areola and her forefinger is well placed under the breast massaging the milk ducts from below. The drops of milk signal the flow of the milk.

Breast pumps

There are two different kinds of pumps: manual (hand-operated) and electric.

Manual:

- Cheaper
- May not be as quick as electric



IMAGE DESCRIPTION: A mother expresses breast-milk with a manual breast-milk pump. Breast-milk is seen in the bottle.

Electric:

- More costly
- Strength of the suction can be adjusted to build or reduce intensity
- Setting the strength to too high right away may be painful and may bruise your nipple



IMAGE DESCRIPTION: A mother expresses breast-milk using an electric breast-milk pump. Breast-milk is seen in the bottle attached to the pump.

For both manual and electric pumps, be sure to sterilize the reusable items before use. These include the storage accessories such as the flange, membranes, bottles and adaptors and the other parts of the pump.

How to Safely Store Breast-Milk

How can I store breast-milk after expressing?

You can store breast-milk in a clean, sterilized container or in special breast-milk storage bags:

- In the deep freeze up to 6 months
- In the freezer of a 2-door fridge up to 3 months
- In the coldest part of the refrigerator up to 1 week
- On the counter at room-temperature up to 8 hours



IMAGE DESCRIPTION: Two milk bags containing breast-milk alongside some empty breast-milk bags.

You must mark the date on every storage bag or container so that you will know when the milk has been stored.

The oldest bag (first-in, first-out) should be used when you are ready to feed your baby.

Should I fill the breast-milk storage bag?

When freezing the breast-milk, you should leave space at the top of the bag. This is recommended since breast-milk expands as it freezes.

How much milk should I store at a time?

You should store breast-milk in small portions to avoid wasting breast-milk that might not be finished during a feed.

Approximately 60 ml to 120 ml, or the amount of milk that will be offered at one feeding, is ideal.

What is milk-banking?

Personal milk-banking is where you express and store your breast-milk in large quantities.

Your baby can have your breast-milk as a meal even if you are not around (e.g., at work, daycare, babysitter, etc.)

How do I defrost frozen breast-milk?

You can defrost frozen breast-milk by placing it in the refrigerator, putting it in a container of warm water, or placing it under warm running water. Defrosting breast-milk in a microwave is not recommended.

You can also leave it to defrost on the kitchen counter for 1-2 hours.

How do I warm breast-milk that was stored in the refrigerator?

You can warm the milk by placing the storage bag or container in a bowl of warm water for a few minutes.

Do not use a microwave to heat or defrost breast-milk since:

- Nutrients are lost when overheated
- It may cause “hot spots”, which can burn your baby’s mouth

What do I do with leftover, defrosted breast-milk after I feed my baby?

Leftover breast-milk can be stored in the refrigerator for up to 24 hours. Defrosted breast-milk left beyond 24 hours must never be reused. Never refreeze breast-milk after it was thawed.

Can I reuse breast-milk storage bags?

No. Breast-milk storage bags are not meant to be reused. They come sterilized so that your breast-milk will be safe for your baby. These bags cannot be sterilized after use. If you put fresh breast-milk in a used storage bag, it will expose your baby to harmful bacteria.

Always use a new breast-milk storage bag to store your breast-milk.

Can I mix breast-milk with formula?

Breast-milk should not be mixed with formula or any other type of milk as this introduces bacteria to the breast-milk. Any unused portion will also need to be discarded once mixed as this can easily be contaminated and can make your baby sick.

Breastfeeding Support

Initiating breastfeeding for the first time is a very rewarding experience both for the mother and her baby. Having support is important to mothers, especially those who are giving birth for the first time. This can prevent mothers from becoming overwhelmed. However, you should not be worried since there are qualified breastfeeding specialists who are willing to address all your concerns. Breastfeeding support is readily available to all women who are interested in breastfeeding their babies.

The Ten Steps to Successful Breastfeeding states in Step Ten that mothers should be referred to community resource groups for breastfeeding support. At every maternal and child care facility, the staff have been trained to provide the support that mothers need. The Ministry of Health is committed to providing breastfeeding support at the Regional Health Authority and community levels.

Once a mother expresses interest in breastfeeding her baby, she will be visited by a support person within seven (7) days of leaving the hospital. The support, which includes advice and help on latching, positioning and expression of breast-milk, will be ongoing until you are confident enough to feed your baby on your own. If you have any questions or concerns after the home visits have ended, feel free to contact the support group or support person. Guidance will be ongoing until you feel as though you no longer need it.

If you are interested in helping others with breastfeeding concerns, you can become a peer support person. To be trained as a Breastfeeding Counsellor, you can contact the Ministry of Health, Directorate of Women's Health for more information at 627-0010 ext. 1561 or 1566 (numbers may be subject to change).

It is important to have knowledge on how to adequately nourish your baby throughout important milestones. Contact the nearest health facility to speak with a Breastfeeding Counsellor, or Registered Dietitian for information on complementary feeding and introducing solids into your infant's diet.



IMAGE DESCRIPTION: Three members of the health care team is counselling with mother as she sits with her baby in her arms.

Contact Information for Breastfeeding Support

You can contact the breastfeeding support groups at your nearest Regional Health Authority or civil society groups on the following numbers:

Location	Group	Contact Number
Couva	TTAM (Trinidad and Tobago Association of Midwives)	674-8008
Mt Hope	BTOFF (Breast-milk The Official First Food)	662-7153 ext 2144
Port-of-Spain	BLISS (Breastfeeding Lifelong Investment So Simple)	623-2954 ext 2822
Port-of-Spain	Mamatoto	621-2368
Port-of-Spain, Curepe & Tobago	TBATT (The Breastfeeding Association of Trinidad and Tobago)	468-5412
Sangre Grande	Eastern Regional Health Authority	226-1107
San Fernando	South West Regional Health Authority	225-1813
Tobago	Tobago Regional Health Authority	660-4744 ext 3123

Please note that the contact numbers are subject to change.



SECTION 3:

Introduction to Solids

Introduction to Solids

A well-balanced diet filled with essential nutrients must be introduced during infancy and early childhood to facilitate optimal growth and development. Birth to two (2) years of age is the critical window where a child must be fed the right foods to prevent malnutrition, delayed mental and physical development and impaired academic performance. Therefore, it is necessary for parents and caregivers to be aware of age-appropriate foods that can be given to infants and young children to promote balanced, healthy lives.

Complementary Feeding

When breast-milk alone cannot meet the nutritional needs of infants, other foods and liquids are introduced into their diet to supplement the breast-milk. This is called complementary feeding. Complementary feeding generally begins at six (6) months up to twenty-four (24) months; however, breastfeeding may continue beyond two (2) years of age.



IMAGE DESCRIPTION: A bowl of oatmeal is on display. The food looks really appealing.

Safe Preparation and Storage of Complementary Foods

Careful attention must be placed on safe and hygienic practices during food preparation and feeding. This is to prevent gastrointestinal illnesses, such as diarrhoea and vomiting, that can be caused from food contamination. Safety practices to consider include:

- Wash hands with soap and water before food preparation and eating
- Use clean water for drinking and preparing meals
- Keep food preparation areas clean before and after use
- Avoid contact between raw and cooked foods and store them in separate containers
- Serve foods immediately after preparation
- Store foods safely by covering and refrigerating within 2-3 hours of preparation
- Use clean utensils to prepare and serve food
- Use clean spoons, forks, cups, plates and bowls when feeding children

Frequency and Consistency of Meals

As the infant gets older, it is recommended that the consistency of their meals is gradually increased based on their requirements and abilities. Additionally, the number of times that the child is fed complementary foods must also increase. Depending on their age, mashed, pureed, semi-solid and solid foods, as well as finger-foods, can be given as meals and snacks multiple times per day. If the child is no longer breastfed, more frequent meals may be required to sustain their energy and nutritional intake.



IMAGE DESCRIPTION: A toddler is feeding herself a piece of corn with a brilliant smile on her face, pieces of her meal are all over her chin and on her chest.

Feeding Recommendations from Infancy and Onward

A variety of foods must be given to infants and young children to ensure that nutritional needs are being met. Breast-milk continues to be the meal of choice for babies up to six (6) months and beyond. However, complementary foods must be introduced to supplement their diets. Staple foods give your children energy. These include cereals (rice, wheat, oats, cornmeal), roots (potato, yam, cassava) and starchy fruits (plantain, breadfruit). Animal-source foods provide protein, zinc, iron and calcium which should also be included in their diet. These include meat, chicken, fish, eggs, cheese and yoghurt. For a vegetarian-based diet, chickpeas, lentils, black eyed peas, and beans are alternative sources to animal products. These can also be included in non-vegetarian diets.

Leafy and colourful vegetables should also be incorporated into meals. These include spinach, broccoli, sweet potatoes, pumpkin, carrots, beets, etc. Additionally, fruits (banana, orange, mango, guava, etc.), oils and fats (butter, avocado, vegetable oils) should also be included in meals throughout the day. Sugary foods and drinks should not be introduced into a child's diet at all. Water should be provided with meals.

The following sections provide a detailed description of recommended foods by age group.



IMAGE DESCRIPTION: A colourful array of fruits and vegetables that can be used in the preparation of complimentary foods. Infants can enjoy foods prepared at home from the family's pot.

Recommendations for Feeding a Newborn up to 6 Months of Age

- Breast-milk should be the only meal given to your baby until 6 months of age
- Breast-milk quenches your baby's thirst and satisfies their hunger. Do not give other foods or liquids
- Breastfeed as often as your baby wants, both day and night. You should breastfeed at least eight (8) times a day in the first 4 weeks, then 5-6 times a day as the baby gets older
- Breastfeed when your baby shows signs of hunger. These may include fussing, sucking of fingers, moving of lips, and turning their head from side to side
- When feeding, allow your baby to empty the breast then offer the other



IMAGE DESCRIPTION: Mommy is intent on continuing breastfeeding up to six months and beyond, baby feeds at the breast quietly; bonding with mommy.

Recommendations for Feeding an Infant Age 6 Months to 1 Year

- Continue to breastfeed as often as your baby wants
- You can begin to initiate complementary feeding at age six months by offering small, softened amounts of other food
- Wait a few days before introducing new foods so that you can monitor your baby's tolerance levels
- As your baby grows older, increase the quantity of food while continuing to breastfeed



IMAGE DESCRIPTION: A bowl of pureed bananas recommended for feeding infants age six months to one year, slices of bananas are on display next to the bowl.

Ages 6-8 months

- Begin by offering 2- 3 tablespoons of thick porridge or well-mashed foods 2-3 times per day. You can gradually increase the amount to ½ cup
- At 8 months, offer small chewable foods that can be held between their fingers. This helps to develop their pincer grasp
- Allow your baby to self-feed but provide assistance when necessary
- Snacks can be given between meals, depending on your baby's appetite
- Avoid foods that can cause choking such as nuts, grapes and raw carrots



IMAGE DESCRIPTION: A bright, orange-coloured bowl of baby food is displayed as an example of how foods should be prepared for a complimentary meal for an infant six months and older.

Ages 9-11 months

- Offer chopped, mashed and other foods that your baby can pick up
- Depending on your baby's appetite, 3 – 4 meals as well as 1-2 snacks can be offered throughout the day
- Feed your baby from their own bowl or plate
- Patiently help and encourage your baby to eat, but do not force feed
- Remove any distractions and try to keep your baby interested in their meal
- Offer boiled and cooled water throughout the day to quench your baby's thirst
- Bottled water must also be boiled before offering it to your baby



IMAGE DESCRIPTION: Two small bowls show recommended sizes based on baby's appetite. These are examples of complimentary foods of different textures. These are for infants in the 9-11 months age group.

Recommendations for Feeding a Child 1 to 2 Years

- Continue to breastfeed as often as your infant wants up to 2 years of age and beyond
- Continue to provide chopped or mashed nutritious foods at each meal
- Staple foods and other foods from each food group should be given at each meal
- Snacks can also be provided between meals, depending on your infant's appetite
- Feed your infant from their own bowl or plate
- Patiently help and encourage your infant to eat, but do not force feed



IMAGE DESCRIPTION: The baby is feeding on a piece of broccoli. Infants are encouraged to feed themselves during the complementary stage.

Recommendations for Feeding a Child 2 to 5 Years

- Three, nutritious meals must be given daily. It can be the same meal as the rest of the family
- Nutritious snacks can also be given between meals
- Continue to offer a variety of foods. If your child refuses a new food, offer “tastes” of it several times on different occasions
- Meal portions should depend on the child’s age, size and level of activity. As your child grows older, the size of the portions should increase



IMAGE DESCRIPTION: This two year old boy is feeding himself a hearty meal that looks delicious and full of variety and nutritionally balanced.

Do I Need Special Equipment or Appliances to Prepare My Child's Meals?

No, you don't. You can use simple items in your kitchen to portion out and prepare meals. These include:

1. Measuring cups and spoons to portion out the meals



IMAGE DESCRIPTION: Measuring cups and spoons are displayed for use in the preparation of complementary foods, these will be useful at the end of the six months of exclusive breastfeeding. Using these tools can help you to monitor how much your baby eats.

2. Blender or strainer (sieve) to puree baby food



IMAGE DESCRIPTION: A blender and strainer are also recommended for use in the preparation of complementary foods for the infant. These are useful as they help you to alter the consistency of the food items you provide to your baby.

3. Masher or fork to help smooth meals



IMAGE DESCRIPTION: A masher and fork completes the utensils that will be required in the preparation of complementary foods for infants. Altering the consistency of various food items enables you to provide meals in a form that your baby can accept.

How Can I Get an Idea of Local Recipes for My Infant?

The Office of the Chief Nutritionist, Ministry of Health, has prepared a Caribbean-based recipe guide which provides ideas on a variety of snacks and meals for your infant. This can be found at the back of this book.

Getting the Texture Right

Puree

“To make fruit or vegetables into a thick, smooth sauce by crushing”

Equipment needed:

Strainer or Blender



IMAGE DESCRIPTION: A strainer and spoon is used to puree foods into the right texture for the infant at different ages.

Mashing

“To reduce a food to a pulpy mass by crushing.”

Equipment needed:

Masher or Fork



IMAGE DESCRIPTION: A masher is used to crush food in a bowl to bring it to a pulpy mass.

CAUTION!

If you use a blender or food processor, you must still sieve the food to ensure it is completely smooth if your baby is very young (6-8 months).



IMAGE DESCRIPTION: Another texture is achieved by using a strainer to puree a banana into a bowl.

Balanced Diet for Baby

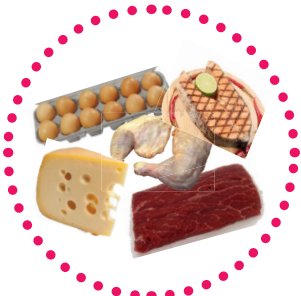
Mixing foods from different groups helps your baby to get all the nutrients they need for good health and growth. This is called the "Multimix Principle".

There are three different ways you can combine foods from the Caribbean Six Food Groups.

The Six Caribbean Food Groups



STAPLES



FOOD FROM ANIMALS



LEGUMES & NUTS



VEGETABLES



FRUITS



FATS & OILS

MAGE DESCRIPTION:
A balanced diet is important to the growth and development of the infant. In the Caribbean, mothers are advised by their health care professionals to utilize food items from the six food groups to achieve adequate nourishment for their infants, by using the Multimix Principle. The principle combines meals with 4-part staples, 2-part legumes, 1 part food from animals and 1-part vegetables.

A good guide to use when mixing your baby's food is:

4 part Staples, 2 part Legumes, 1 part Food from Animals, 1 part Vegetables

- **Double or Two-mix**

Good mix

Two-mix: Staples + Legumes

E.g. Green fig + lentils

or

Two-mix: Staples + Food From Animals

E.g. Ripened plantain and chicken

- **Triple or Three-mix**

Better mix

Three-mix: Staples + Legumes + Vegetables

E.g. Corn + dhal + bhagi

or

Three-mix: Staples + Legumes + Food From Animals

E.g. Potato + pigeon peas + deboned fish

or

Three-mix: Staples + Food From Animals + Vegetables

E.g. Sweet potato + turkey + steamed carrots

- **Quadri or Four-mix**

Most nutritious mix.

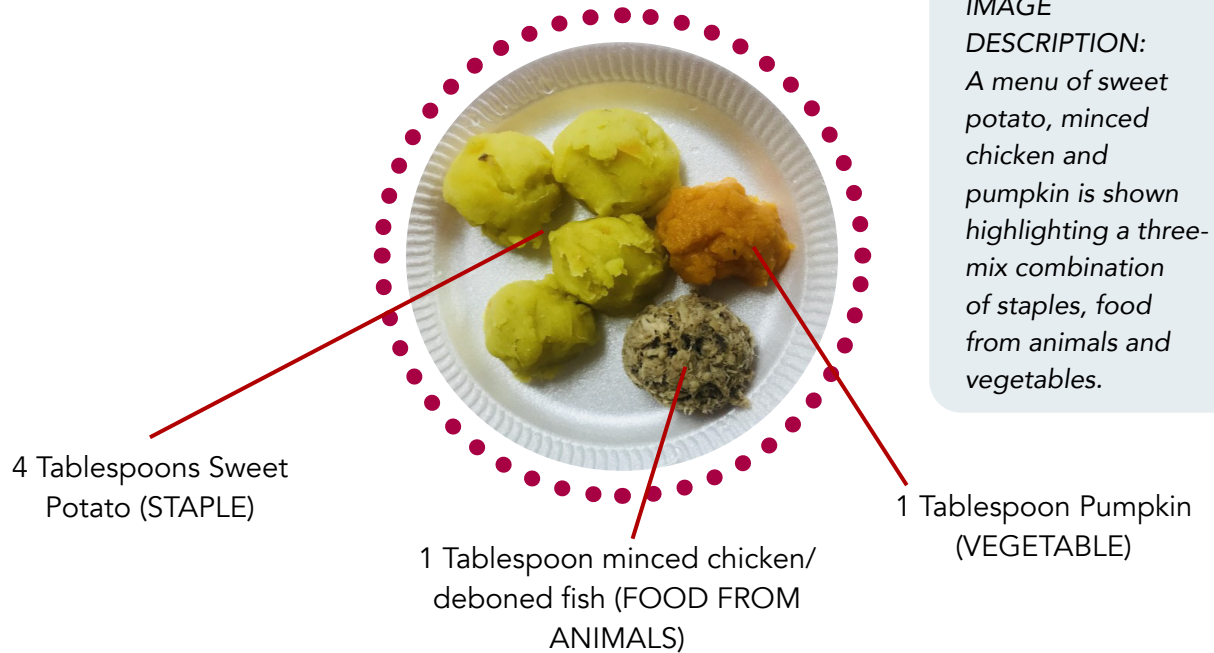
Your baby will get more nutrients when a variety of different food groups is eaten.

Four-mix: Staples + Legumes + Vegetables + Foods from Animals

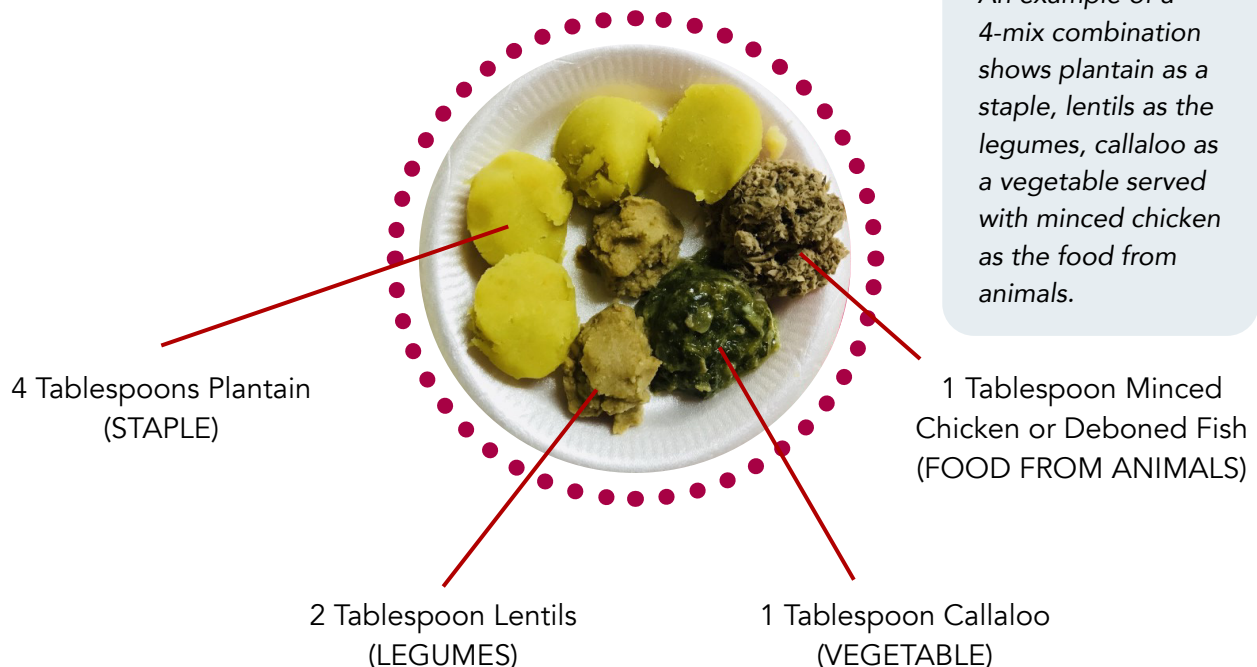
E.g. Green fig + pigeon peas + steamed carrot + chicken

Using the Multimix

Example of a Three-Mix



Example of a Four-Mix



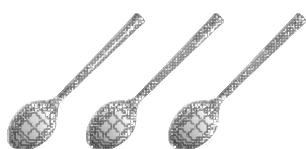
Portions, Portions, Portions!

In the beginning your baby may eat about 1 or 2 teaspoons of food as they learn to eat from a spoon.

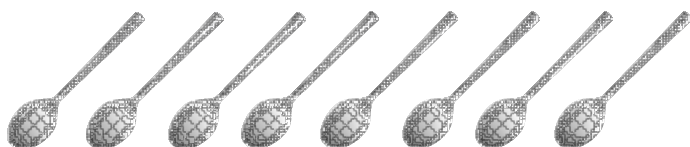
Portion Guide

6-8 MONTHS

Start with 2-3 levelled tablespoons



Reach up to 8 levelled tablespoons or 1/2 cup



How often?

Snacks: 1-2 per day

(Snacks are smaller meals in between your baby's bigger meals. Fruit is a good choice!)

Meals: 2-3 per day

REMEMBER!

This is just a guide.

This also depends on your baby's appetite!

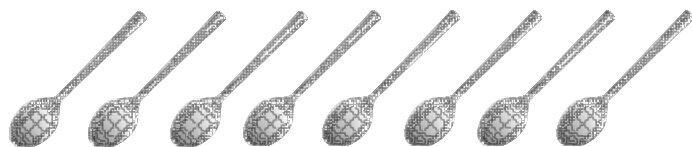
NEVER force-feed your baby!

ALWAYS let them set the pace for feeding!

*Continue to
breastfeed on
demand!*

9-11 MONTHS

8 levelled tablespoons or 1/2 cup



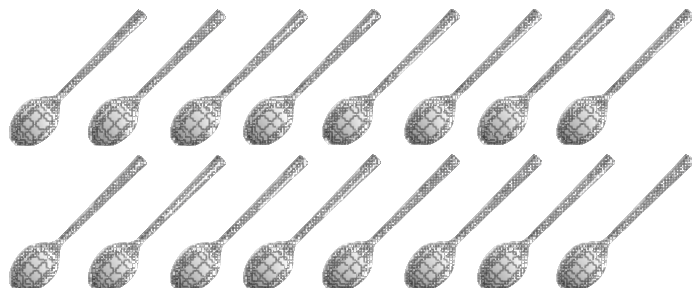
How often?

Snacks: 1-2 per day

Meals: 3-4 per day

12 - 23 MONTHS

Reach up to 16 levelled tablespoons or 1 cup



How often?

Snacks: 1-2 per day

Meals: 3-4 per day



SECTION 4:

Recipes

Baby's Cornmeal Porridge

Yield: 7 Tbsp.



IMAGE DESCRIPTION: A cup of cornmeal porridge made with expressed breast-milk is ready for a six months old infant to eat, yummy!

Nutrition facts per 7 Tbsp.

Calories	Carbs	Protein	Total Fat	Iron	Calcium	Fibre
89 kcal	14.9 g	1.7 g	2.5 g	0.5 mg	10.9 mg	1.1 g

Ingredients

- 2 level Tbsp. cornmeal
- 3/4 cup water
- 3 Tbsp. (1 1/2 Oz.) expressed breast-milk

Method

1. To a pot, add water to dried cornmeal and cook until the mixture turns translucent.
2. Remove from pot and mix together in a clean bowl with expressed breast-milk.
3. Serve immediately or store in a clean container in a refrigerator.

Baby's First Fruit Puree

Yield: 4 Tbsp.



IMAGE DESCRIPTION:
Mangoes and bananas make a delectable fruit puree that a sixth month old infant can feed on. Fresh slices of both fruits garnish the cup containing the pureed fruits.

Nutrition facts per 4 Tbsp.

Calories	Carbs	Protein	Total Fat	Iron	Calcium	Fibre
79 kcal	20.5 g	0.9 g	0.3 g	0.2 mg	7.1 mg	1.8 g

Ingredients

- 1/4 cup ripened mango (approx. 1 1/2 face ripe Julie mango)
- 1/2 medium banana

Method

1. Mix the mango and banana in a clean bowl until very well mashed with no lumps.
2. Press the mango and banana mixture through a fine mesh sieve (strainer) until the mixture comes through the other end completely smooth.
3. Serve immediately or store in a clean container in a refrigerator.

Baby's Rice Porridge

Yield: 7 Tbsp.



IMAGE DESCRIPTION: A cup of rice porridge adorn this picture. The texture is smooth and creamy. This dish is easy to prepare at home and includes breast-milk.

Nutrition facts per 7 Tbsp.

Calories	Carbs	Protein	Total Fat	Iron	Calcium	Fibre
136.5 kcal	25.5 g	2.6 g	2.2 g	0.2 mg	17.9 mg	0.3 g

Ingredients

- 1 Tbsp. uncooked rice or 1/2 cup cooked rice
- 3/4 cup water
- 3 Tbsp. (1 1/2 oz.) expressed breast-milk

Method

1. Cook the rice until very soft such that the rice grains can be easily crushed between your fingers.
2. Cook until most of the water has been boiled off, leaving a small amount of water behind. Do NOT strain off the remaining liquid
3. Press the cooked rice through a fine mesh sieve until the mixture comes through the other end completely smooth.
4. Mix the rice that has been sieved with expressed breast-milk. You may add more breast-milk until the desired thickness is achieved.

Chicken Puree with Sweet Potato, Plantain & Carrot

Yield: 6 Tbsp.

8+
months



IMAGE DESCRIPTION: A combination of chicken pureed with sweet potatoes, plantain and carrot provides mom with more to choose from when it comes to mealtime for her eight-month-old infant.

Nutrition facts per 6 Tbsp.

Calories	Carbs	Protein	Total Fat	Iron	Calcium	Fibre
100 kcal	16.8 g	1.6 g	0 g	1.0 mg	19.2 mg	1.6 g

Ingredients

- 2 Tbsp. cooked and sieved sweet potato
- 2 Tbsp. cooked and sieved plantain
- 1 Tbsp. cooked and sieved carrot
- 1 Tbsp. cooked minced chicken

Method

1. Mix together sweet potato, plantain, carrot and chicken in a clean bowl.
2. Using a fine mesh sieve, press the mixture through the sieve until the mixture comes through the other completely smooth.
3. Serve immediately or store in a clean container in a refrigerator.

Fish Puree with Green Fig and Green Peas

Yield: 6 Tbsp.

8+
months



IMAGE DESCRIPTION:
Green fig combined with green peas and fish is pureed for a nutritious meal for infants to enjoy at eight months old and beyond.

Nutrition facts per 6 Tbsp.

Calories	Carbs	Protein	Total Fat	Iron	Calcium	Fibre
195 kcal	27.6 g	8.5 g	6.2 g	0.8 mg	18 mg	4 g

Ingredients

- 2 Tbsp. cooked and sieved green banana (2 green figs)
- 2 Tbsp. cooked and sieved green peas (4 tbsp. green peas)
- 1 Tbsp. cooked minced local white salmon
- 1 tsp. vegetable oil

Method

1. Cut green fig into small pieces and steam for 3-5 minutes or until very soft. Leave 1-2 tsp. of water behind for easy straining.
2. Cook the green peas in water until very soft and drain.
3. Mix together the green fig, green peas, fish and oil in a clean bowl. Using a fine mesh sieve, press the mixture through the sieve until the mixture comes through completely smooth.

Fish Puree with Sweet Potato and Callaloo

Yield: 6 Tbsp.

8+
months



IMAGE DESCRIPTION:
Variety adds the spice to life as the menu features fish pureed with sweet potatoes and callaloo, a meal fit for infants eight months old and beyond.

Nutrition facts per 6 Tbsp.

Calories	Carbs	Protein	Total Fat	Iron	Calcium	Fibre
134 kcal	20.9 g	11.8 g	0.7 g	3.0 mg	77.7 mg	3.0 g

Ingredients

- 4 Tbsp. cooked and sieved sweet potato
- 2 Tbsp. cooked and sieved lentils
- 1 Tbsp. cooked and sieved callaloo
- 1 Tbsp. cooked minced chicken/boneless or deboned fish

Method

1. Mix together sweet potato, lentils, callaloo and fish in a clean bowl.
2. Using a fine mesh sieve, pass the mixture through the sieve until the mixture comes through the other end.
3. Serve immediately or store in a clean container in a refrigerator. Baby food can last for no more than one (1) day in the refrigerator!

Appendix

Image credits:

Cover image of tropical fruits: Food photo created by freepik - www.freepik.com

Image for *Skin-to-skin Contact* on page 11: Lindsay Mgbor/Department for International Development, CC BY 2.0, <https://commons.wikimedia.org/w/index.php?curid=26240371>

Image displaying glass of milk on page 21: Food photo created by KamranAydinov - www.freepik.com

Image of washing hands on page 22: Water photo created by master1305 - www.freepik.com

Image of baby food on page 48: Food photo created by freepik - www.freepik.com

Image of baby food on page 49: Food photo created by freepik - www.freepik.com

Image of orange baby food on page 53 - 54: Food photo created by freepik - www.freepik.com



Breastfeeding & Beyond:

A Guide to Infant and Child Feeding