



**RBSK**  
RASHTRIYA BAL SWASTHYA KARYAKRAM  
राष्ट्रीय बाल स्वास्थ्य कार्यक्रम  
FROM SURVIVAL TO HEALTHY SURVIVAL



1

JOURNEY OF THE FIRST  
DAYS  
FOUNDATION FOR A BRIGHTER FUTURE

**RASHTRIYA BAL SWASTHYA KARYAKRAM**



## **Journey of The First 1000 Days Foundation for a Brighter Future**

**Rashtriya Bal Swasthya Karyakram**  
Ministry of Health & Family Welfare  
Government of India  
April 2018



# MESSAGE



जगत प्रकाश नड्डा  
Jagat Prakash Nadda



स्वास्थ्य एवं परिवार कल्याण मंत्री  
भारत सरकार  
Minister of Health & Family Welfare  
Government of India

## MESSAGE

India has taken rapid stride in reducing child mortality and improving child survival. Investing in early childhood development is the strongest public investment that a country could make to get as the best return and attain children with full potential and focus on realizing the Sustainable Development Goals (SDGs).

The first thousand days in a person's life is most crucial, as it establishes a solid platform for a child's physical, mental and social health, leading to the rest of their life. The power of the first thousand days encompasses the right nutrition, stimulation, love and support; beginning with the pre-conception period and continuing in the first two years of a child's life.

This book **"Journey of First 1000 Days"**, is a roadmap in that direction of creating a shared value of children's development, across various sectors. I congratulate the Ministry of Health and Family Welfare for this unique initiative to reach out to all parents and this would further complement the existing efforts being implemented by the ministry in this direction.

I urge parents and caregivers to utilize this book, which will benefit their children and society at large.

(Jagat Prakash Nadda)

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# MESSAGE



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Government of India  
Department of Health and Family Welfare  
Ministry of Health & Family Welfare

Dated: 7 April, 2018

## MESSAGE

National Health Mission under Ministry of Health & Family Welfare, Government of India, has made significant progress in reducing both maternal and under five child mortality in the country.

Rastriya Bal Swasththya Karyakram (RBSK), has shifted the focus from **“only survival to healthy survival”** through timely screening and early management to improve the quality of life from birth till 18 years of age. This program is designed to focus on the children at-risk and intervene during the critical years of brain development through medical, surgical and therapeutic interventions, at zero cost to the families.

Neurological research on early childhood development shows that the early years beginning from the pre-conception period till two years of age, play a key role in children's brain development. Taking the quantum of care further, Ministry of Health and Family Welfare is committed to improve the experience of the earliest stages of development, including the prenatal period.

The first thousand days of child is a unique period of opportunity when the foundation of optimum health, growth and brain development across the lifespan are established, with right nutrition, healthy lifestyle, child-rearing practices, would have profound impact on a child's ability to grow and learn.

Through this document **“Journey of First 1000 Days”**, parents and families would have a good knowledge of how best to utilize the potential of the first thousand days.

I hope this book will prove to be a milestone in child and mother care and would further complement the existing programme and that States and UTs would take the initiative of utilizing this book as a resource for the parents.

  
(Preeti Sudan)



# PREAMBLE



**Manoj Jhalani**

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Dated the 10<sup>th</sup> April, 2018

## PREAMBLE

The National Health Mission, an Indian government's efforts towards providing 'Health for All' has strengthened the public health system in rural and urban areas by improving access to and utilization of maternal and child health services among vulnerable and marginalized populations, increasing the percentage of fully immunized children, decreasing the incidence of tuberculosis, malaria and other infectious diseases and providing promotive and preventive services for non-communicable diseases at all levels of health care.

Development of a child begins as early as the start of a woman's pregnancy during which avoidance of stress, good nutrition, fetal interaction, regular antenatal visits, care around birth including privacy, dignity, birth companion, avoiding augmentation or Induction of Labour unless medically indicated followed by early initiation of breast feeding, skin to skin contact, early stimulation is essential to have a healthy child with optimal physical, mental and social development.

The first one thousand days in the life of a person hold the key to unlock and shape the life-long potential of a person. By the age of 2 years, 80% of a person's brain is developed; these are the formative years, where factors such as adequate healthcare, good nutrition, early learning and stimulation, quality childcare practices and a clean safe environment will have an influence in the future of a child.

The environment in which children grow up also plays a role in their cognitive and psychosocial development. Activities that involve playing, singing or reading and that stimulate the brain through all the senses can help improve their ability to think and communicate.

The present document, *"Journey of First 1000 Days"*, is a conscious effort to educate the parents and caregivers about good child rearing practices. I hope that this book will stimulate further thoughts across disciplines in the goal of improving cognitive and emotional development in children.

  
(Manoj Jhalani)



# FOREWORD



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Ministry of Health & Family Welfare  
Nirman Bhavan, New Delhi - 110011

## FOREWORD

India, with an annual birth cohort of 26 million, is committed to promote holistic early child development as the topmost priority.

National Health Mission initiative Rashtriya Bal Swasthya Karyakram (RBSK) has made considerable progress for the improvement of quality of life beyond survival. The program focusses on the need for a holistic approach towards the health of a child moving away from the compartmentalized approach to a more comprehensive approach of examining the child has a whole including their overall developmental aspects right from the birth. However the most rapid period of brain development actually coincides with the fetal life in the mother's womb and the first two years of child's life. Intervening during this sensitive period of brain development is most effective.

The first thousand days of life- the time spanning between conception and the second birthday provides a unique window of opportunity to act at a time when the foundations of optimal health, growth and neurodevelopment are being established across the life span; which may also have intergenerational effect. At least 200 million children living in developing countries fail to meet their developmental potential (Lancet; 2007). This loss of potential perhaps could be mitigated, had we timely intervened during the sensitive period of brain development i.e. the first 1000 days.

The objective of *"Journey of First 1000 Days"* is to provide parents and health care providers with the most recent and up-to-date knowledge regarding the most important factors that can impact a child's cognitive development during the first thousand days of a child's life. This book is meant as a synthesis of knowledge from various fields, such as maternal health, child health, cognitive neuroscience and more.

We hope that this book will stimulate further thought, comprehensive and effective policies and programs, and research across disciplines in the goal of improving cognitive and emotional development in children.

(Vandana Gurnani)



# ACKNOWLEDGEMENTS



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## ACKNOWLEDGEMENT

India has shown tremendous reduction in the key health indicators like Infant Mortality Rate and Under-five Mortality Rate (USMR) through the efforts of National Health Mission. The under-five mortality rate (USMR) in India declined from 126 per 1000 live births in 1990 to 39 per 1000 live births in 2016 and of these around 58% of them are during the neo-natal period.

Children are the basis for all dimensions of sustainable development. They have a right to thrive, develop to their full potential. Early childhood development is critical in the realm of Sustainable Development Goals and their specific targets. To promote this, we need to build a strong foundation based on several aspects, from the pre-conception period to pregnancy and the first two years.

Children acquire basic learning skills and personal capacities early in life. All subsequent abilities are built on these foundations. Children, who are unable to get the right care necessary to foster early cognitive development, grow poorly, learn less, and are more likely to encounter difficulties later in life.

I am grateful to the Smt. Preeti Sudan, Secretary for being a guiding factor in the development of this book; Shri Manoj Jhalani, Additional Secretary & Mission Director, for the guidance and the support of taking forward this endeavor; Smt. Vandana Gurnani, Joint Secretary (RCH) for the support extended throughout the process of development of this document. I would place my appreciation for Dr. Arun Singh who conceived the idea of best child-rearing practices in the country and constructed complete holistic booklet out of it and the National RBSK team and the various reviewers from various institutions. I would also place on record my appreciation for Dr. P K Prabhakar and the Child Health Team.

The document **"Journey of First 1000 Days"** aims to prepare parents and health care providers with the most recent and up-to-date knowledge regarding the most important factors that can impact a child's cognitive development during the first thousand days of a child's life. I am certain that the States & UTs would utilize this document which will have the profound impact of molding into children to help them reach their full potential.

  
(Ajay Kherra)





## Contributors

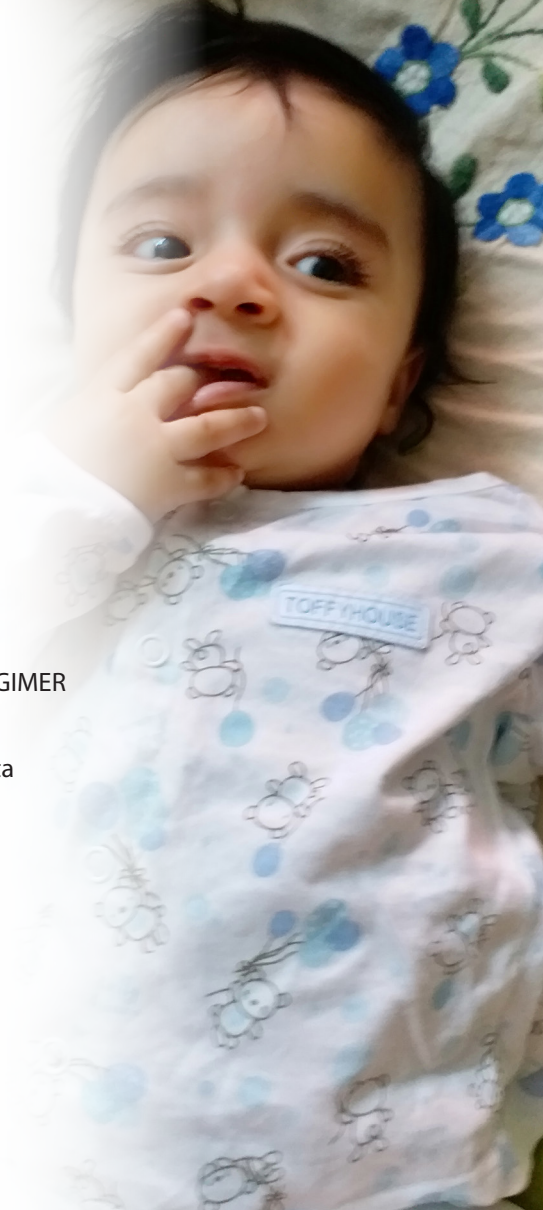
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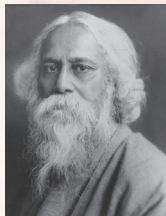
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“

*The smile that flickers on a baby's lips when he sleeps-  
does anyone know where it was born?*

*Yes, there is a rumor that a young pale beam of a  
crescent moon touched the edge of a vanishing autumn  
cloud, and there the smile was first born in the dream of a  
dew-washed morning.*

*Rabindranath Tagore*



”

# Why 1000 Days?

What makes us human is our brain.

It sets us apart from other living species on this planet.

Apart from the physical growth, a human baby's brain development paves the way for her future level of intelligence and quality of life. Much of this development starts before a baby is even born. In fact, the foundation is laid with the parents' decision to have a child.

The **"First 1000 Days"** are a period of rapid physical growth and accelerated mental development and offers a unique opportunity to build lifelong health and intelligence. Remember that the baby in the womb is dependent on the mother for nutrition as well as

mental, physical and emotional growth. What you do, as parents, in the first 1000 days makes a difference to the rest of your baby's life.

The **"First 1000 Days"** refers to the period that begins with pregnancy planning and goes up to when the child reaches her second birthday. Each day of this journey is special and influences the way she develops, grows and learns - not just now, but for her entire life.

This guide is all about ensuring that every child and every parent has access to information to create an optimal environment during the first 1000 days, for a better tomorrow.

Happy Parenting!



*Many things we need can wait. The child cannot. Now is the time his bones are formed, his mind developed. To him we cannot say tomorrow, his name is today.*



# PLANNING YOUR PREGNANCY

## THE FIRST STEP IN YOUR PREGNANCY JOURNEY

*The planning phase - time before pregnancy is just as important as the pregnancy and childbirth itself!*

*Virtually everything you consume or inhale while pregnant will be passed through to the fetus. This process begins as soon as you conceive. Hence, make sure that you are on a healthy diet and have given up smoking, drinking, any form of tobacco or any illegal drugs. This applies to both the parents.*

## Introduction

If you are simply thinking about, or trying to have a baby, it is a good idea to start getting ready for pregnancy. A focus on pre-pregnancy health, nutrition, lifestyle and environment of the mother can increase chances of having a healthy baby, with a bright start.

For some women, getting the body ready for pregnancy takes only a few months. But, for others, it might take longer. Whether this is your first baby or the next one, here are some extremely important steps to help you get ready for the birth and nurturing of a healthy, intelligent and sensitive child.

“

*The story of your baby begins much before birth.*

”



# Goals for This Stage

## 1. Plan Your Pregnancy

In order to plan your pregnancy, discuss with your spouse and set a goal about how many children you want and when you want to get pregnant.

Here are some key points to help you make a better decision:

- ❖ Do not make a decision under peer or parental pressure.
- ❖ Avoid pregnancy before you are 18 years old.
- ❖ Maintain the recommended gap of minimum 2 years between pregnancies, for better nourishment of both your children
- ❖ You may need to arrange resources for the arrival of the little one.
- ❖ Prepare yourself or your spouse physically, mentally, emotionally and financially.
- ❖ Undergo a holistic health checkup.
- ❖ Adopt and maintain healthy diet, lifestyle and behaviors.
- ❖ Get your hemoglobin level checked. If it is less than 12 grams per deciliter, consult your doctor.



### My Plan : My Family

1. I want to have \_\_\_\_\_ child / children.
2. I want to get pregnant, when I am \_\_\_\_ years old.



*Plan your pregnancy. It should be by choice.*



## Ask yourself – Do you want a baby now?

- ❖ If yes, stop contraception at least 6 months before you start planning.
- ❖ If you decide to delay, consult a doctor/ANM/ASHA for a suitable contraception method for you and/or your spouse, use the contraception correctly and at all times until you are ready to be parents.

## 2. Eat Healthy Foods

Food choices can prepare you for a healthy pregnancy. The baby in the womb is dependent physically, mentally and emotionally on the mother. Thus, the nutritional status of the mother, even before becoming pregnant, is critical to the early development of the baby.

### Make sure mother's diet includes one from each group -

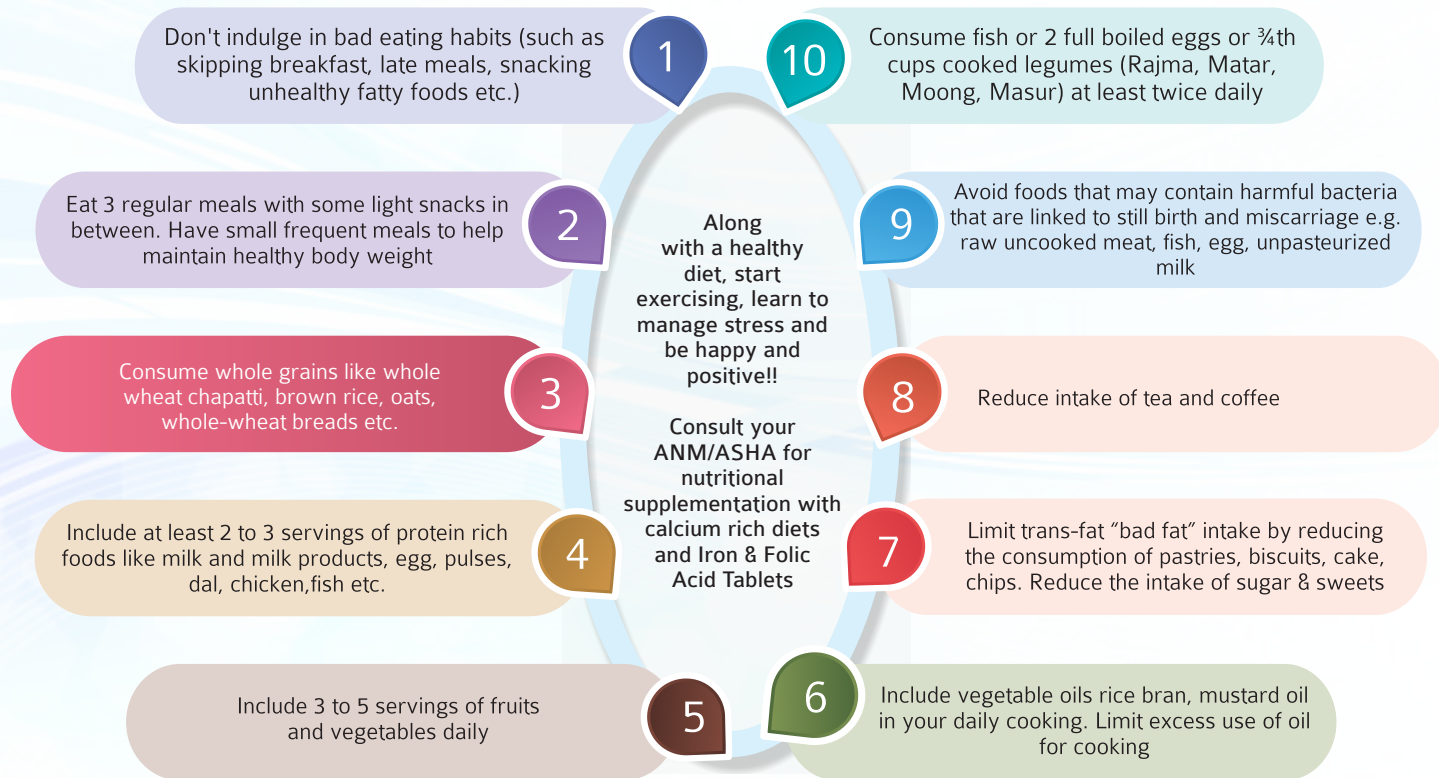
- ❖ **Cereals** – Rice, Wheat, Ragi, Bajra, Jowar in form of chapati, halua, idli, dosa, upma, poha etc. Avoid white bread, biscuits and other foods made with refined flour (Maida).



- ❖ **Fruits and vegetables** – Eat seasonal fruits and vegetables liberally. Your diet must include 2 katoris green leafy vegetables, 1 katori of starchy vegetables like potato, beet , carrot and 1 katori of other vegetables, like lady's finger, brinjal, tomato, beans etc. The more colorful the fruit or vegetable, the more nutritious it is.
- ❖ **Protein** – If you are a non-vegetarian, choose fish, full boiled eggs, and cooked meat. If you are a vegetarian, choose any pulses like moong, masoor, tuvar, rajma, at least 2 katoris a day.
- ❖ **Milk and milk products** – You can choose between 2 glasses of milk, or 2 katoris of curd or 60 gm paneer.
- ❖ **Fat** – Try to get your fat intake from vegetable sources like mustard oil and rice bran oil. Use a mixture of mustard oil and rice bran oil or mustard oil and groundnut oil, to ensure adequate quantities of Omega 3 and Omega 6 fatty acids in your diet. You can also consume flax seeds (Alsi) to get enough Omega 3 fatty acids in your diet.
- ❖ **Water** – Drink at least 10 - 12 glasses of water every day.



*Prefer using variety of local seasonal foods, vegetables and fruits being grown in and around your area.*



### 3. Stay Active

Women should stay active and reach a healthy weight before conception. This is important both for the mother and the baby. If you are underweight or overweight before becoming pregnant, it reduces your chances of becoming pregnant. Remember that working at home or in a job is not exercise, one should set aside time for regular physical activity, for example, walking or yoga.

### 4. Take 400 Micrograms (1 Tablet) of Folic Acid Daily

Folic acid is essential for both the baby and the mother. This prevents spinal and brain birth defects in the baby. you need to start once you have planned for a pregnancy and continue for 3 months after confirmation of pregnancy. You can get it free of cost from your ASHA/ANM or at a government clinic. However, if a 400 microgram tablet is not available, you can take a 5 mg tablet, apart from a diet rich in folic acid (refer page 22).



*If you are planning a baby, consult a doctor/local medical practitioner to know your ideal body weight*

## 5. Avoid Harmful Chemicals and Toxins

Toxic substances are chemicals and metals or materials that can harm your health. You may be exposed to toxic substances every day, for example, pesticides on fruits and vegetables, home cleaning products and lead-based cosmetics.. Exposure to toxic substances can harm you, making it harder to get pregnant and even small amounts of toxic substances during pregnancy can cause diseases in your child early or later in life. Here are a few steps that can help you prevent toxin exposure –

- ❖ Quit smoking and avoid people who smoke.
- ❖ Stay away from pesticides.
- ❖ To get rid of pesticides sprayed on fruits and vegetables, soak them in salt water, before cutting or peeling, for some time. Rinse well and throw the water.
- ❖ Remove your shoes before entering the house to prevent bringing lead-contaminated soil in, from outside.
- ❖ Avoid cleaning agents available in the market, instead clean your house with soap and water.
- ❖ Mop your floors instead of sweeping them. Sweeping or dusting can spread the dust into the air, which is a major source of lead.

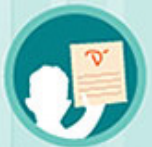
PREVENT CHILDHOOD LEAD POISONING



**Damage to the brain  
and nervous system**



**Slowed growth  
and development**



**Learning and  
behavior problems**



**Hearing and  
speech problems**





- ❖ Use glass and stainless steel containers instead of plastic ones, to store and eat food.
- ❖ If you are exposed to toxic substances at work, request a change in your duties.
- ❖ If anyone in your family works with toxic chemicals, that person should change and shower after work.
- ❖ Exposure to lead during pregnancy can harm the brain development of the baby. Avoid products that may contain lead, such as lead paint and lead-based cosmetics.
- ❖ Do not use mosquito coils in closed rooms. Instead use mosquito nets.

## 6. Protect Yourself from Infections

Protect yourself against any infections by –

- ❖ Washing your hands frequently with soap and water, especially before cooking and eating.
- ❖ Maintain hygiene after using the toilet.
- ❖ Avoid people who are sick.
- ❖ Try not to share food, drinks and utensils with those who are sick.

## 7. Take the necessary vaccines

Vaccinations are our best defense against many diseases. These diseases can cause serious health problems for the baby.

Rubella/German measles and Hepatitis B can seriously affect unborn babies. If you haven't been vaccinated against these, visit your doctor before you try to conceive and then avoid becoming pregnant for a month after taking the vaccine.

## 8. Consult an ANM or Doctor

Tell the ANM or Doctor that you are trying to get pregnant.

It is good to get your BP, Blood sugar, and other routine examinations and clinical checkup done. If you have suffered from any fleeting joint (Rheumatic fever) pains in your childhood, please inform your doctor.

If you have a pre-existing health condition, for example hypertension, diabetes, epilepsy and / or other condition for which you take medication, ask your doctor if you should continue taking them. Learn to manage your pre-existing health conditions better. It is good for you and your husband to get screened for Sexually Transmitted Diseases(such as HIV and Syphilis), thalassemia and sickle cell anemia.







## 9. Avoid Tobacco, Alcohol and Narcotic Drugs

Smoking, drinking and using narcotic drugs can cause problems for the mother, such as difficulty getting pregnant, separation of the placenta from the womb too early, and the water may break too early. Problems for the baby include being born too small, being born with low birth weight, dying before birth or after birth, sudden infant death syndrome (SIDS), and possible birth defects. Adopting a healthy lifestyle to ensure a healthy home environment is important for the baby.

## 10. Oral Health

Get dental checkup done and improve your dental health by regularly brushing your teeth twice - in the morning and before bed time for at least 2 minutes.

If you are suffering from gum and teeth disease, pay close attention to your oral health and discuss concerns with your doctor.



*Pregnant women with gum and teeth (periodontal) disease may have a higher risk of delivering a preterm or low birth weight baby.*

## 11. Emotional Health

### Manage and reduce stress.

Stress of any kind can cause anxiety, sadness, loneliness in you. It can cause your baby to develop problems at birth or later in life. Father and family members can help the mother by creating a positive and safe home environment.

### Say NO to Domestic Violence

Your baby may suffer, or even die, as a result of domestic violence. If you are a victim of domestic violence,

- ❖ tell someone you trust or talk to your ASHA
- ❖ find someone to help you
- ❖ try to leave safely
- ❖ your local Women's Helpline number



*Care and support by husband and mother-in-law gives emotional support and confidence in dealing with the process of child bearing. Mother-in-law can share their experience to reduce anxiety.*



*Being relaxed can double your chances of becoming pregnant!*



# Busting Myths Around Conception and Pregnancy

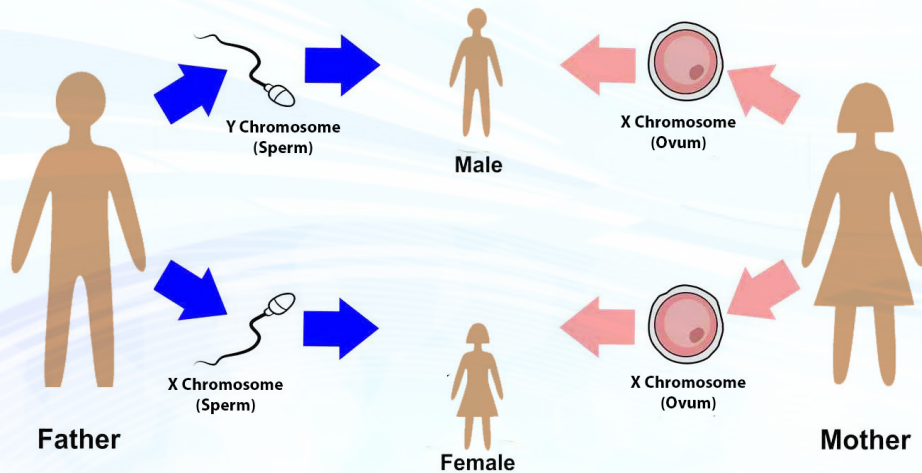
## Is the mother responsible for giving birth to a baby girl or baby boy?

First of all, in today's world having a boy (male) or a girl (female) child should not matter. Girls have equal potential to excel in any field. Hence, they can become good doctors, engineers, scientists, poets, painters or sports persons. This can only happen when they are encouraged and treated equally to boys. However, some of us continue to underestimate the potential of a girl child and blame the mother for her birth. In this process, the society loses out on our girls reaching their full cognitive potential.

## The father determines the sex of a child though it is not in his control. Here's why:

A baby gets chromosomes both from the mother and father. These chromosomes determine the sex of the child. The mother has two sex chromosomes known as "XX". The father also has two sex chromosomes, but they are different than those of the mother: they are the "XY" chromosomes. It is the Y chromosome which determines the male sex of a child which the

child gets from father. However, there is no way for the father to ensure which chromosome will get passed on to the child! Once XX or XY is decided on the first day of primitive child, one cannot change the genetic makeup.



## Can you choose the sex of a child? Is there a medicine or treatment to change the sex inside the womb?

The answer is no, you cannot choose the sex of a child. Even though the father's chromosome determines the sex of the child, he has no control over which chromosomes are carried by a particular sperm and which sperm will fertilize the egg.

There are no medicines or drugs which can change the sex of your child. Any medicines that claim to do so may harm the child's brain and other organs.



*The Decision to have a Baby  
should be made mutually  
between husband and wife*



# NUTRITION

BEFORE, DURING AND AFTER PREGNANCY

*Eating during pregnancy is not simply to satisfy your hunger but also to satisfy the special needs of your baby. Ensure that your plate includes foods that the baby requires for optimal development. Give your baby a healthy start in life.*

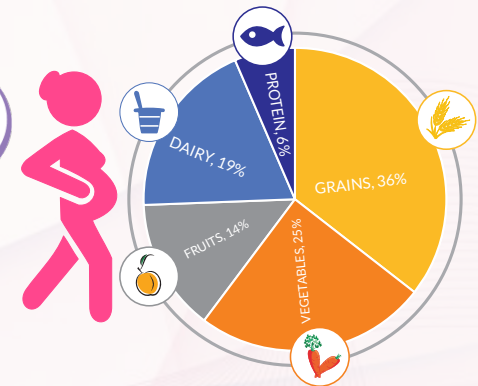


# Introduction

The mother's nutrition, while planning the pregnancy as well as during pregnancy and breastfeeding, plays a significant role in influencing the baby's physical growth and mental development.

Knowing what and how to eat is beneficial for the health of the mother and the child. Pregnancy and childbirth may challenge the mother's body more than anything experienced before. Physical and mental preparation is important for the parents' as well as the baby's well-being. This chapter gives specific advice about essential nutrients,

adequate diet, safe exercise and rest, during pre-pregnancy, pregnancy and breastfeeding.



“

Right nutrition taken by you has a long-lasting impact on health during and beyond the first 1000 days of a baby's life.

”





## Essential Nutrients For A Pregnant Woman

### Iodine

What happens if a pregnant, or breastfeeding, woman doesn't get enough iodine in the diet?

The main concern of mild iodine deficiency during pregnancy and breastfeeding is its effect on the brain of the unborn child and growing infant, in particular, reducing the intelligent quotient (IQ). The daily iodine requirement is 220 micrograms.

Check whether your diet contains:



Spinach



Potato  
with skin



Iodized  
salt



Milk



Curd



Fish



Boiled Egg

## If I am taking iodized salt, can my baby still suffer from iodine deficiency?

Yes. There is a loss of iodine during storing and cooking of iodized salt. To ensure you meet your daily requirements, you need to take –

- ❖ 2 tsp of iodized salt every day.
- ❖ 2 glasses of milk / 2 katori of curd / 2 full boiled eggs with 1 katori of spinach every day.
- ❖ Sprinkle salt on food after cooking. Add salt either in the later stages of cooking or after cooking.
- ❖ Avoid storage of salt in hot and humid conditions, such as the cooking area.
- ❖ Once opened, store salt in an airtight glass jar.



*Taking iodine, when you are pregnant, can boost your baby's brain.*



*The loss of iodine during cooking may range from 7% to 70%. It depends upon type of cooking method and cooking time. Maximum loss is during pressure cooking and boiling and less in deep frying.*

## Folic Acid

What happens if the pregnant woman doesn't get enough folic acid in her diet?

Folic acid deficiency can lead to a child born with birth defects, involving the brain and spinal cord. Good sources of folic acid, consumed especially 3 months before you conceive, and during the first 3 months of pregnancy protect your baby. The daily requirement of folic acid is 400 micrograms.

Check whether your diet contains:



Cabbage



Ladies  
finger



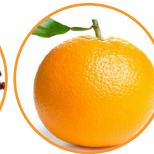
Spinach



Carrot



Beans and  
Peas



Orange



Fish

## Iron

What happens if the pregnant woman doesn't get enough iron in the third trimester?

Even mild iron deficiency, that may go undetected at times, negatively impacts the child's mental development. But with supplementation, the child's mental development improves, even if the woman continues to have iron deficiency.

Check whether your diet contains:



Red  
Spinach



Spinach



Cabbage



Radish



Mustard



Gur  
(Jaggery)



Boiled Egg



Chicken

## Vitamin B12

What happens if the pregnant or breastfeeding mother's diet is Vitamin B12 deficient?

Vitamin B12 deficiency is found in those mothers who are strict vegetarians. This may lead to an increased risk of birth defects including brain and spinal cord. The daily requirement of Vitamin B12 is 1.2 micrograms.

Check whether your diet contains:



Soymilk



Peanuts



Milk



Curd



Fish



Boiled Egg



Chicken

## Vitamin D

What problems can Vitamin D deficiency cause in a pregnant or breastfeeding woman?

Vitamin D deficiency occurs in mothers who are not exposed to sufficient sunlight or do not eat food containing Vitamin D. This would affect the foetal bone development. The daily requirement of Vitamin D is 400 IU.

Check whether your diet contains:



Mushrooms



Almond



Milk



Curd



Fish



Boiled  
Egg



Sunlight (although  
this is not a food,  
it is essential for  
adequate Vitamin D).

## Omega 3

What happens if the mother's diet doesn't contain Omega 3 ?

If your diet doesn't contain sufficient omega 3, this would impact the child's brain and vision development. Fish is good source of this kind of fat. Vegetarians should use a mixture of mustard and rice bran oil or mustard and groundnut oil as a cooking medium. You can also consume flax seeds.

Check whether your diet contains:



Leafy  
Green



Walnuts



Beans



Chia Seeds



Mustard Oil



Rice Bran  
Oil



Fish



## Cooking Tips for the Pregnant Woman

<i>DOs</i>	<i>DON'Ts</i>
Wash your hands with soap before you begin cooking or eating.	DO NOT keep raw or cooked food at room temperature for longer than 2 hours.
Wash all utensils before use. You can use one tsp of household bleach in 1 liter of water to clean them. Rinse utensils well.	DO NOT keep cooked food in the fridge for more than 2 days. Reheat food well before eating it.
Soak all vegetables and fruits in salt water for some time, rinse and wash, before peeling and cutting. Throw the salt water used for soaking.	Limit food with very high content of fat, sugar, or salt, like potato chips, achar, mithai, samosa, kachori, deep fried foods. DO NOT re-use or overheat oils. Limit use of Dalda.
Eat 3 meals and 2-3 snacks everyday that are low in sugar and salt.	Avoid foods containing trans-fat, such as packaged namkeens, chips, cakes etc.
Enjoy variety of foods from 4 food groups everyday – grain products (wheat, rice, ragi, bajra, jowar), milk and alternatives, vegetables and fruits, fish/meat or soybeans/mushrooms/lentils.	DO NOT consume raw or half boiled eggs/ unboiled milk.
Use a mixture of mustard oil and rice bran oil or mustard oil and groundnut oil, to ensure adequate amount of Omega 3 and Omega 6 fatty acids in your diet.	DO NOT take more than 2 cups of tea or coffee in a day.



# Sample Meal Plans for the Pregnant Woman

Time	Meal Type - 1	Meal Type - 2	Meal Type - 3	Meal Type - 4
Morning(6-7 AM)	<ul style="list-style-type: none"> <li>⊙ A glass of milk 250 ml with Rusk OR 2 Biscuits (Marie biscuits)</li> <li>⊙ 1 Apple</li> <li>⊙ 1 Ragi laddoo</li> <li>⊙ 1 or 2 Dates</li> </ul>	<ul style="list-style-type: none"> <li>⊙ A glass of milk 250 ml with Rusk OR 2 Biscuits (Marie biscuits)</li> <li>⊙ 1 Ripe Banana or Grapes (Blue / green)</li> <li>⊙ 1 Ragi laddoo</li> <li>⊙ 1 or 2 Dates</li> </ul>	<ul style="list-style-type: none"> <li>⊙ A glass of milk 250 ml with Rusk OR 2 Biscuits (Marie biscuits)</li> <li>⊙ 1 Guava / 1 Mango / Jamuns</li> <li>⊙ 1 Ragi laddoo</li> <li>⊙ 1 or 2 Dates</li> </ul>	<ul style="list-style-type: none"> <li>⊙ A glass of milk 250 ml with Rusk OR 2 Biscuits (Marie biscuits)</li> <li>⊙ 1 Apple or 1 Orange</li> <li>⊙ 1 Ragi laddoo</li> <li>⊙ 1 or 2 Dates</li> </ul>
Breakfast(8-9 AM)	<ul style="list-style-type: none"> <li>⊙ 4 Idli OR 3 small Adai dosa OR 1 bowl upma (whole wheat rava)</li> <li>⊙ 1 bowl of thick sambar OR chutney</li> </ul>	<ul style="list-style-type: none"> <li>⊙ Khandvi (1 serving) OR Dhokla (100 gm) OR</li> <li>⊙ 2 Thepla with Curd / Yogurt (1 small bowl)</li> </ul>	<ul style="list-style-type: none"> <li>⊙ Moori (1 cup) with sabzi (1 bowl) OR</li> <li>⊙ 1 Stuffed Paratha</li> </ul>	<ul style="list-style-type: none"> <li>⊙ 1 Stuffed Paratha/dalia OR</li> <li>⊙ 2 Poori with Potato Masala</li> </ul>
Mid-Morning(11 AM)	<ul style="list-style-type: none"> <li>⊙ 1 Orange OR 1 Apple OR 1 Pomegranate (Anar) OR 1 cup black grapes with 1 Glass Tender Coconut Water OR lemon water</li> </ul>	<ul style="list-style-type: none"> <li>⊙ 1 Orange OR 1 Apple OR 1 Pomegranate (Anar) OR 1 cup black grapes with 1 Glass Tender Coconut Water OR lemon water</li> </ul>	<ul style="list-style-type: none"> <li>⊙ 1 Orange OR 1 Apple OR 1 Pomegranate (Anar) OR 1 cup black grapes with 1 Glass Tender Coconut Water OR lemon water</li> </ul>	<ul style="list-style-type: none"> <li>⊙ 1 Orange OR 1 Apple OR 1 Pomegranate (Anar) OR 1 cup black grapes with 1 Glass Tender Coconut Water OR lemon water</li> </ul>
Lunch(1-2 PM)	<ul style="list-style-type: none"> <li>⊙ One Bowl cooked Rice</li> <li>⊙ Vegetable Side Dish - 1 Bowl (Carrot OR Beet)</li> <li>⊙ Spinach Curry OR any Green leafy vegetable - (1 bowl - must)</li> <li>⊙ Dal 1 bowl - (Tuar dal sambar, Rasam, whole moong dal)</li> <li>⊙ Curd / Yogurt - 1 small bowl</li> <li>⊙ 1 small bowl Payasam OR Atta/ Rava Halwa</li> </ul>	<ul style="list-style-type: none"> <li>⊙ One Bowl cooked Rice OR Dal Dhokli (One) OR One bowl Khichdi</li> <li>⊙ Vegetable Side Dish - 1 Bowl (Potato with skin OR sweet potato OR Beet, arbi OR zimikand)</li> <li>⊙ Spinach Curry OR any Green leafy vegetable - (1 bowl - must)</li> <li>⊙ Dal 1 bowl - (moong dal, masur, chana) OR Gujarati Kadhi</li> <li>⊙ 1 Chikki</li> </ul>	<ul style="list-style-type: none"> <li>⊙ One Bowl cooked Rice</li> <li>⊙ Vegetable Side Dish : 1 Bowl (Potato with skin OR sweet potato OR Beet, arbi OR zimikand)</li> <li>⊙ Spinach Curry OR any Green leafy vegetable or saag (1 bowl - must)</li> <li>⊙ Dal 1 bowl - (moong dal, masur, chana )</li> <li>⊙ Curd / Yogurt - 1 small bowl</li> <li>⊙ 1 Sandesh</li> </ul>	<ul style="list-style-type: none"> <li>⊙ One Bowl cooked Rice OR 2 Fulkas/ bajra rotior Chapati</li> <li>⊙ Vegetable Side Dish : 1 Bowl (Potato with skin OR sweet potato OR Beet, arbi OR zimikand)</li> <li>⊙ Spinach Curry OR any Green leafy vegetable : (1 bowl - must)</li> <li>⊙ Dal 1 bowl : (moong dal, masur, rajma, chana )</li> <li>⊙ Curd / Yogurt - 1 small bowl</li> <li>⊙ 1 laddoo</li> </ul>

Time	Meal Type - 1	Meal Type - 2	Meal Type - 3	Meal Type - 4
Evening Snack(5-6 PM)	<ul style="list-style-type: none"> <li>1 Glass Milk OR 1 cup Tea</li> <li>1 Medu Vada OR Paruppu Vadai (occasionally)</li> <li>2 Biscuits OR Rusk</li> </ul>	<ul style="list-style-type: none"> <li>1 Glass Milk OR 1 cup Tea</li> <li>Murmura Chaat (100 gm)OR 1 cup Poha</li> <li>2 Biscuits OR Rusk</li> </ul>	<ul style="list-style-type: none"> <li>1 Glass Milk OR 1 cup Tea</li> <li>1 cup Moori, chanachur, cucumber, tomato mix OR 2 Biscuits OR Rusk</li> </ul>	<ul style="list-style-type: none"> <li>1 Glass Milk OR 1 cup Tea</li> <li>1 Veg Tikki OR 2 Biscuits OR Rusk</li> </ul>
Soup(7-8 PM)	<ul style="list-style-type: none"> <li>Rasam (Tomato, Tamarind, Garlic, Heeng) - 1 Bowl</li> </ul>	<ul style="list-style-type: none"> <li>Vegetable Soup - 1 Bowl OR Tomato Soup - 1 Bowl</li> </ul>	<ul style="list-style-type: none"> <li>Vegetable Soup - 1 Bowl OR Tomato Soup - 1 Bowl</li> </ul>	<ul style="list-style-type: none"> <li>Vegetable Soup - 1 Bowl OR Tomato Soup - 1 Bowl</li> </ul>
Dinner(9-10 PM)	<ul style="list-style-type: none"> <li>1 bowl rice OR</li> <li>1-2 Chapati</li> <li>Dal - 1 bowl (Sambar)</li> <li>Vegetable</li> <li>1 bowl Ragi Ambli</li> <li>medium piece of fish 75 gm OR 1 full boiled egg</li> </ul>	<ul style="list-style-type: none"> <li>Chapati 2 to 3 with Dal - 1 bowl (moong dal, masur, chana)</li> <li>1 bowl vegetable dish</li> </ul>	<ul style="list-style-type: none"> <li>1 bowl cooked rice OR Chapati 2 to 3 with Dal - 1 bowl (moong dal, masur, chana)</li> <li>1 bowl vegetable dish</li> <li>medium piece of fish 75 gm OR 1 full boiled egg</li> </ul>	<ul style="list-style-type: none"> <li>1 bowl cooked rice OR Chapati 2 to 3 with Dal : 1 bowl (moong dal, masur, chana)</li> <li>1 vegetable dish</li> </ul>

## Flavor Bridge

*Scientists at Monell Chemical Senses Center, Philadelphia, have found that babies preferred those foods which their mother took during pregnancy and while breastfeeding. They were more enthusiastic about adopting the same diet. Eat a variety of foods with various essential nutrients so that your child will also adopt them later and not turn into a picky eater. This will also ensure that your child stays healthy during all stages of development.*

Eat at least 2 katori (250 ml) of cooked green leafy vegetables per day along with other vegetables like lady finger/ brinjal/beans/ tomato etc. daily

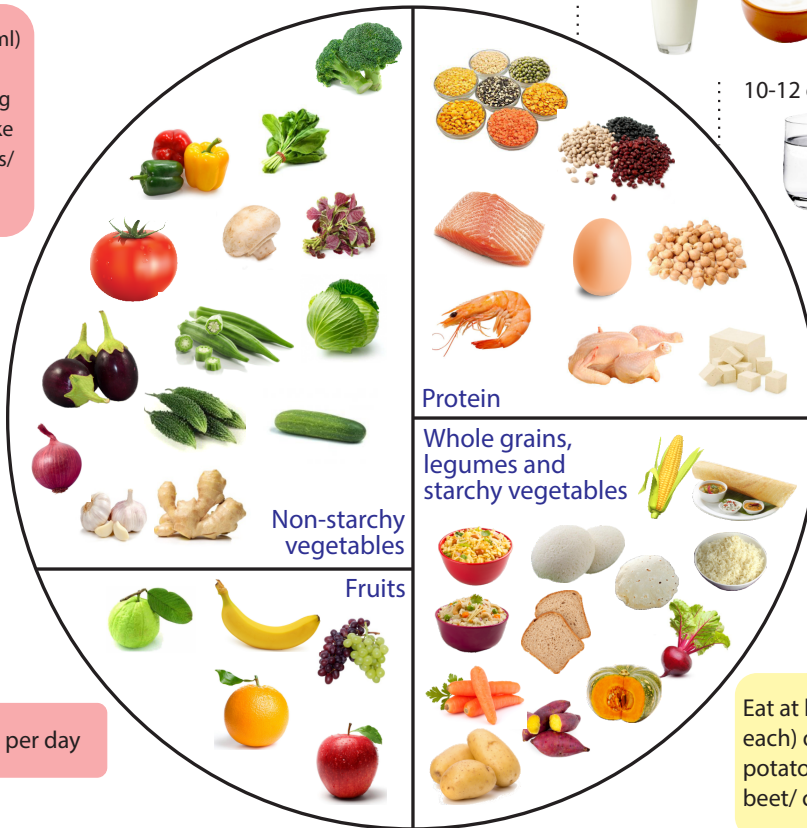


Use more than one source of fat /oil: mustard oil/ soya bean

+

Ground nut / rice bran/ Coconut oil

Eat at least 2 fruits per day



250 ml of milk or 2 katori of Dahi



10-12 glasses of water/day



Eat at least 75 gm. fish twice daily or 2 full boiled eggs or 3/4th cup cooked legumes (Kabuli chana; Rajma, Matar, Moong, Masur) at least twice daily

Eat at least 4 chapatti made of wheat/ Bajra /Maize or Makai or 2 katori (250ml) cooked rice or Ragi in form of roti/ laddu/ Rava upma or Dhosa

Eat at least 2 katori (175ml each) of starchy vegetables: potatoes/ sweet potato/ beet/ carrot etc.

Choose foods with low sugar

## Stay Hydrated

- ⦿ Water prevents urinary tract infections
- ⦿ Water carries nutrients to the baby
- ⦿ Water is used in the amniotic sac
- ⦿ Dehydration can cause contractions

## Importance of Exercise

Staying healthy during pregnancy includes not only adequate nutrition but also enough rest and exercise. Simple exercises, such as walking, during pregnancy are highly beneficial. It helps the mother prevent pelvic and back pain, reduces the risk of gestational diabetes and hypertension, improves heart function, reduces constipation, bloating and swelling and ensures the right weight gain.



*You should try exercises based on your interests and the doctor's advice. Activities like yoga, swimming and walking 30 minutes a day are good for a pregnant woman. You can begin with a small 5-minute walk in the park and see how you feel. This can be gradually stepped up to 30 minutes, without overexerting.*

## Healthy Exercise Tips for the Pregnant Mother

- ❖ *Start with mild exercises, such as a 5-minute walk in the park. Do not overexert.*
- ❖ *Wear loose and comfortable clothing.*
- ❖ *Avoid exercising in hot and humid weather.*
- ❖ *Avoid all activities which have high risk of falling.*
- ❖ *Include relaxation before and after your exercise program.*
- ❖ *During the second and third trimesters, avoid exercise that involves lying flat on your back because doing so may decrease blood flow to the uterus.*
- ❖ *Drink plenty of water to avoid dehydration. Take frequent breaks.*
- ❖ *Stop exercising immediately, if you observe vaginal bleeding, headaches, breathlessness, uterine contractions, dizziness, increased fatigue and fluid leaking from vagina. Get yourself checked by the doctor.*

## Importance of Sleep

The pregnant woman should get into the habit of sleeping on her side, early in the pregnancy. Sleeping on the side makes it easy for the heart to circulate blood. Lying on the side with knees slightly bent will be the most comfortable position for the mother to get into as she enters her third trimester.



- ❖ Have 8 hours of sleep at night and at least 2 hours rest during the day.
- ❖ Lie on your left side as it increases the blood supply to the fetus.
- ❖ Avoid hard work, such as lifting heavy weight.
- ❖ Do not overexert yourself and delegate few tasks to others.
- ❖ Take a quick afternoon nap, whenever possible.

# CONCEPTION

## PREPARE TO RECEIVE THE GIFT OF PARENTHOOD

*If you and your spouse have decided to become parents, you may be excited but unsure of what to do next. As a woman, you need to understand your menstrual cycle to enhance chances of conception. As a man, you need to support your wife and help her stay relaxed and calm.*

## The Fertile Window

The fertile window refers to the days in a woman's menstrual cycle when pregnancy is possible. To understand your fertile window or fertile period, you need to understand your menstrual cycle first. As a husband, you can help your wife keep track of her cycle by helping her keep a menstrual record.

The first day of your periods is noted by the first day when you start bleeding. Though bleeding usually ends by 3-5 days, the cycle would continue and end only at a time when one menstruates next.



*The best time to try and conceive is during the 'fertile window' of the menstrual cycle. This is different for different women.*







## MARCH 2018

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1 	2 	3 
4 	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29 	30 	31 

- ⦿ **Cycle period:** 1st March to 28th March: 28 days
- ⦿ **First day of this cycle** is the first day of bleeding i.e. 1st March 2018
- ⦿ **First day of the next cycle** is the first day of bleeding i.e. 29th March 2018

Suppose your bleeding started on 1st March 2018 (Thursday) and lasted till 4th March (Sunday), but your next bleeding started on 29th March 2018. So, the first day of your cycle or day 1 would be 1st March and the cycle period would be from 1st March till 28th March. Then 29th March becomes the first day of the next cycle or period.

## Knowledge on ovulation and timing of ovulation is important.

Ovulation is the process of an egg leaving the ovary and traveling into the fallopian tube. Usually occurs at about day 14 of an average 28-day cycle.

- ⦿ The most effective period for trying to get pregnant would be 2-3 days before ovulation and the worst period would be 48 hours after ovulation.
- ⦿ Fertile period is the best period when it is possible to get pregnant. It typically starts from 3 days before ovulation to 1 day after ovulation, for a total of 5 days.
- ⦿ On the other hand, trying for a child during the fertile period does not always guarantee pregnancy. In fact, even for healthy couples, the chance of getting pregnant in any given cycle is only about 15%.
- ⦿ If you or your spouse are using contraception, you should stop using it at least 6 months in advance, if you plan to get pregnant.



*Don't hurry for IVF or ovulation stimulating drugs for infertility, if you do not conceive quickly. There are some side effects of IVF or Ovulation stimulating drugs (5-8% increase in twins and pre-term babies). So, before going for IVF or other fertility treatments couples should –*

- ❖ *Maintain a healthy weight*
- ❖ *Eat a balanced diet*
- ❖ *Avoid smoking or illegal drugs or alcohol or any form of tobacco*
- ❖ *Avoid Stress*
- ❖ *Avoid all medications and supplements unless your physician recommends*
- ❖ *Communicate all cultural or religious practices, you wish to maintain, starting from conception to birth of your child, to your caregiver or physician and check with them whether they are safe during pregnancy and beyond.*

Timing of ovulation depends on the duration of cycle :

CYCLE LENGTH	OVULATION PERIOD
22 Days	Day 6 - 10
24 Days	Day 8 - 12
26 Days	Day 10 - 14
28 Days	Day 12 - 16
30 Days	Day 14 - 18
36 Days	Day 20 - 24
42 Days	Day 26 - 30

**Usually subtract 14/15 from the total cycle length and then add or subtract two days**

#### Learn to recognize when you are ovulating

- ⦿ In some women, pain in the lower abdomen signifies that they have ovulated.
- ⦿ Some women may notice a light-colored blood spotting after one or two days of their ovulation. When a woman is about to ovulate, her discharge (cervical mucus) can become clear, slippery, and stretchy, similar to that of raw egg white. Hence, monitoring your discharge is a good way to predict ovulation.
- ⦿ Measuring Basal body temperature: A 0.4 degree Fahrenheit increase in body temperature as compared to body temperature in the morning, is a sign that you have ovulated.



#### **Can I still get pregnant if I have PCOS(Polycystic Ovary Syndrome)?**

Yes. Patients suffering from poly cystic ovarian disease (PCOD) have multiple small cysts in their ovaries (the word poly means many) and present with irregular, unpredictable, usually heavy menstrual cycles, patients are often obese with excessive facial and body hair and have problems in release of eggs from the ovary (ovulation). PCOS is one of the most common, but treatable, causes of infertility in women. Having PCOD does not mean you can't get pregnant. Talk to your doctor about how you can raise your chance of getting pregnant.

## Busting Myths Around Conception

- ⦿ There is no such position of physical intimacy which may increase the likelihood of pregnancy.
- ⦿ Having sex more than once per day will increase chances of pregnancy is a myth.
- ⦿ Ovaries continue to produce new eggs during the reproductive years is a misconception. In fact, the total number of eggs is already formed and stored in the ovary when the would-be mother was still a fetus. After puberty, the ovaries release one mature egg every month.

## How Soon can a Woman Become Pregnant

Across the world, approximately 85% of couples will conceive within one year if they have regular unprotected sex. Many people believe that there is something wrong if you are not becoming pregnant within the first year of marriage. This is not true.

Length average conception rates in fertile couples

Month	1	6	12	18	24
Percentage of Couples Pregnant	20 %	70 %	85 %	90 %	95 %



Do not panic or hurry for IVF or ovulation stimulating drugs for infertility. There are many side effects of IVF or ovulation stimulating drugs. These drugs may cause 5-8% increase in twins and preterm births. So, before going for IVF or using other fertility treatments, couples should adopt a healthy lifestyle.



**To increase your chances of conceiving or becoming pregnant –**

- ❖ Avoid stress and anxiety.
- ❖ Say 'No' to dieting. Maintain a healthy weight.
- ❖ Sleep in a completely dark room.
- ❖ Consult the doctor if you have irregular periods.
- ❖ Take regular iron tablets and foods rich in Iron.
- ❖ Quit smoking and alcohol.
- ❖ If you are a strict vegetarian, you must make sure your intake of iron, folic acid, zinc and vitamin B-12.
- ❖ Stay active but do not over-exert.
- ❖ Get tested for Sexually Transmitted Infections (STIs).
- ❖ Avoid exposure to harmful chemicals.



# PREGNANCY

WELCOME TO THE NEXT 9 MONTHS AND BEYOND!

*You're about to experience the most life-changing events a woman can experience. No matter what your age, financial status or education, this moment is likely the one you'll always remember, in part because of all the mixed emotions you feel. Don't worry! This Pregnancy Planner contains everything you need to get through the next year.*



## Introduction

Welcome to the next 9 months and beyond! In this chapter, you'll learn about the 3 phases (trimesters) that make up the 9 months of pregnancy. We will introduce you to some of

the changes you can expect in this period. Our goal is to help you have the healthiest pregnancy possible to get your baby the best start for a bright future.

## Stress and Birth Outcomes

- ⦿ Women who experience high levels of stress during pregnancy have 25-60% higher risk for pre term delivery.
- ⦿ Stress before and during pregnancy has been linked to low birth weight.
- ⦿ Stress may increase the risk of developmental delays among low birth weight babies.
- ⦿ Stress could be moving to a new address against the liking of the mother, more than usual arguments with the husband, serious hospitalization of a family member, husband losing his job, divorced or separated mother etc.

“

*The moment a child is born, the mother is also born.*

”





## Confirmation of Pregnancy

A missed period is often a sign of pregnancy. To confirm, use the Nishchay Home-Based pregnancy test card. Once your pregnancy is confirmed, register with the ANM.

### NISCHAY PREGNANCY TEST KIT

*“Nishchay – Home based pregnancy test card” has been introduced by government of India across the country where any women can test and confirm her pregnancy immediately after the missed period. You do not need a doctor, you can do yourself or can take help from the local health worker if you feel. You do not need to pay. It is free.*

- ❖ *Just two drops of morning urine and if there are two coloured (Violet) stripes then you are pregnant*
- ❖ *If there is only one strip then you are not pregnant*
- ❖ *If no coloured strip then you should repeat*



## Calculation of EDD (Expected Date of Delivery)

The pregnancy lasts about 280 days. To understand when your baby will be born, use the following tool.

### Example

- |   |                         |                 |
|---|-------------------------|-----------------|
| 1. Date that your last menstrual period started | <input type="text"/>    | October 10,2018 |
|   | <i>Month, Day, Year</i> |                 |
| 2. Count ahead 7 days                           | <input type="text"/>    | October 17,2018 |
|   | <i>Month, Day, Year</i> |                 |
| 3. Count back 3 months                          | <input type="text"/>    | July 17, 2018   |
|   | <i>Month, Day, Year</i> |                 |
| 4. Add 1 year. This is your due date            | <input type="text"/>    | July 17, 2019   |
|   | <i>Month, Day, Year</i> |                 |

*If you don't remember the day your last period started, don't worry. Your healthcare provider can guide out when your baby is due by sending you for an **ultrasound** .*



*Remember that a due date is always an estimate. Babies usually are born within 1-2 weeks of their due date.*



*If you don't remember the day your last period started, try to remember some important celebration/ festival, this might help you recall the date.*

## The Three Trimesters

Congratulations on your Pregnancy! You are a parent now!

A pregnancy can be divided into three trimesters, each of which is marked by specific changes in you and developments in your baby. Throughout this period, it is important that you consult your doctor/health provider and ensure your wellbeing.

One trimester is 3 months and each month is composed of 4 to 5 weeks. A human pregnancy, therefore, lasts 40 weeks (about 9 months). Healthcare providers start counting pregnancy weeks from the first day of your last menstrual period or LMP.

Use the calendar from page 48 to page 56 to keep a record of your LMP, EDD, medical check-ups, tests, vaccines, any medication, recording your baby's kicks etc.



### FAMILY SUPPORT

- ❖ *Family behaviour and attitude should be pleasant and encouraging.*
- ❖ *Family should ensure provision of healthy diet and timely visits to health facility for regular ante-natal checkups.*
- ❖ *Avoid delay in contacting medical facility when labour starts or in case of a complication.*
- ❖ *Adequate finance and transport should be arranged beforehand.*

## First Trimester (LMP up to 13 weeks)

Pregnancy is a normal health process and your body is made for it. Your baby depends on you and your body for everything. The first trimester is a time of fast growth and development for your baby and the best way to take care of her is to take care of yourself.



During this period, your baby's body structure and organ systems begin to develop.

## Second Trimester (14 to 27 weeks)

The second trimester of pregnancy is often called the "golden period" and this is when you start feeling the baby.



In the second trimester, the baby's brain develops further. This development will continue for two or more years after birth. After the 20th week, you would be able to feel the baby's movements.

## Third Trimester (28 to 40 Weeks)



Beginning of 28th week till the 40th week. This is the final stage where maximum weight, height and head circumference of your baby is formed. 50% of the cortical brain development happens between 37-39 weeks.

During the third trimester, your baby continues to develop, gain weight, and begins to prepare for the birthing process. The closer to full term or 40 weeks your baby is, the better she is able to cope with birth and life outside your body.

## Month 1

By the end of the first month, the baby's organs begin to form, including the brain, spinal cord, lungs and heart begins to beat. Bones begin to form.

Use this calendar to note the events and tick every night. Note the date and day of your check-ups.

**Concerns:** Nausea and vomiting; Spotting

Month:

Week #	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1st							
2nd							
3rd							
4th							
5th							

- Visit your ANM and AWW for pregnancy confirmation and registration. Mention "R".
- Get duration of pregnancy, in weeks, body weight, blood pressure, pulse, any swelling jaundice or presence of any murmur recorded at the clinic.
- Take Folic Acid tablet every day.
- Get first dose of tetanus toxoid.
- Get urine test done for protein, sugar and pus cells.
- Get your blood screened for hemoglobin, blood group including Rh factor, Syphilis, HIV, Hepatitis B, Thyroid, Malaria, Thalassemia & Sickle Cell Anemia.
- Diabetic testing or glucose tolerance test must be done. Have 75 gm of glucose dissolved in 300 ml of water and measure the value after 2 hours. If more than or equal to 140 mg, consult the doctor immediately.



*If you are feeling nauseated, it is because changes in hormones can make you feel sick to your stomach. Certain smells and movements can make the nausea worse. The good news is that the nausea usually disappears after the first trimester.*



**To help cope with nausea and vomiting, you can:**

- ❖ Avoid having an empty stomach.
- ❖ Eat whatever food appeals to you in frequent small amounts until you are feeling better.
- ❖ Get out of bed slowly and eat soon afterward.
- ❖ Drink fluids between meals and not with meals.
- ❖ Choose cold foods (with less smell) or get someone else to do the cooking if possible.
- ❖ Get plenty of fresh air.
- ❖ Try smelling fresh-cut lemons.
- ❖ Avoid smoke, strong odors, alcohol and caffeine.

## Month 2

Your baby's brain, liver, kidneys, bloodstream, and digestive system are developing. The arms and legs begin to grow. Your baby's face is also developing. Touch is the first of the senses to develop.

Month:

Week #	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1st							
2nd							
3rd							
4th							
5th							

- ⊙ Take second dose of Tetanus toxoid vaccine.
- ⊙ Take regular, gentle exercise, such as walking.
- ⊙ Always wash your hands, before and after preparing food, using the toilet, working in farms or handling animals.
- ⊙ Avoid extreme heat. Do not sit for prolonged periods close to a fire.
- ⊙ Eat only fresh, clean and hygienically prepared and stored food.
- ⊙ Eat foods rich in Calcium and Vitamin D, such as milk, curd and paneer.
- ⊙ Get oral hygiene checked by a dental doctor.
- ⊙ Avoid all psychological stresses, as stress may impact your baby.
- ⊙ Prepare a birth plan with your ANM / Doctor and family.



### How are you feeling?

Many women feel exhausted at this stage. Your body is building a home (the placenta) for the baby right now. This is hard work and takes a lot of your energy. If you feel tired and/or nauseated –

- ❖ Eat and sleep well
- ❖ Rest when you feel tired
- ❖ Ask your husband or other family members for help in household and other work
- ❖ At work, if your work is exhausting, request your supervisor or employer for a change in duties

## Month 3

Facial features are present and the nose and outer ears are formed. Baby begins moving although you won't feel it yet. All internal organs are developing. Baby begins sucking her thumb.

Month:

Week #	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1st							
2nd							
3rd							
4th							
5th							

- ⦿ Let your employer know you are pregnant.
- ⦿ Discuss any possible work-related danger with your doctor.
- ⦿ Find out about maternity leave and your entitlements.



Three diseases that can cause mental retardation and other anomalies in the fetus can be prevented:

- ❖ German measles (rubella) can cause mental retardation, heart abnormalities, cataracts, and deafness. Avoid anyone with measles-like rash, during pregnancy.
- ❖ Chickenpox is particularly dangerous if contracted shortly before delivery. If you have not already had chickenpox, avoid anyone with the disease or anyone recently exposed to the disease.
- ❖ Toxoplasmosis is primarily a danger for cat owners. Avoid contact with cats or cat litter during the pregnancy period and intake of under cooked or infected meat.

## Month 4

During the 4th month, your baby is growing fast. Fingernails and hair grow and the baby can smile and frown.

**Concerns:** Constipation

Month:

Week #	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1st							
2nd							
3rd							
4th							
5th							

- ☉ Start oral swallowable Calcium tablets every day. Take 1 tablet each, along with lunch and dinner. Each calcium tablet should contain 500 mg elemental calcium and 250 IU vitamin D3.
- ☉ Get the second dose of tetanus toxoid vaccine if not already received.
- ☉ Deworming - a single dose of 400 mg of IP of Albendazole to be taken.
- ☉ Take 1 tablet of Iron & Folic Acid every day, 2 hours after meals, if hemoglobin is more than 11. If the hemoglobin level is less than 11, take 2 tablets of IFA every day.
- ☉ Visit your ANM/Doctor for your 2nd ante-natal checkup.



### Did you know?

*Your baby can already hear and she knows the sound of your voice? Talk to your baby every day.*



- ❖ You must have a dental checkup in 2nd trimester
- ❖ Many women get constipated during pregnancy. Do not use a laxative without consulting a doctor.



# Month 5

The baby now has fingerprints and footprints. Your baby can now kick, twist and turn. She may be most active when you're sitting still. By 20 weeks, your baby's brain and nervous system is developed enough to react to sound and light.

Month:

Week #	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1st							
2nd							
3rd							
4th							
5th							

- ⦿ Iron is important not only for your blood but also needed for your baby's brain to develop.
- ⦿ Deficiency of iron may lead to increased risk of preterm delivery and low birth weight baby. In children, it causes developmental delays and behavioral disturbances.
- ⦿ You may have more energy now.
- ⦿ You might sweat more and you may notice cramps in your legs.
- ⦿ You should have at least one Ultrasonography between 18-19 weeks to rule out any risk to pregnancy.



*If you had an ultrasound test done during pregnancy, you may have seen your baby sucking his thumb.*



**Here are a few changes you may experience at this stage –**

- ❖ Your breasts may be getting bigger.
- ❖ You might sweat more.
- ❖ You may have heartburn, indigestion or constipation.
- ❖ Not all antacids are safe for pregnant women. Check with your doctor or health care provider before you take one.
- ❖ You might have vaginal discharge. However, itching or burning is not normal, have these checked by your healthcare provider.

## Month 6

Your baby can now hear your voice and music. Eyes are open. Your baby moves around. You can feel when she's high up in your abdomen or low down in our pelvis. She develops a pattern of sleep and activity.

Month:

Week #	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1st							
2nd							
3rd							
4th							
5th							

- ⦿ *Eat often and eat well.*
- ⦿ *Go for your 2nd ANM/Doctor visit if not done earlier.*
- ⦿ *Get tested for blood group, including Rh factor if not done earlier.*
- ⦿ *By this time, you have learnt to become aware of baby movements. The baby's movement could be a kick, flutter or roll.*
- ⦿ *If your glucose tolerance was negative initially, repeat it between 24 to 28 weeks.*



### Keep these handy –

- ❖ *Name, address, and phone number of the doctor or nurse who will deliver your baby*
- ❖ *The quickest and easiest route to the hospital.*
- ❖ *The location of the hospital entrance you should use when labor begins.*
- ❖ *The phone number of an ambulance service. (102/108)*



*Near the end of your second trimester, you may feel the muscles in your uterus becoming tight or hard, and then releasing slowly. These are called Braxton-Hicks contractions and they are normal. These contractions aren't labor contractions. These contractions help your uterus get ready for labor and birth. These contractions aren't regular and they usually don't hurt. They can happen anytime and anywhere, lasting from a few seconds up to 2 minutes. You'll likely have them more often in the last few weeks of pregnancy, right up to the start of labor.*

# Month 7

Your baby's eyes begin to open and close. When you talk, sing and connect with your baby, you are helping the baby's brain to develop. You may feel uncomfortable but the baby feels well protected within the womb, thanks to the oxygen supply from the placenta.

**Concerns:** Swelling in feet and ankles

Month:

Week #	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1st							
2nd							
3rd							
4th							
5th							

- Visit ANM/Doctor for 3rd ante-natal checkup.
- Continue with calcium and Iron & Folic Acid tablets.
- As your baby develops, you would appreciate the number and type of movements, which changes with your baby's activity. Usually afternoon and evening periods, are times of peak activity for your baby. Your baby will usually not move during sleep periods, which last between 20-40 minutes, both during the day and night.



Interact with your baby while she's still inside you. Singing and reading to your baby not only helps her develop better but also strengthens your bond with her. The father should also interact with the baby.



You may notice swelling in your feet and ankles in the third trimester. To reduce swelling, put your feet up, avoid crossing your legs, wear loose clothing and get plenty of rest.

## Month 8

The wrinkles on your baby's skin are filling out with fat. Most babies settle in an upside-down position, ready for birth. Your body is also getting ready for the baby's birth.

**Concerns:** Heartburn or acidity

Month:

Week #	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1st							
2nd							
3rd							
4th							
5th							

- ☉ Start observing your baby's movements. There is no specific number of movements which is normal. However, if you feel that there is a reduction or change in your baby's movements, you need to lie down on your left side and focus on your baby's movements for next 2 hours. If you do not feel 10 or more separate movements during these 2 hours, you should consult a doctor immediately.



**If you experience heartburn or acidity**

- ❖ Do not lie down immediately after eating
- ❖ When you do lie down, raise your head and shoulders
- ❖ Drink fluids between meals, not with meals
- ❖ Eat small meals and snacks

# Month 9

Your baby continues to grow and prepares to be born, moving down into the pelvis. The baby is going to be here soon. Your breasts may leak yellowish fluid or colostrum. It is one of the ways your body prepares you for motherhood and is perfectly normal.

Month:

Week #	Sun	Mon	Tue	Wed	Thu	Fri	Sat
1st							
2nd							
3rd							
4th							
5th							

- Visit ANM/Doctor for your 4th ante-natal checkup.
- Get your blood and urine tests done, especially urine for protein, sugar and pus cells.
- Record any uterine contractions. Talk to your ANM / Doctor about any irregularities.



## Preparing for the birth of your little one

- ❖ Prepare a detailed birth plan with your ANM / Doctor.
- ❖ Arrange for a birth companion to accompany you through labor.
- ❖ Keep your own clothes ready. Clothing should be soft and loose fitting, so that it can be removed or adjusted easily.
- ❖ Prepare soft 100% cotton clothes for the baby.
- ❖ Mentally prepare to breast feed your baby within 30 minutes of birth.
- ❖ Avoid any stress.



Allow labor pain to begin on its own. Do not ask for quick or painless delivery or a Caesarean section. Continue the pregnancy till 39 weeks.



# LABOUR

## THE BABY IS ON ITS WAY!

*The birth of your child is a special and unique experience. No two deliveries are identical, and there is no way to predict how your specific delivery is going to go. However, you have no reason to worry. Nature has designated birth hormones to do an amazing job guiding you (the mother) and your baby on the path of a healthy birth. These hormones prepare both you and your child in every step of the way, from getting ready for labour to the actual labour process and finally birth of a baby.*

*In this chapter you will learn more about what to do during labour, the different stages of labour and ways to ease the entire process of child birth.*



## What is Labour?

Labour is the process of gradual child birth which usually manifests step by step followed by expulsion of placenta through the birth canal. Placenta is the organ connecting the fetus to the mother's womb. It is responsible for providing oxygen and nutrition to the baby during pregnancy. The placenta is delivered after the birth of the child. For 9 months the child was kept safely in the mother's womb with the

opening of the womb being thick and closed. Labour begins usually at end of 9 months when the womb contracts to help the baby to come out gently. For a first baby, labour may last 12 to 20 hours. One should be patient and try not to hasten the process of labour as maternal birth hormones have various checks and balances to ensure smooth and safe delivery.

“

*Labour and birth are beautifully designed by nature. Natural birth practices are not only safe but also good for our children. Let us respect Nature and its ways*

”



# What to do before, during and After Labour

## Before labour:

- ⦿ Avoid Stress prior and during labour
- ⦿ Let labour begin on its own. Avoid medicines to speed up labour, unless absolutely necessary or advised by the doctor
- ⦿ Avoid Elective labour induction for you or your doctor's comfort: This may have side effects on the newborn
- ⦿ Avoid Epidural or painless delivery as epidurals interfere in the process of labour and birth



- ❖ *The Uterus (womb) holds the baby as it grows*
- ❖ *The Mucus plug is at the narrow opening of the Womb to keep the bacteria away*
- ❖ *The Cervix is the narrow opening of the Uterus or Womb*
- ❖ *The vagina is the birth canal*
- ❖ *The placenta and the umbilical cord sends nourishment to the baby*

## During Labour:

- ⊙ **Have a Birth companion for Continuous Support:** In labour room mothers feel better when cared for, addressed politely and encouraged by people they know and trust to stay with them. These Birth companions can support the labouring woman in simple but important ways: protecting her privacy, helping her get comfortable, providing a glass of water, holding her and encouraging to move and making her feel safe and protected. This would make the mother relaxed and encourage the release of natural birthing hormone thus avoiding Caesarian section or the need for induced labour.
- ⊙ **Positions to make your labour shorter and easier:** Physical Movements like walking during labour will help you to cope with strong and painful contractions and at the same time gently moving the baby through the birth canal. Research supports that walking, movement, and changing positions may shorten labour, and are effective forms of pain relief and assures the newborns safety. You should select the position in which you are comfortable which could be sitting or lying on the side.



- ❖ *90 % of the women are capable of normal delivery with some support. Every pregnant woman needs to know that birth is intended to happen simply and easily.*
- ❖ *Stress, inducing labour before it is due and unnecessary medication can interfere with the natural birthing process.*
- ❖ *A baby's brain at 35 weeks is only two-thirds of what it will weigh at 39-40 weeks.*
- ❖ *If your pregnancy is healthy, it is best to stay pregnant for at least 39 weeks.*

- ⦿ Natural oxytocin or Birth hormone is released from the mother's brain to help the womb contract and gradually push out the child. At the same time it helps to release a natural pain killer from the mother's body to relief her birthing pain. This is good for the brain of both mother and child. It stimulates the brain to make them feel happy and helps in bonding. Request the doctor to avoid use of artificial oxytocin or Prostaglandin to initiate or shorten the labour, unless absolutely necessary.

## After Labour:

- ⦿ Keep Mother and Baby Together: It helps in initiating and continuing Breastfeeding and avoiding stress to the newborn thus improving cognition. Physiologically mothers and babies are meant to be together. Your Baby stays warm and has a stable heart rate and regular respirations. Routine care of the baby can be performed by keeping the baby on mother's abdomen after her birth and allowing the cord pulsation to stop before cutting the cord. This would give the baby the advantage of zero separation.
- ⦿ Initiate breastfeeding within 30 minutes of birth. Providing breast milk including colostrum to the newborn is known to improve the IQ of the child.



❖ *Reduction of stress during Labour process allows the natural birthing hormone to ensure a smooth delivery*

❖ *Birthing hormones are also responsible in mother and child bonding which in turns prevent behavioral problems and helps the child to learn.*

## Signs and Symptoms of Labour - What to Expect & What to do

Since labour is a very gradual process, it is divided into various stages. The mother needs to know when the body is getting ready for labour and when the actual labour starts.

### Pre-Labour Or Preparation For Actual Labour

Every woman's labour is different, but here is an idea of what may happen when, and what you can do.

#### Signals that the body is getting ready for labour

- ⦿ Lightening – Suddenly, near the end of the pregnancy, you will feel you are able to breathe better. This is because your baby has moved down. This may happen 2-3 weeks before you go into actual labour.
- ⦿ Mucus plug / Show – Just before labour, the plug guarding the opening of the womb comes out with a pink, red or brown discharge.
- ⦿ Niggling contractions may come and go. These contractions are frequently seen just before the true labour pain as the body is preparing for the delivery of the baby
- ⦿ You may have backache

- ⦿ You may feel very emotional
- ⦿ You may be unsure if this is labour or not

### What the Mother and Birth Companion should do in this stage

- ❖ Try a good long walk
- ❖ Spend time with her or read to her some text
- ❖ Spend a relaxing evening with family and friends
- ❖ Let her lie down and relax.
- ❖ Run a bath or shower then wrap her up in warm loose clothes
- ❖ Make her drink a couple of glasses of water and offer her favorite snacks.
- ❖ If it is night, encourage her to sleep as she needs to be well rested for the true labour pain.

## Onset of Labour(12-20 hours)

### Signals that actual labour has started

- ❖ Established, regular labour pain occurring frequently, followed by water breaking.
- ❖ True labour pain will usually have contractions that are regular and long and would not disappear on lying down or changing posture.
- ❖ Contractions would become progressively stronger and you would feel the pain in the lower back, at times, radiating to the front.

Labour and Childbirth usually occurs in 4 stages – Dilating Stage, Push Stage, Placental Stage and Recovery Stage.



- ❖ *Now is the time for the mother to be moved to the nearest hospital or the one which was planned.*
- ❖ *You may call 102 or 104 or 108 for moving to the hospital. It is FREE.*



*A contraction is an awe-inspiring co-action of the womb muscles: While the top of the uterus tightens and thickens, the bottom relaxes and stretches to help baby through into the birth canal for delivery. Learning what a contraction does, can help to “work with” it. Remember each contraction helps soften and open your cervix for the passage of your baby. Each contraction is helping your baby get closer to your arms.*

## 1. Dilating Stage or First Stage

This stage starts with the onset of true labour pain until the birth passage is completely dilated to 10 cm to allow the child to pass through. In case of first baby it may take 12-14 hours.

### What the Mother and Birth Companion should do in this stage

#### A. Help her to relax

##### Focal Point Concentration:

Help her focus on something other than pain. She can look at something or someone to clear her mind.

##### Visualization:

Talk about something or some place that makes her feel relaxed and safe.

## B. Breathing for labour

During labour, breathing techniques, such as slow breathing and light breathing is useful. They can help you -

- ❖ relax
- ❖ focus your attention during a contraction
- ❖ maintain a good supply of oxygen to your baby
- ❖ relieve pain

## C. Comfort positions during labour

- ❖ Walking, standing and sitting upright may help
- ❖ Move as much as possible to help move your baby down.
- ❖ These positions may help you manage pain and avoid medications.



### **Breathing Techniques in First Stage Labour**

#### **Light Breathing in Labour**

- ❖ *Let your contractions guide you in the rate and depth of your breathing.*
- ❖ *Breathe in and out through an open mouth. Breaths will be shallow.*
- ❖ *Breaths will be about twice your normal rate.*
- ❖ *When a contraction starts to decrease, return to your slow breathing, that is breathe at half your normal rate and breathe out through your mouth letting all the air out, like a relaxing sigh.*
- ❖ *When the contraction ends, take a deep breath and end with a relaxing sigh.*
- ❖ *Try to completely relax, change your position, or have a sip of fluid as desired.*



## D. Massage

Do not massage the abdomen. However, smooth rubbing of the face, neck and shoulder, back, thighs, feet can be helpful. Pressing with the hand on the lower back helps to relieve backache.

## E. Ask the mother to

- ❖ Go to the bathroom every hour or so to keep her bladder empty
- ❖ Stay upright to help labour progress
- ❖ Change position and keep moving

## F. Offer her:

- ❖ Verbal reassurance and encouragement
- ❖ A hot water bottle, or back massage
- ❖ Sips of drinks and snacks
- ❖ Keep track of the contractions
- ❖ Help make her comfortable (prop pillows, get her water, apply touch)

- ❖ Remind her to change positions frequently (go with her on a walk or offer her a bath).
- ❖ Provide distractions from labour such as music, reading a book or playing a simple game.
- ❖ Don't think that there is something wrong if she is not responding to you

## 2. Push Stage or Second Stage

The period from full dilatation of birth passage (up to 10 cm) till the baby is delivered. This may take 1-2 hours in case of first baby. During this stage, you would feel a strong urge to push at the peak of each contraction. You may feel like shouting, screaming or making loud, deep noise with each contraction.

## What the Mother and Birth Companion should do in this stage

### Encourage her:

- ⊙ To get into a pushing position that uses gravity to your advantage.
- ⊙ To push when she feels the urge, using the same muscles that one would use for a bowel movement.
- ⊙ To rest and breathe between contractions.
- ⊙ Wipe her face between contractions and offer sips of water
- ⊙ Tell her when you can see her baby's head
- ⊙ Do not become discouraged if your baby's head emerges and then slips back into the vagina
- ⊙ Don't be offended if she displays anger or becomes emotional.



### Breathing Techniques in Second Stage Labour

#### Short Breath Holding

- ❖ *In this stage, you may feel the impulse to push down with each contraction.*
- ❖ *While pushing down, hold the breath for a short time, about 5-10 seconds.*
- ❖ *Push during breath holding.*

#### Panting

- ❖ *Panting is like blowing out a candle over and over again, that is quick shallow blows. Use it to control the urge to push, for example, when the baby's head is crowning.*



### 3. Placental Stage or Third Stage

Delivery of the placenta. Placenta is a flower shaped organ that feeds a developing baby inside its mother's womb and is delivered after the baby's delivery. This may take from 5-60 minutes.

#### What the Birth Companion should do in this stage

##### Congratulate her with a pat on the back - she is a mother

- ❖ Help her hold her baby skin-to-skin and wipe the baby while keeping on the mother's tummy
- ❖ Ask her to greet her baby
- ❖ Help the ANM cut the baby's cord after some time
- ❖ Help her breastfeed immediately
- ❖ Check for heavy blood loss. Check if she needs stitches, although it is rarely required.
- ❖ Dress the child



*Skin-to-skin contact helps bonding, so it is a good idea to have your baby lifted onto you before the cord is cut so that you can feel and be close to each other straight away. The cord isn't cut until it's stopped pulsing – this means blood is still passing from the placenta to your baby. This usually takes around 2-4 minutes. The umbilical cord is clamped and cut, the baby is dried to prevent them from getting cold, and you'll be able to hold and cuddle your baby. Start breast feeding as early as possible.*



## 4. Recovery stage or Fourth stage

The fourth stage of Labour is the first two or three hours after birth. During this time you might experience tremors and chills, as well as discomfort from after-pains, episiotomy or tears, and hemorrhoids. You may also feel dizzy or faint if you stand up.

### What the Birth Companion should do in this stage

- ❖ Support the mother
- ❖ Observe her for any bleeding
- ❖ Monitor the pulse and blood pressure



#### **Should I Store My New-born's Cord Blood?**

*Indian Council of Medical Research believes that private storage of cord blood as "biological insurance" is not currently recommended and has found no scientific evidence "to substantiate clinical benefits with the use of stem cells derived from cord blood."*

# YOUR BABY

## CONGRATULATIONS ON THE BIRTH OF YOUR BABY!

*After a long wait of 9 months, your baby is the greatest gift you will ever receive. From the moment you first hold this miracle of life in your arms, your world will become broader and richer. You will experience a flood of feelings, some of wonder and joy and others of confusion and of being overwhelmed.*

*This section will help you to learn about your baby, her needs and also guide you on caring for your baby – how to help her to grow and achieve her full genetic potential.*



## Introduction

Mothers are Mothers. Any mother, human or animal, always nurtures, protects and teaches her young one to function and survive in this world. From first steps to survival skills, animal mothers teach their babies the same lessons as human mothers. What then, is so special or unique about a human child and her mother?

## Early Brain Development

During the first three years of a baby's life, the brain grows and develops significantly and patterns of thinking and responding are established. During this period a baby's brain is twice as active as an adult's brain. As a parent you have a very special opportunity to help your

baby develop socially, physically, and cognitively. The first years last forever.

- ⦿ A child needs to feel special, loved, and valued.
- ⦿ She needs to feel safe.
- ⦿ She needs to feel confident about what to expect from her environment.
- ⦿ She needs guidance.
- ⦿ She needs a balanced experience of freedom and limits.
- ⦿ She needs to be exposed to a diverse environment filled with language, play, exploration, books, music, and appropriate' toys through play and stories.



*Brain is the only organ not fully developed at birth. 90% of critical brain development occurs in the first 1000 days.*







## Why is a human child so unique?

As human beings or Homo sapiens, meaning the “wise man”, our identity in the animal world is our highly evolved brain. How can we, as parents’ nurture, protect and help our children grow to their full potential and not merely survive? This is something that requires us to think, learn and practice. On one hand, we must benefit from age-old child rearing practices based on traditional wisdom and on the other hand, we must also learn the good practices of the modern world based on science and logic. We, as parents, must assure that our child’s brain and body grow and blossom to its full potential. Herein, we have a large role to play especially in the first two years of life.

New parents are typically most concerned about the baby’s overall wellness but also about gender, skin colour, and birth weight and birth time. However, the most important thing that requires our attention would be measuring the new-born’s head circumference, which can be done by a simple measuring tape. Measuring the head circumference helps doctors and parents track the brain’s growth.

# What makes us human?



## ELEPHANT

*The mother is mostly worried of the weight. Elephant weighs around 6,000 Kg where as a man weighs about 60 kg!*



## GIRAFFE

*The mother is mostly worried of the height Giraffe's neck alone is 6 feet long and the total height would be around 18 feet!*



## PEACOCK

*The mother is only worried of the Beauty. The feathers of the peacock are composed of many colors, including the crescent sheen of bright blue and green. But the peacock has a very small brain.*



## HUMAN CHILD

*The mother should be mainly concerned about the Brain. The story of the brain started in the womb, the structure was made in the womb but the wiring between the brain cells is not completed and the first 2 years of life is crucial for this wiring of brain which shapes us as adults.*

## BRAIN

"The brain of a term child is underdeveloped at birth and most development will take place in the next 24 months. Let us not miss the opportunity"

"The genes are the bricks & mortar to build a brain. The environment we provide, as parents, is the architect". We should try to give the right environment for developing the brain.

At Birth, only 25% of the eventual brain is formed. 75% of the human brain develops in the first 3 years. This is catalyzed by environmental stimuli which is in the hands of care givers.



*Head circumference accurately reflects brain size and growth during the first years of life--the period of the majority of brain growth--except in unusual situations.*

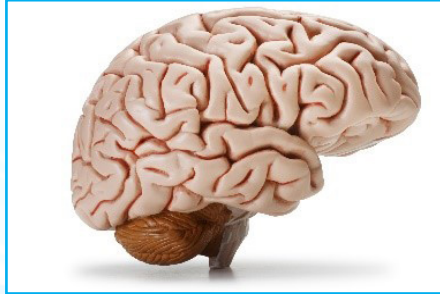
- ❖ *The average newborn's head circumference measures about 33-34 cm*
- ❖ *Birth - 3 months: an increase of 1.5 -2 cm per month*
- ❖ *3 to 6 months: an increase of 1 cm per month*
- ❖ *6 to 12 months: an increase of 0.5 cm per month*
- ❖ *In the first 12 months: Total 10-11 cm gain*
- ❖ *In the next 12 months: 2.3 cm gain per year*

## Building the brain is like building a house



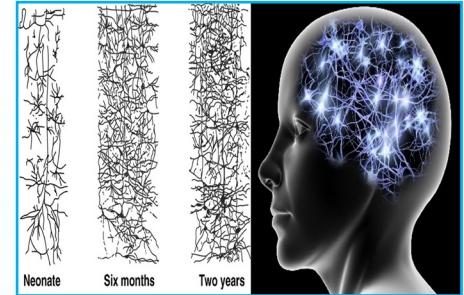
### HOUSE

*While building a house, the base or the foundation is laid first, followed by walls and floors. Lastly, the electrical system is wired. The electrical wiring connects all the rooms and illuminates the entire house.*



### HUMAN BRAIN

*In the brain, the basic structure or foundation is formed inside the womb. The “wiring” of the brain starts when the brain cells start connecting to each other and this helps the different parts of the brain to communicate with each other. Brain is most active and receptive in the first 2-3 years because this is the period when maximum wiring is completed.*



### WIRING OF THE BRAIN

*In the first two years, babies make 700 new connections every second!*





## The Most Important Things:

- ❖ It does not matter whether your child is a male or female
- ❖ It does not matter whether your child is fair or dark skinned
- ❖ It does not matter whether your child is tall or short
- ❖ It does not matter whether your child is thin built or chubby
- ❖ It does not matter in which community or in which part of the world your child was born as 99.99 % of the genetic material is the same among any two human children on this planet (Findings of the Human genome project)

So, you should be happy as long as your child is healthy and disease free.

However, what matters most is the brain development of your child. The potential of the brain to develop in the child does not differ in a boy or girl, dark skinned or fair skinned for the brain has no color. Brain has its own height, its own weight and its own beauty. It is the developed brain which can transform the family, society, country and the world at large.



### ***Danger Signals In New Born***

*Following conditions in a baby needs contact with M.O. or ANM*

- ❖ *Difficulty in breathing*
- ❖ *Inability to suck*
- ❖ *Inability to pass urine and stools*
- ❖ *Umbilical stump is red or has pus*
- ❖ *More than 10 pustules over body or one large boil*
- ❖ *Jaundice*
- ❖ *Fever*
- ❖ *Diarrhoea*
- ❖ *Dull and lethargic baby*
- ❖ *Seizure*
- ❖ *Eyes are red or infected*
- ❖ *Any birth defects are seen*

# FIRST HOUR, FIRST DAY

THE FIRST HOUR OF YOUR BABY'S LIFE IS CONSIDERED THE GOLDEN HOUR

*If you have a normal delivery, insist on spending the first hour or so after birth, interacting with your child. Holding the baby, stroking and looking at the baby is very important in the first hour of life, as most babies are usually alert and responsive during this time.*

## Bonding

The first exchanges of eye contact, sound and touch between you, as a mother, and the child, deepen the mother-child bond. Bonding triggers the connection of the wires of the

child's brain, leading to relaxation and development of intelligence. This also lays the foundation of parent-child relationship.

### What you need to do?

- ⦿ Spend the first hour or so after birth holding, stroking, and looking at your baby. Because babies are usually alert and very responsive during this time, researchers have labeled this as the sensitive period.
- ⦿ Respond to your Baby whenever she cries promptly & gently without delay. You cannot spoil a young baby by giving her extra attention.



*The moment a child is born, the mother is also born.*







## Plan the Golden Hour

- ⦿ Immediately after birth, the baby should be dried with a clean towel and dressed in the soft Cotton clothes that you have already prepared.
- ⦿ Do not give your child a bath as the child was already swimming and taking a bath in your womb. She is clean and just needs drying up.
- ⦿ Sometimes your baby's skin is covered with a thick, white, cheese-like layer called vernix. Do not remove it for it gives your child's skin, protection from infection, is a moisturizer and is also your baby's first blanket.
- ⦿ Have clean clothes for the baby ready: A pair of gloves or mittens, socks, long sleeved dress, clean towels and cotton diapers. The baby's dress should be made of clean, soft, 100% cotton cloth. It should cover the baby's upper body, should have long sleeves and no buttons.
- ⦿ Breastfeeding should be started within the first hour of birth. The stomach size of the newborn is 1.5cm in diameter approximately. By day 3 it increases to 2.5 cm and by day 10 it becomes 3.7cm in diameter. The amount of milk the mothers produces is in accordance to the increasing stomach size. If we give more milk, than the stomach size there is a chance of vomiting and aspiration, i.e. milk going into respiratory tract of the child which may lead to death.

- ⦿ It is quite normal if you do not immediately have warm feelings for your baby. Labor is a demanding experience and your first reaction for birth may be a sense of relief that at last it's over. Give yourself at least half an hour so that the strain of labor fades away. Drink some water and request that your baby is kept next to you. Watch your baby and hold her. The connections will automatically start building in your brain as well as the newborn's brain.
- ⦿ Nursing the baby within the half an hour of delivery, is extremely useful:
  - Breastfeeding benefits you by causing your uterus to contract and reduce the amount of uterine bleeding.
  - The first hour is best to start breastfeeding as the baby is awake and alert. Soon the baby will go into a deep sleep and then it may become difficult to start breastfeeding.
  - For the first two to five days after delivery, your body produces colostrum, a thin yellow fluid that contains protein and antibodies to protect your child from infection. It is your child's first vaccine, do not miss it.



### **Colostrum Is Your Child's First Vaccine**

*Your first yellow milk is vital for baby's nutrition and protection against infection. The amount of colostrum and milk within the first couple of days may be very less but do not worry. This quantity is sufficient for your child. It will increase as your baby grows.*

## Reflecting on your child's arrival:

- ⦿ After all this activity, during your child's first hour of life, your baby will probably fall into deep sleep, giving you time to rest and think back over the exciting things that have happened to you since the labor has begun.
- ⦿ Make sure the baby sleeps with you. Touch her, draw her near your breasts, but you also need to relax and sleep to gather your strength.
- ⦿ It is nice to sleep along with your child and follow her routine rather than make her follow yours.
- ⦿ You have a very big job ahead of you, you are a parent now.



### Right after Birth

- ❖ *It is important to stay in the health facility where you deliver for a minimum of 48 hours as most complications in mother and baby occur then.*
- ❖ *You and your baby should be seen by a health worker on the day of delivery, and on 3rd day, 7th day and 6 weeks after delivery.*
- ❖ *Baby should get vaccination for 0 dose Polio, Hepatitis B (if recommended under routine immunisation) and BCG on the first day.*
- ❖ *You will also receive counselling on cord care, keeping the baby warm, respiratory infections, loose motions, nutrition and family planning, during your stay.*
- ❖ *Take extra calories and fluids to fulfill requirements of breast feeding.*
- ❖ *Take adequate rest.*
- ❖ *Take immediate medical help if any complications appear in yourself or your baby.*

Look at the child face for his/her expression. They offer cues for us as parents to understand them.



### DROWSY

*Some movement. Allow her to sleep. Protect from strong light and sound.*



### ACTIVE SLEEP

*Dream sleep or light sleep and unless careful newborns awaken easily. Baby may twitch or jerk her arms, legs, her eyes move under her closed eyelids. Breathing is often irregular and may stop for 10 seconds, then starts again with a burst of rapid breathing for 10 seconds.*



### DEEP SLEEP

*A non-dream or deep sleep baby will breathe deeply and regularly. Sometimes with a big sigh. Child will lie very still with no body movement; no eye movement, breathing is smooth and rhythmic. Does not awaken easily.*



### QUIET ALERT

*Quiet Alert is best for bonding. Interact with your child. Newborn has sustained gaze, limited movements.*



### ACTIVE ALERT

*Lots of activity, mild distress occasionally.*



### CRYING

*Crying is a language of the baby. Pick up the baby and console her. Feed her if you think she is hungry.*

## Your baby's Essentials

### Baby clothes

- ❖ should be made of 100% cotton only.
- ❖ should be long sleeved with no buttons.
- ❖ should not make the baby too warm or too cold.



### Baby Pillow

Make a traditional baby pillow out of dried yellow mustard or Rai seeds. The mustard seeds mold to the natural shape of the new-born baby head and prevent the head from becoming flat at the back. Flatness of the back of baby's head often leads to deformed skull shape called deformational Plagiocephaly or flat head syndrome. It is a condition characterized by an asymmetrical distortion (flattening of one side) of the skull.





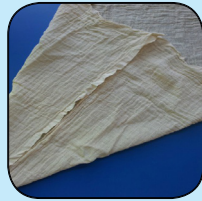
## Baby Diapers

Make baby diapers with soft muslin cotton fabric only.

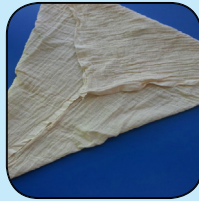
### Using Muslin: How to fold "Diaper"



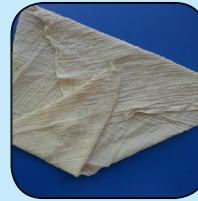
1. Place pre-washed muslin flat on your change pad.



2. Fold top left corner and bottom right corner into the middle to create a "Kite"



3. Fold top down.



4. Fold bottom piece up.



5. Fold the sides into the middle to create a narrow piece.



6. Your flat is now folded.



7. Place your baby on top of your folded diaper.



8. Fold the middle piece up between the legs.



9. Place the side pieces on top.



10. And secure it.



11. Stuff the edges around the legs inside.



12. Add an optional re-usable waterproof cover.

## When not to worry?

					
1. Normal bleeding in the eye (subconjunctiva)	2. Swollen eye lid	3. Ear tag	4. Breast swelling : please do not press it. It is normal	5. Vaginal discharge including blood is normal in female newborns. This would stop on its own.	6. White pearl like swelling on the hard palate
					There may be some changes on the skin and body of the baby which can make you feel worried. But there are some changes which may look abnormal but are completely physiological.
7. Rash on day 2 or 3 of life. Very small white to yellow swelling surrounded by red patch your folded diaper.	8. Neonatal acne	9. Black to grey coloration on the back, buttocks and around the wrist and ankle	10. Red patches at the back of neck	11. Red patches on the forehead and between eyes	





# BASIC INFANT CARE

## LEARN TO CARE FOR YOUR BABY

*When your baby first arrives, you may feel a bit tired caring for her. Even routine tasks, such as diapering and dressing, can fill you with anxiety. Do not worry. You will soon develop the confidence of an experienced parent. Your baby will give you the most important information on how she likes to be treated, talked to and held for being comforted.*

*This section will help you understand how to take care of your newborns and respond to their needs.*

## Feeding your Baby

Continue breastfeeding your baby from the first hour of birth till she is 6 months old. Holding your baby close will help in establishing lactation within the first week.

### Breast feeding:

#### Getting started: Preparing the baby for breast feeding

1. Skin-to-skin contact immediately after birth and zero separation of baby from Mother helps in establishing and continuing breast feeding. New-borns have a very powerful sense of smell and almost all of them can recognize their mother's own breast milk smell.
  2. Ensure that the first milk or
- colostrum is given to the new-born. It's a very concentrated food, so your baby will only need about a teaspoonful at each feed. It is the first protection that the child gets.
  3. Letting down and correct latching on to the breast: After your baby is born, the mother's breast is ready to produce milk. The process begins with the baby getting a good grip on the areola and not the nipple and starts to suck. The first feeding should be done immediately after birth.
  4. Relaxed mother: The more relaxed and confident the mother feels, the quicker the milk will let down.
  5. Frequency: The more the mother breastfeeds, the more your baby's sucking will be stimulated and the more milk is produced.

“

*The child will guide you automatically to many of the right responses as soon as she is born.*

”



## How often should I feed my baby?

How often babies feed varies. As a very rough guide, your baby should feed at least eight times or more every 24 hours during the first few weeks. It's fine to feed your baby whenever they are hungry, when your breasts feel full or if you just want to have a cuddle. It's not possible to overfeed a breastfed baby.

Breastfed babies generally feed more frequently than bottle-fed babies. Once the milk has come, new-born will typically feed 8-12 times a day. This does not mean that the child is not getting enough milk each time. The best feeding schedule is what the baby designs for herself.

### When your baby is hungry, she may

- ❖ get restless
- ❖ suck their fist or fingers
- ❖ make murmuring sounds
- ❖ turn their head and open their mouth (rooting)
- ❖ It's best to try and feed the baby during these early feeding cues as a crying baby is difficult to feed.

The volume of milk produced by the breast increases dramatically over the first week. In the first few days, one may produce as little as 1 teaspoonful i.e. 5 ml at each feeding, but by 4-5th day the volume increases may be up to 20-30 ml.

### How do you know if your baby is getting enough?

The baby's diapers usually provide clues whether she's getting enough milk. On the first day, the child wets only one diaper but by day 7, they generally wet 6 or more diapers and pass at least 3 yellow stools.

### Feeding Patterns

Each baby has a particular style of feeding. Some would start immediately, as soon as they are put to breast. Some would take time. One needs to have patience and understand this behavior.



*Burping should be done after every feed.*



*Please do not give "Janam Ghutti" or Honey or any other fluid other than mother's own milk, even once.*

## Immunization

The first day injections the baby will be given are Vitamin K1, BCG, Hepatitis B and Oral polio. Vitamin K1 vaccine is given within one hour of birth to prevent rare bleeding disorders in newborns which can cause serious problems.

## Responding to Newborn Cries

Crying serves several purposes for your baby.

- ❖ It allows her to call for help to attend to her needs.
- ❖ It helps her shut out extra light, sounds and other sensations that are too intense for her.
- ❖ It also helps her release tension.
- ❖ Pay close attention to your baby's different cries. You will soon be able to find the reason behind it.
- ❖ When responding to the child's cries, try to meet the most pressing need first.
- ❖ Check if her extremities are cold or if the diaper is soiled.



*A hungry cry is usually short and low pitched and it rises and falls. An angry cry will tend to be turbulent. A cry of pain comes on suddenly and loudly with a long high pitch shriek followed by a long pause and then and then a flat wave.*

## Helping your Baby Sleep

Beginning from the first week till she is 2-4 weeks old, the baby will follow a unique sleep cycle. She may want to sleep during the day and stay awake at night. You should rest when your baby is sleeping. Provide a suitable environment, by avoiding bright light into the room, in the room when the baby is sleeping and allow light to come in when the baby is awake.

Babies usually sleep for 16-18 hours and this duration will gradually decrease with time. You can help your baby sleep by –

- ❖ Ensuring baby is well-positioned and well covered to allow sound sleep
- ❖ Ensuring the baby is warm and well fed before trying to make your baby sleep
- ❖ Understanding your baby's sleep cycle and ensuring adequate sleep
- ❖ Allow the baby to maintain her own sleep cycle.







## Urination and Bowel Movement

A baby usually passes urine 6-8 times a day, if adequately fed. If the baby passes less urine, the mother should be aware of the inadequacy of her milk. A baby will usually pass semi-solid stool when on breast milk and sometimes may not pass stool at all. There is no reason to be alarmed unless the baby is not taking the feed, vomiting or showing signs of discomfort.

## Care of the Diaper Area

Wash your hands with soap and water each time you change your child's diaper. Ensure provision of sufficient number of child's clothes and diapers. One may require 8 – 12 changes per day. Ensure temporary diaper storage container with a lid to temporarily store soiled diapers prior to final disposal or washing and reusing.

Diaper area is exposed to excessive hydration, occlusion, friction and maceration. Water and wet cloth are the gold standards for cleansing the nappy area. Mothers are advised to use cloth napkins which should be changed frequently. It is important to keep the area dry. After defecation, moistened cloths or cotton balls soaked in lukewarm water can be used for cleaning the area. In case diapers are used, barrier creams containing zinc oxide and petrolatum based preparation could be used. Cloth napkins are to

be washed with a mild detergent in warm water and dried in sunlight. Use of antiseptics is to be avoided as a routine.

## Care of the umbilical cord

Umbilicus should be kept dry and clean. Lukewarm water should be used for cleaning and cord should be kept exposed to air.

## Care of the scalp

Crusts and scaling of scalp (peeling of scalp) is common in new borns. Baby shampoos which are free from fragrance could be useful in removal of crusts and scales. Wash the baby's scalp and hair only after the cord falls off. After that, you can wash your baby's scalp and hair twice every week.

## Care of the skin of preterm baby

Practice gentle and minimal handling of pre-term babies. Parents and health care providers should follow strict hand hygiene practices. Give sponge bath only till the baby attains 2.5 kg weight. After that, regular bath can be given, using a mild cleanser.





## Bathing your Baby

Make sure your nails are always cut before touching the baby. You can start bathing the baby after they have stabilized (usually 48 hours in a normal delivery of normal weight baby).

Routine bathing of newborns and infants doesn't cause any harm. Daily baths are more preferable. During winter and in hilly regions, babies may be given bath twice or thrice a week.

## Massaging your baby

### Massage or Touch therapy

Touch is considered absolutely essential for growth and development of a new born. Systematic application of touch is termed as massage. Massage promotes circulation, suppleness and relation of the different areas of the body and tone up the muscles. Massage results in promotion of mother infant bonding.



- ❖ Bath should be given in a warm room
- ❖ Bath water should be lukewarm (Temperature of the bath water should not exceed 37-degree Celsius)
- ❖ Check the temperature of the water before placing the baby in the bath
- ❖ Bathe baby by putting a small amount of water over baby's scalp, neck folds and groin areas. The diaper area should be cleaned last as this is usually a contaminated area.
- ❖ Bath duration should not exceed 5 minutes. Longer baths can cause over hydration of the already fragile baby skin and decrease threshold for injury.

## Benefits of Oil Massage

Oil enhances skin barrier function, acts as a source of warmth and nutrition and increases weight gain. Infants also show less stress behavior following massage. You can use Coconut and sunflower oil to massage your baby. Avoid using mustard oil, olive oil, mineral oil and synthetic oil for massaging newborns. Oil massage should be given before bath during summer and after bath during winter.

Massage is to be given to babies when they are alert and active, preferably 1 to 2 hours after feed. Massage is to be done in a warm room. Mother or the care giver has to cut their nails, and to remove the rings and watch. Strokes should be gentle and firm and not jerky. These gentle strokes should be given from head to foot. As the baby may not lie still, one should work with and not against the movements. Full body massage will take 15 minutes.





## Stimulation for your Baby

Providing the right stimulation at the right time is the key for brain development. The stimulation program will be of use to the parents of high risk babies as well as to the normal child to bring best out of them. Mother should be therapist for this program. Age appropriate toys and stimulating environment plays a key role in development of the child.

### Here are some tips for positive stimulation and bonding:

- ❖ Respond in a gentle and positive manner to your baby's cries and cues.
- ❖ Ensure proper positioning close to the mother and cuddling when the baby gets frustrated/ disturbed.
- ❖ Massaging also ensures bonding.
- ❖ Spend lots of time sharing loving eye contact with your baby, while being sensitive to when they need a break and may look away.
- ❖ Babies thrive on parents' love and attention and enjoy lots of positive touch in these early days. Some might say "you will spoil the baby" but this is impossible when you are responding to your baby's needs.

- ❖ Talk to your baby often and try to put what your baby is feeling into words. For example, “You’re so happy to be playing this game”.
- ❖ Make a running commentary of whatever you are doing like name actions that you are doing e.g. when dressing baby “One arm through, other arm, over your head!” Over time, this helps babies learn to predict what is happening next.
- ❖ Enjoy your baby while following their lead. This will help you both to build a sensitive relationship. For example, if your baby is looking at the fan sit near them and describe it.



# MILESTONE MOMENTS

CHILDREN LEARN WHAT THEY EXPERIENCE

*How your child plays, learns, speaks and acts offers important clues about your child's development. Check the milestones your child has reached at each age. Also learn what you need to do to help the child achieve these milestones.*



## Introduction

Research about brain development suggests that experiences during the first two years of life have a major impact on your child's future. Each time you play, talk, touch and respond to your child in a loving manner, you have made a significant difference. This chapter

is filled with important activities that the children do at each stage of development and what we need to do to benefit our children at each stage of development. This would also be a reminder to all parents, the importance of play activities.

“

*“If you want your children to be intelligent, read them fairy tales. If you want them to be more intelligent, read them more fairy tales.” - Albert Einstein*

”



# Birth to 2-3 Months

Talk with your baby's doctor at every visit about the milestones your child has reached and what to expect next.

## What most babies do at this age?



- Begin to recognize the faces of the people at 8-12 inches away
- Prefer human faces and black and white contrast patterns
- Follow moving objects
- Pay close attention to and turn head towards the voice of the mother
- Begin to smile at people
- Startle or erupt into cry at loud noises
- Coo, make gurgling sounds when happy or after feeding
- Can hold head up and begin to push up when lying on tummy
- Make smooth movements with arms and legs
- Keep hands relaxed and take swipes at dangling objects
- Begin to babble

## What you should do?



- ❖ Cuddle, talk, and play with your baby during feeding, dressing, and bathing
- ❖ Attend to cries immediately and hold the baby close to make her feel secure
- ❖ Help your baby learn to calm herself. It's okay for her to suck on her fingers
- ❖ Act excited and smile when your baby makes sounds
- ❖ Help your baby learn to calm herself.
- ❖ Pay attention to your baby's different cries so that you learn to know what she wants
- ❖ Talk, read, and sing to your baby
- ❖ Lay your baby on his tummy when she is awake and keep toys near her

Contact ANM/AWW/health care provider immediately if you see any one of these "Warning" signs



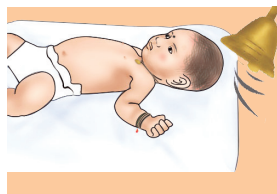
No social smile



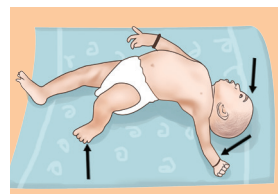
Does not make any eye contact when being fed, cuddled or spoken to



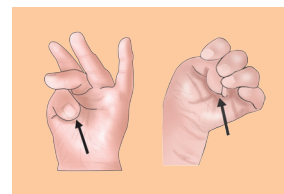
Persistent squinting after 2 months



Does not startle / wake up / cry in response to sudden loud sound



Head pushed back, with stiff arms and legs



Hands are kept fisted or open with thumbs held persistently inside the palm

## Learning through play & Age appropriate Toys



The traditional "jhoola" or "thooli" is essentially a U-shaped cloth hammock made from the mother's cotton sarees, traditionally used to put babies to sleep and gives the same posture which she was feeling in the mother's womb. This carries the smell of mother which makes the child relax.



Babies enjoy looking at colorful objects and shapes and can see only up to 30 cm. So hang toys close to their face. At this stage of development Child begins to recognize the face of their mother.



Parents should talk to them and sing to them. Mother's should not use any body spray as this mask the mother's original smell which helps the baby to identify. Mother's hair style should not be changed as this helps the newborn to recognize her with his/her limited vision.



Shake a rattle, bell or a squeaky toy so that they familiarise with the source of sound and enjoy.



These red bangles or black and white toys can be tied to a thread and dangled in front of the baby to help in visual fixation and tracking and to initiate reaching for the object. These colorful Pipli or Dhauli clothes are visually stimulating for children and can be hung near the child at a distance of 40-50 cm from the child's face.



# Your Baby at 4 - 6 Months: "The Looker"

Talk with your baby's doctor at every visit about the milestones your child has reached and what to expect next.

## What most babies do at this age?



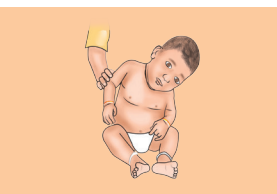
- ◊ Copy some movements and facial expressions, like smiling or frowning
- ◊ Like to look at self in a mirror & Reach for toy with one hand
- ◊ Attempt to reach and grasp a toy, using both hands and eyes together
- ◊ Follow moving things with eyes from side to side
- ◊ Keep head steady, unsupported, when held upright
- ◊ Can hold a toy and shake it & Bring hands to mouth
- ◊ Push up to elbows, when lying on tummy
- ◊ Smile spontaneously, especially at known people
- ◊ Like to play with familiar people and might cry when playing stops
- ◊ Begin to babble ('ah', ee, oo, other than when crying), laughs aloud or makes squealing sounds
- ◊ Respond to affection and let you know if she is happy or sad

## What you should do?



- ◊ Hold and talk to your baby. Smile and be cheerful while you do
- ◊ Show her a mirror and ask, "Where is my baby?"
- ◊ Set steady routines for sleeping and feeding
- ◊ Play games such as peek-a-boo
- ◊ Show her the pictures and name the objects but don't teach her the alphabet. Tell her stories.
- ◊ Babies learn by exploring objects in their homes. Put interesting and safe things on the floor for the baby to reach out and explore.
- ◊ Take children outdoors and introduce them to the outside world.
- ◊ Children suck on their fingers and thumb for comfort. It is not a cause for concern. Do not stop at this early age.
- ◊ Communicate with baby. Imitate baby sounds and praise her when she imitates yours.

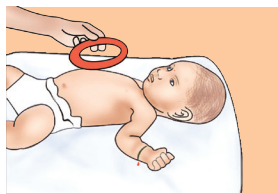
Contact ANM/AWW/health care provider immediately if you see any one of these "Warning" signs



Lacks head control



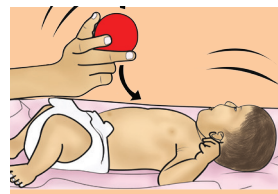
Cannot sit up even with help



Does not grasp things within reach



Does not vocalize by making different sounds, such as 'ah', 'ee', 'oo'



Head and eyes do not move or track a moving object



Unable to raise head when on tummy

## Learning through play & Age appropriate Toys



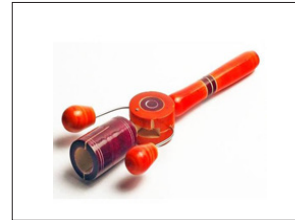
*Give your child unbreakable plastic mirrors attached to the inside of bed or hand held mirror at 6 month of age.*



*Play with soft balls including some that make soft, pleasant sounds.*



*Textured toys which can be prepared at home will help children understand the feel of various textures.*



*Babies can hold the rattle in their hands and can enjoy the sound by 4 months of age.*



*Give children small, rounded push toy like simple cars or animals on wheels / rollers (starting around 6 months).*

# Your Baby at 7 - 9 Months: "The Cruiser"

Talk with your baby's doctor at every visit about the milestones your child has reached and what to expect next.

## What most babies do at this age?



- ⊙ Roll over or turn over in both directions
- ⊙ Grasp a toy by using all fingers
- ⊙ Locate source of sound
- ⊙ Turn head to visually follow familiar faces or toys
- ⊙ Utter consonant sounds like 'p', 'b', 'm'; start babbling like "mamama" and "bababa"
- ⊙ Looks for toys that have been hidden in front of them
- ⊙ Respond to name being called
- ⊙ Stretch arms to be picked up
- ⊙ May be afraid of strangers
- ⊙ Put things in mouth
- ⊙ Move things smoothly from one hand to the other

## What you should do?



- ❖ Let children drop, bang and throw things repeatedly.
- ❖ Respond to the noise that the child makes in a gentle and patient manner
- ❖ Give your child clean, safe household utensils to play and explore
- ❖ Play games like peek-a-boo and hide-and-seek
- ❖ Hide a child's favorite toy under a cloth or box. See if the child can find it.
- ❖ Play games with "my turn, your turn"
- ❖ Teach cause-and-effect by rolling balls back and forth, pushing toy cars and trucks and putting blocks in and out of a container.
- ❖ Read and talk to your baby

Contact ANM/AWW/health care provider immediately if you see any one of these "Warning" signs



Cannot roll over



Needs support to sit



Does not turn towards a sound (out of sight)



Does not utter pa..pa..pa, ma..ma..ba..ba, etc.



Tilts head to one side each time when looking at objects

## Learning through play & Age appropriate Toys



*Peek-a-boo develops understanding for partially hidden objects. Babies will reach for an object that is partially hidden, indicating knowledge that the whole object is still there. If an object is completely hidden however the baby makes no attempt to retrieve it initially.*



*Let your child play with toys, in different sizes, shapes and colors, that can be stacked.*



*Use squeeze and squeak toys.*



*Give her interlocking plastic discs on a ring, and safe plastic rings for mouthing and teething.*

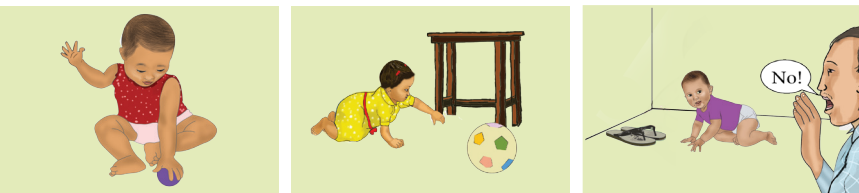


*Encourage the child to play with blocks and shapes.*

# Your Baby at 10 - 12 Months: "The Explorer"

Talk with your baby's doctor at every visit about the milestones your child has reached and what to expect next.

## What most babies do at this age?



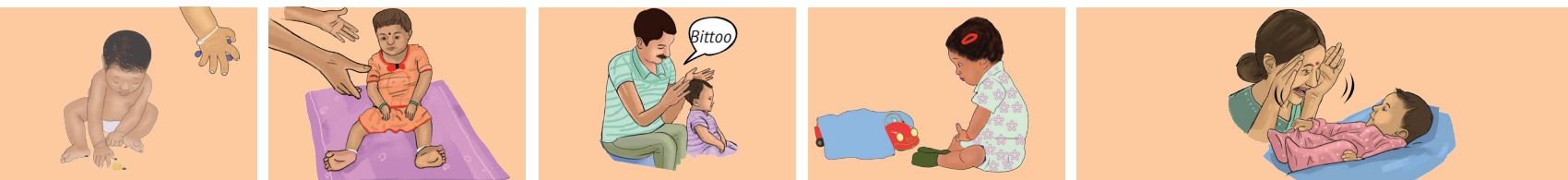
- ⊙ Sit without support and reach for toys without falling
- ⊙ Raise arms to be picked up
- ⊙ Crawl to get desired toys without bumping into any objects
- ⊙ Transfer object from one hand to another hand and bang two objects together
- ⊙ Use one or two common words in mother tongue
- ⊙ Say "mama" and "dada" and exclamations like "uh-oh!"
- ⊙ Respond to simple requests like "no", "come here" etc.
- ⊙ Cry when mom or dad leaves
- ⊙ Show or hand you a book when she wants to hear a story
- ⊙ Use simple gestures, like shaking head or waving "bye-bye"
- ⊙ Find hidden things easily
- ⊙ Copy gestures

## What you should do?



- ❖ Place a toy slightly out of reach to encourage standing and walking while using support
- ❖ While exploring, babies might hurt others accidentally. Show them how to touch gently. Do not shout at them.
- ❖ Tell your baby stories and read picture books aloud.
- ❖ Babies are curious about everything. They are learning to choose what to want to play with. Help them in their exploration but ensure their safety.
- ❖ Babies learn by watching what their parents do and then trying to copy the same. This is how they learn.
- ❖ Babies drop bang and throw objects to see what happens next. Parents should remain patient and turn this into exploratory play.
- ❖ Show and name things in their environment

## Contact ANM/AWW/health care provider immediately if you see any one of these "Warning" signs



Cannot pick small objects with finger and thumb

Does not stretch hands to be picked up

Does not respond to own name

Does not search for half hidden toys that the child sees you hide

Does not play social games like peek-a-boo (jhalak/aankh-michauli)



## Learning through play & Age appropriate Toys



Babies play and learn by exploring and Banging objects at home. Avoid any sharp objects.



Toys that have finger, hands and legs : like rag doll prepared from cloth.



Push and pull toys specially at the age of 11-12 months.



Baby books or old magazines with bright pictures (don't teach them alphabets but show only pictures and tell them stories).

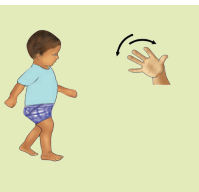


Babies play with toys of different color, shapes, size and surfaces to learn and explore. They tend to repeatedly bring two toys together and then pull them apart as a part of the play. They tend to put one tumbler into another and learn about sizes and shapes. Textured toys can be also prepared at home, to make them realize the feel of various textures.

# Your Baby at 13-18 Months: "The Walker"

Talk with your baby's doctor at every visit about the milestones your child has reached and what to expect next.

## What most babies do at this age?



- Can take several independent steps. Can walk alone.
- Use many familiar gestures like waving, clapping
- Put pebbles/small objects in a container
- Name and identify common objects and their pictures in a book
- Show interest in a doll or stuffed animal toy by pretending to feed
- May have temper tantrums
- Point to show someone what they want
- Say several single words, at least 5 words consistently even if not clear.
- Say and shake head "no"
- Know what ordinary things are for; for example, soap, glass, brush, spoon
- Scribble on her own, spontaneously
- Can follow 1-step verbal commands without any gestures; for example, sit when you say "sit down"
- Drink from a cup or small glass
- Eat with a spoon or own hands, though it may spill

## What you should do?



- ❖ Provide push toy for babies to learn walking
- ❖ Give some fruits, toys, etc. to children. Ask them to identify the objects, put them in and take them out of containers
- ❖ Ask your child simple questions. Encourage them to talk.
- ❖ Provide a safe, loving environment. It's important to be consistent and predictable.
- ❖ Praise good behaviors more than you punish bad behaviors.
- ❖ Encourage empathy. For example, when the baby sees a sad, encourage her to hug or pat the other child.
- ❖ Read books and talk about the pictures using simple words.
- ❖ Provide toys that encourage pretend play, for example, dolls, play telephones.
- ❖ Encourage her to drink from a cup and use a spoon, no matter how messy.
- ❖ Blow bubbles and let your child pop them.

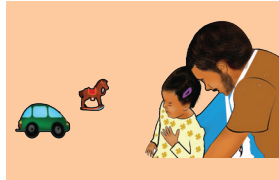
Contact ANM/AWW/health care provider immediately if you see any one of these "Warning" signs



Cannot stand on her own without support



Cannot put small objects in container



Does not point finger at an object when named



Does not respond to mother's gestures and seems to be in her own world



Does not use both hands for everyday activities (shows preference for one hand)

Amma,  
papa, dada

Does not say single words like "mama" or "dada"



# Your Baby at 13-18 Months: "The Walker"

## Learning through play & Age appropriate Toys



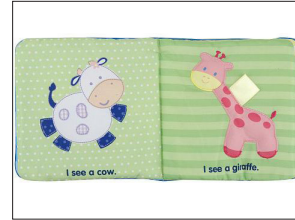
*Toddlers learn by imitating. They need many opportunities to practice.*



*Introduce picture books but do not teach the alphabet yet.*



*Toddlers are very active. Keep them safe as they walk, run and climb. Children of this age are quite curious.*



*Toys for this age group should be safe and able to withstand a toddler's manipulation. Examples include: Cloth or plastic books with large pictures, Kid cars, Musical toys, Nesting blocks, Stacking toys.*



*Push-and-pull toys(without long cords)*

# Your Baby at 18 - 24 Months: "The Doer"

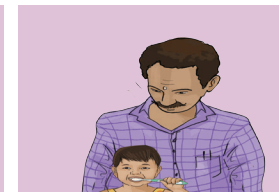
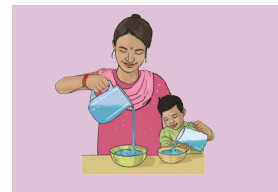
Talk with your baby's doctor at every visit about the milestones your child has reached and what to expect next.

## What most babies do at this age?



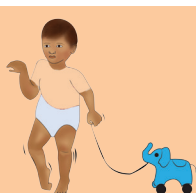
- Can take several independent steps. Can walk alone.
- Walk steadily even while pulling the toy
- Imitate household chores / tasks.
- Correctly point out and name one or more body parts in person or in books.
- Begin to run and kick a ball
- Prefer to play along with other children but not necessarily playing with each other
- Show defiant behavior (doing what he has been told not to)
- Play near or close to other children, but not with each other.
- Point to things or pictures when they are named such as dog, cat and birds
- Say sentences by joining two words like mama- dudhu (milk); mama-mam (water) etc.
- Copy action and words

## What you should do?

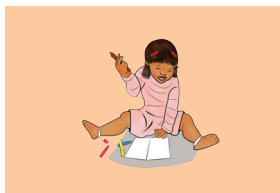


- Provide opportunity for children to walk, run and climb safely.
- Allow children to imitate you and help them by providing opportunity to practice their skills.
- Be patient with them even if they make a mess.
- Encourage children to follow a daily routine, such as sleeping and waking up, at a fixed time.
- Read aloud stories to your child often repeating them.
- Provide a copy and paper for the child to scribble.
- Encourage your child to help with simple chores at home, like sweeping and making dinner. Praise your child for being a good helper.
- At this age, children still play next to (not with) each other and don't share well. Give the children lots of toys to play with. Watch the children closely and step in if they fight or argue.
- Give your child attention and praise when he follows your instructions. Limit attention for defiant behavior. Spend a lot more time praising good behaviors than punishing for bad ones.
- Hide your child's toys around the room and let her find them.

Contact ANM/AWW/health care provider immediately if you see any one of these "Warning" signs



Does not walk steadily while pulling a toy



Cannot scribble

Give milk, amma come...

Does not use two word phrases such as "give milk"



Does not make appropriate response to gestures such as responding to bye-bye/Namaste

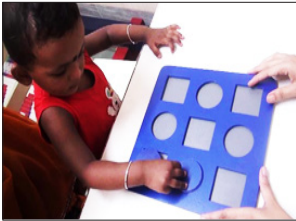


Does not point to body parts



Does not seem to understand and follow simple instructions

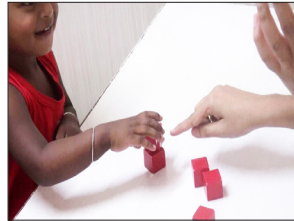
### *Learning through play & Age appropriate Toys*



Children start matching objects with similar shape and size.



*Kicking a ball. Learning to balance and anticipate while in motion.*



*Building blocks with cubes.*



## Social Toys



*Learning to share and socialize. Children play in presence of other kids engaging in the same activity, yet not paying attention to each other*

## While play is essential one needs to know when to stop and give rest

### Baby cues: 'I need a break or a change of activity'

If your baby turns her head away, arches her back or cries, s/he's telling you she needs a break or a change of activity. Try putting your baby on the floor to play or into bed if it's time for sleep.



### Baby tired signs: 'I need rest'

If your baby is yawning, rubbing his eyes or jerking his arms or legs, he's showing tired signs. Toddlers and older babies might whimper, cry and demand attention. Try giving your child some quiet time in bed to help her settle to sleep.

## Common Practices That Can Harm Your Baby

- ❖ Giving honey or 'Janam Ghutti' to a baby before 1 year of age
- ❖ Not giving breast milk for few days after birth
- ❖ Cow's milk – thinking it's light & sacred
- ❖ Over applying baby powder
- ❖ Giving a hard massage or giving a massage too often
- ❖ Trying to remove body hair using besan and atta (gram and "wheat flour)
- ❖ Applying 'surma' or 'kajal' to a newborn's eyes.
- ❖ It is best not to tie a black thread around your baby's wrist or neck. This can lead to choking, strangulation, infection in the skin. If need be, one can put a kaala teeka on the forehead or foot.
- ❖ Putting a few drops of oil in the ear and navel
- ❖ Leaving the child alone for short periods of time



# IMMUNIZATION

## PROTECT YOUR BABY

*Vaccines help strengthen your baby's immune system. This chapter talks about the age appropriate vaccines that are essential for your child.*



## Introduction

At birth, your baby leaves the protected and sterile environment of the mother's womb. The baby is now exposed to the hostile, outside world but her body lacks the experience to protect itself. To help the newborn develop immunity, we need to take 3 vital steps.

### Step 1:

Give mother's breast milk immediately after birth. The first day milk (Colostrum) is the first natural vaccine for the child. It is rich in protein and immunoglobulin and protects against all infections.

Though the baby may get only 3 - 5

ml colostrum at a time, it takes care of all her nutritional needs and gives protection against a number of diseases which the child may come in contact with, in the future. Colostrum makes your child stronger, do not miss it!

### Step 2:

Essential vaccines protect babies from many serious diseases and help them develop immunity (protection) against diseases, even before they come into contact with them. These vaccines are available free of cost with ANM or ASHA and Government hospitals. Remember to give all the vaccines on time, as shown in the chart on the next page.

“

*Give your child a disease-free future.*

”





### Step 3:

Feed only breast milk till the baby is 6 months old (Do not give even water). After 6 months, give only clean drinking water, as 'Water is life and clean drinking water is health'.

Breast milk contains antimicrobial components that help prevent certain acute infections in the baby.










The following chart will familiarize you with –

1. Essential vaccines for the baby
2. Basic developmental milestones
3. Toys that aid your child's development needs

This chart will help to serve as a ready reckoner for the questions, you may have, as your child grows and develops.

## Immunization Essentials

Vaccination Name \ Age	Birth	1½ Month	2½ Month	3½ Month	6 Month	9 Month	18 Month	24 Month
<b>OPV</b> <i>Prevents Polio</i>	✓	✓	✓	✓			✓	
<b>HEP-B</b> <i>Prevents Liver Disease</i>	✓							
<b>Rota Vaccine</b> <i>Prevents Diarrhea</i>		✓	✓	✓				
<b>BCG</b> <i>Prevents Tuberculosis</i>	✓							
<b>PCV</b> <i>Prevents Pneumonia &amp; Meningitis</i>		✓		✓		✓		
<b>Pentavalent= DPT + Hib + HEP-B</b> <i>Prevents whooping cough, diphtheria, tetanus meningitis, &amp; more</i>		✓	✓	✓				
<b>IPV</b> <i>Inactivated Polio Vaccine</i>		✓		✓				
<b>Vitamin A Oil</b> <i>Prevents Night Blindness</i>						✓	✓	✓
<b>Measles &amp; Rubella( MR)</b> <i>Prevents Measles &amp; Rubella</i>						✓	✓	
<b>Japanese Encephalitis(JE)</b> <i>Protects from Brain Fever</i>						✓	✓	
<b>DPT: Booster</b>							✓	

Age --->	Birth	1½ Months At 6 Weeks	2½ Months At 10 Weeks	3½ Months At 14 Weeks	6 Months	9 Months
<b>Indicative Milestones</b>						
<b>Age appropriate toys</b>	 <p>The baby loves colour and contrasts, responds to sound and touch, must have coloured toys with natural dyes</p>			 <p>Gripping and Grasping Skills</p>		 <p>Dexterity, Fine Motor Skills</p>
<b>Feeding</b>	Breast feeding	Breast feeding	Breast feeding	Breast feeding	BF + Weaning	BF + Weaning
<b>Vaccines</b>						
<b>OPV</b> Oral Bivalent Polio Vaccine	OPV-0	OPV-1	OPV-2	OPV-3		
<b>HEP-B</b> Prevents Liver Disease	HEP –B Give within 24 hours					
<b>Rota Vaccine</b> Prevents Diarrhea		Rota-1	Rota-2	Rota-3		
<b>BCG</b> Prevents Tuberculosis	BCG Only one dose					
<b>PCV</b> Prevents Pneumonia & Meningitis		PCV-1		PCV-2		PCV-3
<b>Pentavalent=</b> DPT + Hib + HEP-B		Penta-1	Penta-2	Penta-3		
<b>IPV</b> Inactivated Polio Vaccine		IPV-1		IPV-2		
<b>Vitamin A</b> Prevents Night Blindness						Vitamin A-1
<b>Measles &amp; Rubella( MR)</b> Prevents Measles & Rubella						MR-1
<b>Japanese Encephalitis(JE)</b> Protects from Brain Fever						JE-1

Age --->	12 Months	15 Months	18 Months	24 Months
Indicative Milestones	<div></div> <p>12 months</p>	<div></div> <p>15 months-Exploration</p>	<div></div> <p>18 months-finger pointing</p>	<div></div>
Age appropriate toys	<div></div> <p>* The little child 12-15 months is moving around the house, exploring, learning and possibly tasting every thing</p>		<div></div>	
Vaccines				
DPT : Booster			DPT : Booster-1	
Vitamin A <i>Prevents Night Blindness</i>			Vitamin A-2	Vitamin A-3
Measles & Rubella( MR) <i>Prevents Measles &amp; Rubella</i>			MR-2	
Japanese Encephalitis(JE) <i>Protects from Brain Fever</i>			JE-2	
OPV:Booster			OPV : Booster-1	

- ❖ **Pentavalent Vaccine protects against:** Diphtheria, Pertussis, Tetanus (DPT), Hepatitis B and Haemophilus influenza type b or Hib vaccine. Ensure three doses at 6, 10 & 14 weeks.
- ❖ **Rota Virus vaccine** protects against diarrhea especially due to Rotavirus: Three doses at 6, 10 & 14 week. Given orally.
- ❖ **Measles along with rubella** given to prevent Measles pneumonia and Rubella infection: Ensure 1st dose at 9-12 months of age and 2nd dose at 16-24 months.
- ❖ **Japanese Encephalitis** protects against encephalitis: 1st dose at 9-12 months of age and 2nd dose at 16-24 months.
- ❖ **Hepatitis B** protects from Jaundice due to

Hepatitis B: 0 dose: Birth dose for institutional deliveries with 24 hour. Three primary doses at 6, 10 & 14 week are part of Pentavalent vaccine.

- ❖ **OPV (Oral Polio Vaccine):** Zero dose for institutional deliveries. Three Primary doses to be given at 6, 10 & 14 weeks of age and one booster dose at 16-24 months orally.
- ❖ **IPV (Inactivated Polio vaccine):** at 6 and 14 weeks along with first and third dose of Oral Polio, child must receive injectable Polio IPV.
- ❖ **Vitamin A prevents:** Night Blindness 9 -1st dose at 9 months, 2nd dose at 18 months & 3rd to 9th dose given at 6 monthly intervals up to 5 years.

## Danger Signs: Abnormal Reaction to Immunization:

Contact your health worker if your baby shows the following after effects after vaccination:

- ❖ Inconsolable crying
- ❖ Unusual distress symptoms: skin becoming cold
- ❖ Unresponsiveness to stimulation i.e. is lethargic or unconscious
- ❖ Hypotonia (limp/decreased tone)
- ❖ Marked increase in sleeping time
- ❖ Persistent high fever (104 degrees Fahrenheit or greater)
- ❖ Seizure or convulsion
- ❖ Is sucking weakly or refuses to breast feed
- ❖ Is unable to cry or has difficulty in breathing
- ❖ Has yellow palm and soles
- ❖ Has blood in stools

## Normal Reaction to Immunization: Do Not Panic

- ❖ Crying
- ❖ Mild fever
- ❖ Irritability
- ❖ Localized tenderness and swelling at site of injection

After a vaccination, your baby may cry a little, but that usually settles soon with a cuddle or a feed. If you notice swelling, redness or a small hard lump at the site of the injection, it will subside in 2 to 3 days.

If your baby has a fever:

- ❖ Ensure she doesn't have too much clothing on. Do not cover her with a heavy blanket or quilt.
- ❖ Give her plenty of cool fluids.
- ❖ Give her a bath, sponge her down or turn the fan on.
- ❖ Ask the doctor if you can give your baby Paracetamol. Find out how much medicine can be given.





# ANNAPRASHANA OR COMPLEMENTARY FEEDING

## SCIENCE BEHIND COMPLEMENTARY FEEDING

*6 months to 24 months is a unique window of opportunity that prevents permanent growth faltering in children. Ensuring the right complementary foods along with breastfeeding can give your baby a healthy start.*

## Introduction

This chapter focuses on complementary feeding, different types of food stage preparation and address common concerns regarding what are appropriate and inappropriate foods for your child. Beginning of complementary feeding is a big milestone in a child's life, that comes with many questions. This guide to the three stages of

feeding will help you make healthy and nutritious choices for your baby.

While this is a suggestive guide, it is important to remember that each child is unique and may not take to complementary feeding as easily as some others. Be patient and gentle with your child and let her enjoy her food.



*All parents want the best for their children and are eager to help them reach their full potential.*



## Complementary Feeding –Guidance for Parents:

Complementary feeding or Annaprashana is the introduction of solid in addition to your breast milk feeds. By 6 months of age, most healthy babies have acquired skills which prepare them for complementary feeding. However, some children may acquire the relevant skills at a later date and hence, complementary feeding should be started only once the child is ready. Please do not wean off from breast milk completely, mothers need to add on solid food in addition to breast milk which should continue at least till 24 months.



*Annaprashana (Sanskrit: Annaprashana, Bengali: Onnoprashon) also known as annaprashana vidhi, annaprasan or Anna-prasanam, is a function at 6 months of age that marks an infant's first intake of food other than breast milk. The term annaprashana literally means "food feeding" or "eating of food" without stopping the breast milk.*

Majority of the growth in a child happens in the first year of life. To support this rapid growth, a baby requires a much higher nutrient intake.



*Baby's birth weight triples*



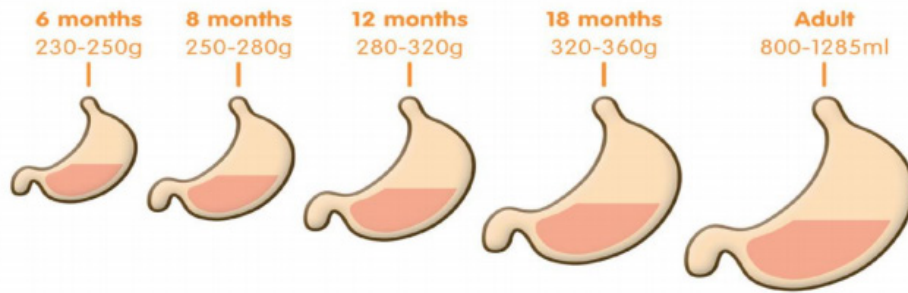
*Baby's height increases by 50%*



*Brain grows rapidly and the brain weight triples*



The gastric capacity of the baby is one-fifth of an adult but the nutritional needs are higher than that of adults. Hence, give small feeds frequently.



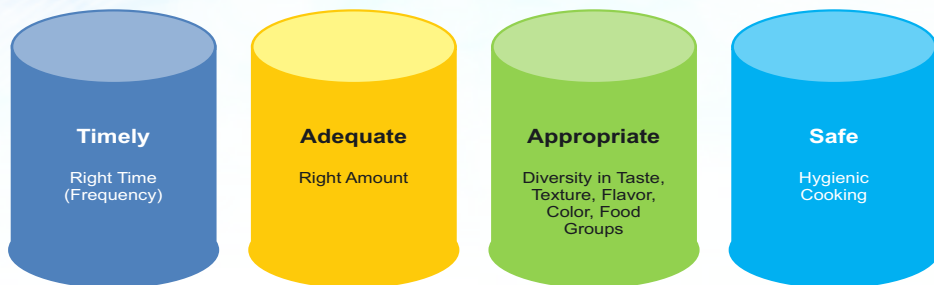
The first 1000 days of life, especially 6-24 months of your babies, forms the critical window for growth and development. Complementary feeding helps to fill in this gap after 6 months of age which breast milk alone cannot cover. Failure to introduce complementary foods or giving complementary food in an inappropriate manner between 6-24 months of age, might lead to physical and brain growth faltering, micronutrient deficiency, malnutrition, and infectious diseases.



*Growth faltering means the infant does not grow in an age appropriate manner in terms of height, weight and head circumference. Height gain in normal infants is about 25 cm in first year, 12 cm in second year and subsequently 4-5 cm every year. Weight gain in normal infants begins with about 6 kg in the first year, 3 kg in second year and subsequently 1-2 kg per year. Head circumference gain among normal infants is about 12 cm in first year, 3 cm in next year and subsequently 3 cm in entire life time.*



#### 4 Pillars of Complementary Feeding to Ensure Optimal Nutrition



*Continue breastfeeding till at least 2 years while you add solid foods after 6 months. The baby may not like the food for the first time. Any food should be offered at least 8 times before deciding that the baby doesn't like it. Offering the same vegetable again may increase the acceptance for the vegetable. Allow your baby to decide when she has had enough to eat. Include your baby in family meals from 9 months onwards.*



## When to initiate complementary feeding

By 6 months of age, infants reach developmental readiness to receive complementary foods. After 6 months of age, it is difficult to meet their nutritional requirements from breast milk alone.

Is the child ready for complementary feeding? Look for these mile stones as an infant's readiness to consume complementary feeds (should also be decided based on developmental milestones).

					
<i>Able to sit up alone or with support</i>	<i>Able to hold her head steady and straight</i>	<i>Opens her mouth on seeing food</i>	<i>Keeps her tongue low and flat to receive the spoon</i>	<i>Closes lips over a spoon and scrapes food off while the spoon is removed from mouth</i>	<i>Keeps food in the mouth and swallows it rather than pushing it back out</i>

## Core Messages for Complementary Feeding Practices

- ❖ The minimum number of times a child should eat solid, semi-solid foods is 2 times per day from 6-8 months and 3 times per day from 9 – 24 months.
- ❖ Continue frequent, on-demand breastfeeding until 2 years of age or beyond.
- ❖ Foods should have proper consistency according to age. At 6 months, the consistency should be a purée (or mash) - cooked vegetables or fruits, that have been ground, blended and strained to the consistency of a creamy paste or liquid. At 7-9 months, the food should be lumpy and beyond 9 months, the finger foods (foods meant to be eaten directly using the finger and the thumb) can be introduced.
- ❖ Food must have different flavors, textures and colors.
- ❖ Food should be hygienic (cooked thoroughly with safe water and raw materials and follow hygiene rules when storing and reheating food).
- ❖ Start with small amounts of food at 6 months of age and increase the quantity as the child gets older, while maintaining frequent breastfeeding.
- ❖ Give foods with less salt and less sugar or spices.



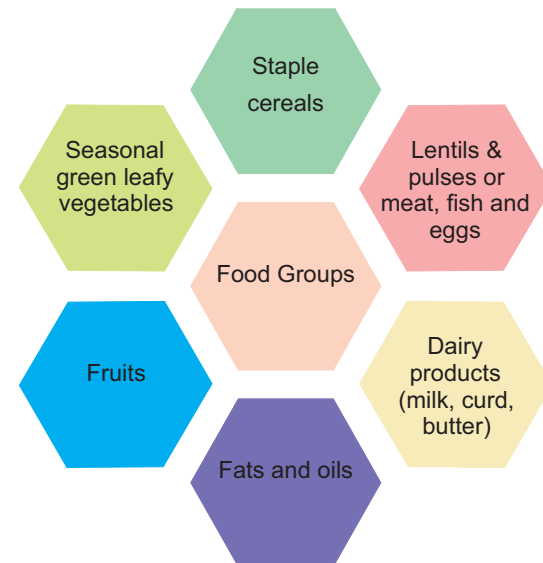
### **Feeding isn't just about Nutrition.**

- ❖ *Exposure and discovering new tastes, smells and textures*
- ❖ *Develop communication and independence*
- ❖ *Lay the foundations for a healthy, balanced diet*
- ❖ *Speech development through chewing and swallowing*
- ❖ *Support continued growth and development*

- ❖ Encourage home based, freshly cooked food.
- ❖ Increase fluid intake during illness, including more frequent breastfeeding and encourage the child to eat soft, favorite foods. After illness, give food more often than usual and encourage the child to eat more.

### During Complementary feeding ensure that:

- ❖ Choose a time when your baby isn't tired and you're not in a rush. It may take a while for your baby to get used to taking food from a spoon, so patience is a must. Allow them to use their own fingers, even if they make a mess.
- ❖ The baby is fully alert and shows early signs of hunger. A vigilant mother can pick up the hunger cues easily. This is the best time to introduce new foods.
- ❖ Make the baby sit upright with no distractions, like TV, mobiles or tablets
- ❖ Remember not to give food that is too cold or too hot, taste it yourself before giving it to your baby



Select one from each food group

- ❖ Try only one new food at a time initially.
- ❖ For safety reasons always watch your baby when they are eating, to help them if they're struggling.
- ❖ Encourage your baby to hold and touch the food.
- ❖ If you're using a spoon, wait for your baby to open their mouth before you offer the food. Your baby may also like to hold a spoon
- ❖ Don't force your baby to eat or finish their food.
- ❖ Baby-led feeding means letting your child feed themselves.
- ❖ Meals for babies can be the same as the rest of the family's to make life easier for everyone
- ❖ Know exactly which foods still need to be avoided until your child is older .



1. Opens his /her mouth on seeing food



2. Allow him to mess with food.

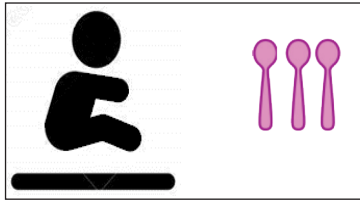


3. No TV cartoon while eating

## Foods to avoid for baby

- ❖ Whole nuts are a choking hazard so should be avoided under the age of five, though chopped nuts are fine.
- ❖ Honey may contain bacteria that can lead to infant poisoning (botulism).
- ❖ Eggs should be cooked till they are hard boiled to kill any bacteria.
- ❖ Unpasteurized milk carries the risk of food poisoning. Give only pasteurized milk.

## Complementary foods



### 6–8 months

Start complementary feeds with 2-3 tablespoons full of thick porridge and well mashed foods, 2-3 times a day. Continue frequent breastfeeding (BF). (1 tablespoon = 3 teaspoons or 15 ml)



### 9-11 months

Start with  $\frac{1}{2}$  a cup/bowl of finely chopped or mashed foods, along with foods that the baby can pick up using her fingers. Give 3-4 meals per day plus BF. Depending upon appetite, offer 1-2 snacks. (1 cup/bowl = 250 ml)



### 12-23 months

Give  $\frac{3}{4}$ th – 1 cup/bowl of family foods, chopped or mashed, 3-4 times per day, along with BF. Depending upon appetite, offer 1-2 snacks.

### Standard Measuring Spoons / Cup



## Right Texture :

### Stage 1: At 6 months:

Start with Puree foods i.e. after cooking the food, grind it and then strain it with a strainer to make an ultra- fine, creamy paste or liquid. You can prepare Spinach Purée; Turnip Purée, Pumpkin Purée. Puree means a smooth cream prepared from cooked and liquidized vegetables or fruits.

After 2 weeks, till beginning of 7 months, you can introduce fruit puree. Try mashed Banana Purée, Carrot puree and Apple puree followed by rice and dal.

### Stage 2: 7-9 months:

Prepare khichri with mashed potato and green vegetables with the consistency of lumpy food. Give food from all the food groups including fat & oil, fruits and green vegetables, Cereals, legumes and pulses, dairy products in form of Yoghurt and cheese and meat/fish/egg in form of animal protein.

### Stage 3: 9th month onwards:

Give finely chopped foods that the baby can pick up with her thumb and finger. Finger foods.



## Right Taste:

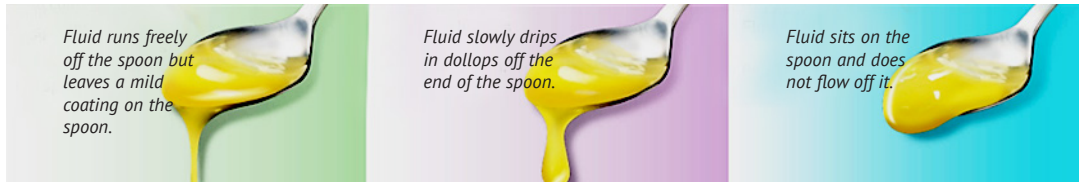
Exposing the baby to flavor begins in the fetal period. Do not encourage excessive sweet or salty food or packaged food like chips, cookies, biscuits. Introduce a variety of foods with different tastes.



*Caution with small-sized beans, raisins, pea nuts. These can cause choking. Do not give to small children unsupervised.*

## Right consistency :

To ensure good nutrition, at the time of introducing complementary feeding, use the right consistency. The food should neither be too runny nor too thick.



Too thin

Thin

Just right



## How much solid food to be given?

- ❖ You should introduce solid foods in a gradual manner. Always introduce only one new food at a time and continue the same for 3-4 days to look out for any allergic reaction. If you notice any rashes, vomiting, loose motion, discontinue the food immediately and do not start until a month or two later.
- ❖ Do not offer more than a teaspoon of the food to the baby initially, gradually increasing to a tablespoon and then to 2-3 tablespoons.
- ❖ Always follow baby's lead. Don't ever force baby to finish what you have made. If you force-feed the baby, she might just vomit everything out, so stop and try again the next day and there is a better chance of succeeding.
- ❖ Make the meal-time fun and not a chore for the baby. She can get all the required nutrition from breastmilk, so don't fret if she takes only a spoon of the food and then loses interest.



## Important Things to remember about Complementary Feeding -

- ❖ *Girls and boys need equal amount of food.*
- ❖ *Wash your own and child's hands with soap and water every time before and after feeding.*
- ❖ *Sit with the child at meal times.*
- ❖ *Choose complementary foods which are locally available, culturally acceptable and can be easily prepared at home, following the rules of right taste, right texture and right consistency.*

## Coping with Difficult Eating Behavior

*Upto the age of 1 year, children readily accept new tastes and textures. However, after the 1st year, children progress through a period of suspicion of new foods and at times, even reject foods previously eaten. This may continue up to the age of 3 years. It is important for parents to understand that this is a normal part of the child's development and trying to force feed a child can trigger food refusal for the rest of life. Remember to -*

- ❖ *Take uneaten food away without comment.*
- ❖ *Encourage self-feeding as early as possible.*
- ❖ *Allow the child to make a mess when eating. Meal times should be a joyful time for the child.*
- ❖ *Give positive attention at meal times.*
- ❖ *Offer food choices and respect their choices.*
- ❖ *Eat the food, you want your child to eat, in front of the child.*
- ❖ *Give your child food in a separate bowl to make sure she gets enough food.*



### Food Allergies

*The foods most likely to cause an allergic reaction should be introduced one at a time so that it is easy to identify if a certain food has caused a reaction. You can start to introduce these foods once your baby is eating cereals and fruit and vegetables. These foods are: foods based on cows' milk or formula milk; foods based on wheat – bread, pasta, and some breakfast cereals; eggs; fish; nuts; soybeans; sesame seed, mustard seed; celery; any foods containing sulphite, such as packaged foods. However, cow's milk should not be given before the first birthday.*

## Baby food Stages:

6  
months



*Eating puréed food:* After cooking the food, mix it and grind it with a hand blender and then strain it with a strainer.

7-9  
months



*Eating lumpier food:* Lumpy foods should be introduced. This requires cooking the food, mix it with hand or fork but no straining. leave small soft lumps.

9-12  
months



*Eat semi - solid to solid food:* Textured food: Requires chewing and improves the chewing efficiency (the number of chews required before a food is swallowed). Include finger foods also.

## STEP 1

START WITH SINGLE VEGETABLES

**At 6 months:** is about giving your baby a taste for vegetables – it might be a challenge, and it probably won't be love at first bite, but keep going and they'll learn to love veggies for life. Start with single savoury flavours and try to avoid sweeter veggies by sticking to things like broccoli, spinach and cauliflower.

### Loving green vegetables for life!

Research has shown that giving your baby more veg flavours rather than sweet tastes can really help to shape their preferences, and teach them to love green vegetables for life. Although babies naturally love sweet tastes, getting them used to simple, single vegetable flavours now can train their taste buds to enjoy these foods in later life. For step one, remember to start with a single vegetable, then with different single vegetables.



### Cleanliness is the Key

*A clean kitchen ensures that baby's food will be free of germs and bacteria. Here are some tips for keeping your kitchen clean.*

- ❖ *Before you start preparing baby's food, wash your hands well with soap and water.*
- ❖ *Make sure you wash all produce thoroughly (even if it's organic or if you plan to peel it).*
- ❖ *Use separate work surfaces and utensils for raw meat, poultry and fish.*



**Fruits Purée:** Only after 2-3weeks of giving single vegetable Purée. (3rd week after introducing complementary foods)





<i>Apple Purée</i>	<i>Ripe banana Purée</i>	<i>Carrot Purée</i>	<i>Dal or pulses</i>	<i>Rice Purée</i>

**At 6-7 months:** At this age, you can introduce lumpier foods, like thicker purées, soft, mashed food or soft finger foods. It helps your child become more adventurous with food and aids development of muscles important for speech. Offer 2-3 familiar veggies in the same meal. Just make sure the purées aren't mixed up, so they learn to love the individual tastes.

Avoid foods that most commonly cause an allergic reaction such as cow's milk, eggs, nuts (ground nut), wheat and fish before 9 months. However, cow's milk should not be given before the first birthday.



Progress from Puréed food to mashed food, and then switch to solid food. This improves chewing efficiency until at least their second birthday.

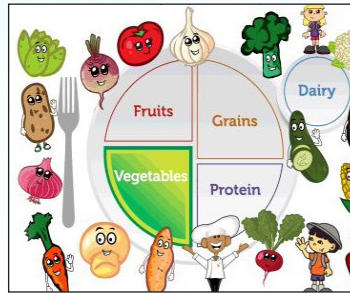
			
<p>Carrots, Broccoli, Cauliflower &amp; Cheese Lumpy</p>	<p>Khichri: Rice + Dal + potato</p>	<p>Apple + Pear + Water = cook it for 10-15 minutes (Stewed fruits)</p>	<p>Carrot sticks: Starting of finger foods at beginning of 8 month</p>



**At 8-9 months:** Food plate must contain: 1) Fruits, 2) Vegetables, including green leafy vegetables, 3) grains, such as rice, wheat or ragi, 4) Protein, such as fish, full boiled egg or pulses (dal), 5) Fats and oils, 6) Dairy products, such as cheese, curd, butter.

Food should be cooked and served as semi-solid, along with finger foods. The baby's plate should contain foods of various colors and textures.

Instead of spoon-feeding your little one a vegetable puree, you can go straight to finger starter foods like bananas or sweet potatoes. This allows them to explore different colours, tastes, and textures.





Food plate for a 9 month old must contain a portion from each food group, it should be colourful and must have diversity in colour, smell & texture. Must be plated in a decorative way including finger foods.



## Finger foods

Finger foods to help in finger coordination especially after 9 months



## Foods to offer at 9 -12 months and beyond

Offer different foods at every meal time and when your baby is having three meals in the day make sure you are offering foods from all four food groups each day:



### GRAINS

*Baby Rice, Wheat, Ragi, Suji, Khichri, chapatti, foods made from Rice (Idli, Upma); Maize, millet and other baby cereals.*



### PROTEIN

*Dal, lentils, pulses, Ground nuts, Soybeans, Chick Peas (Kabuli Chana); Bengal gram, Green Peas. Fish (remove all bones), Eggs (hard boiled)*



### FRUITS

*Banana, Papaya, Apple, Mango and other seasonal fruits etc.*



### VEGETABLES

*Spinach (Palak), Green beans, Bottle Gourd (Lauki), Carrot, Pumpkin, tomato, Mustard leaf, Lettuce (Salad patta), Fenugreek leaves (Methi), Coriander (Dhania)*



### DAIRY

*Curd, cheese (Paneer), Butter*



### FATS AND OILS

*Mix mustard oil and rice bran oil OR mustard oil and groundnut oil.*



## Prevent Iron Deficiency in Your Child

*According to the WHO, iron deficiency is the single most important nutritional risk factor in India, accounting for more than 3% of all disability-adjusted life years (DALYs) lost.*

*In infants (aged 0–12 months) and preschool children (aged 1–5 years), iron-deficiency anemia results in developmental delays and behavioral disturbances, such as –*

- ❖ *decreased motor activity*
- ❖ *decreased social interaction*
- ❖ *impaired brain development*
- ❖ *reduced attention to tasks*

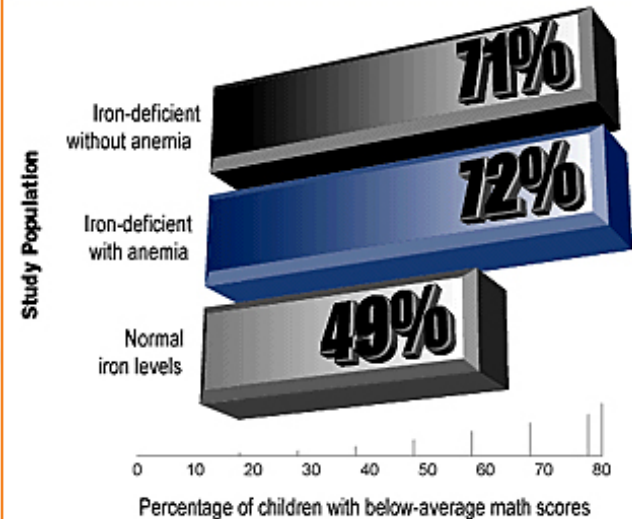
*These developmental delays may persist past school age i.e. 5 years. Maximum Iron deficiency in a child coincides with the rapid rate of growth of both his brain and body, i.e. between 6-24 months. Diet alone is not sufficient and requires Iron supplementation. If your child weighed less than 2500 gm at birth, then the supplementation of Iron is required earlier, beginning 2-3 months.*

## Recommendations to Prevent Iron Deficiency in Your Child

1. *Encourage exclusive breast feeding of your infant (without supplementary liquid, formula, or food) for 6 months after birth and beyond.*
2. *Introduce Iron-rich foods at 6 months of age.*
3. *Introducing Iron drops as supplementation (approximately 1 mg/kg per day of elemental iron) at 6 months of age along with Iron-rich diet, as diet alone is not sufficient to satisfy the need.*
4. *If your child is a preterm or low birthweight, Iron drops need to be introduced before 6 months.*
5. *At 6 months, introduce one feeding per day of foods rich in vitamin C (e.g., fruits, vegetables, or juice) to improve iron absorption, preferably with meals.*
6. *Do not introduce infants to cow's milk before the age 12 months.*
7. *After 12 months children should not consume more than 500 ml daily of cow's milk/goat milk/soy milk, as this also can cause Iron deficiency.*
8. *Iron deficiency can exist in a child with anemia (IDA) or even without anemia (IDNA). Even if your child's haemoglobin is normal, you need to give Iron drops as the child may still be suffering from Iron deficiency, which can negatively impact his intelligence.*

\*IDA - Iron Deficiency Anaemia \*IDNA - Iron Deficient Non-Anaemic

## Iron Deficiency affects School Performance



When a mathematical test was taken on school children, where they had to use their brain, it was found that 71% of children, who performed below average, were Iron deficient (either with or without anemia) as compared to 49 % who performed below average with Normal Iron levels.



## FETAL LIFE OR ANTENATAL PERIOD

- ⊙ *Avoid maternal stress.*
- ⊙ *Avoid working near furnace or fire in the 1st Trimester.*
- ⊙ *Regular Blood pressure and Blood sugar to be done, especially in 1st and repeat in 2nd trimester.*
- ⊙ *Use the concept of flavor bridge – eat green vegetables and a variety of foods so that your baby develops the flavor and attachment to that food.*
- ⊙ *Interact with fetus in the 3rd trimester by talking to her.*
- ⊙ *Avoid infection by washing hands; soak the food in warm saline water to remove pesticides; cook all food well.*
- ⊙ *Maintain oral hygiene during the antenatal period by proper brushing of teeth.*
- ⊙ *Choose a birth companion to accompany you during childbirth.*
- ⊙ *Allow pregnancy to complete at least 39 weeks as maturity of brain during fetal life is only completed by 39 weeks.*
- ⊙ *Avoid carrying your cell phone on your body or placing them on or near your abdomen. Talk on speaker setting.*



## DAY OF BIRTH

- ⊙ *Ensure that the birth companion is with you.*
- ⊙ *Delivery should be in a place where mother's privacy is assured.*
- ⊙ *Do not ask for quick or painless delivery as this would lead to induction and augmentation of labor.*
- ⊙ *There should be zero separation of the newborn from the mother.*
- ⊙ *Immediately take the baby to mother's breast and ensure skin to skin contact.*
- ⊙ *Spend the first hour holding (skin-to-skin), stroking and looking at your baby as she is alert and responsive during this time and will soon go off to sleep.*
- ⊙ *Delayed umbilical cord clamping (not earlier than 1 min. after birth) is recommended for improved maternal and infant health and nutrition outcome.*
- ⊙ *Ensure that the baby gets the initial thick, yellow colored milk, called colostrum, within the first hour. Your newborn requires only about 1 tsp of milk per feed initially to satisfy her hunger, since her stomach is only about the size of a grape. She would wet only 1 diaper the first day and pass 1-2 black or dark green stools. Try to give 8-12 feeds in the first 24 hours.*
- ⊙ *In the first week, the child's stomach size increases to that of a walnut. The quantity of milk produced will increase proportionately to 4-5 tsp (20 ml) full per feed. By 10th day, the quantity becomes 9 tsp (45 ml) full. By the 10th day, the child starts wetting 6 diapers a day.*
- ⊙ *Your newborn will sleep about 16 hours a day, divided into 3 or 4-hour naps, evenly spaced between feedings.*
- ⊙ *Any rashes or birthmarks on your baby's skin will fade away quickly without treatment.*





## BABY'S FIRST YEAR

- ⦿ *Most babies lose about 1/10th of their birth weight during the first 5 days and then regain it over the next 5 days, so that by about day 10, they are usually back to their original birth weight.*
- ⦿ *Pay attention to your child's head growth by measuring the head circumference periodically, using an ordinary measuring tape.*
- ⦿ *Interact with the child by talking, singing, cuddling, respond to her cries quickly and gently, by holding close to yourself to make the child feel secure.*
- ⦿ *Children learn to socialize by initiating reciprocal smile.*
- ⦿ *Mothers should avoid body spray as children recognize mother by smell. Wrap the baby in clean cotton cloth, prepared from mother's old clothes as it carries mother's smell.*
- ⦿ *Mother should not change her hairstyle as children also recognize their mother by contrast of the black hair.*
- ⦿ *Avoid swaddling after birth as it prevents Congenital Dislocation of the Hip (CDH).*
- ⦿ *Use a traditional pillow made of mustard seeds which will mold to the natural shape of the newborn's head and prevent deformity.*
- ⦿ *Ensure exclusive breastfeeding for six months. Continue breastfeeding till the baby is at least 2 years. Introduce weaning foods at 6 months. Foods should have diversity in color, taste and smell. By 9 months, encourage use of finger foods.*
- ⦿ *Give your children safe toys or household objects that they would love to bang; toys can be social, cognitive, sensory and physical toys.*
- ⦿ *Interact with your child as much as possible. Give your child plenty of love and attention. A warm and loving environment helps children feel safe, competent and cared for.*
- ⦿ *Toys with highly contrasting colors and patterns and soft music are good for children.*
- ⦿ *Direct face-to-face communication and storytelling are vital for language development.*
- ⦿ *Do not shake or toss a baby in air, as it can cause serious Shaken Baby Syndrome which can cause physical and mental damage, even death.*
- ⦿ *Do not use television, video games, smartphones and computers for engaging small children, not even assisting in feeding, especially for the first 3 years.*
- ⦿ *Avoid walkers and use traditional push toys.*
- ⦿ *Avoid toys that promote violence.*



## BABY'S SECOND YEAR

- ⊙ *Children should get a stimulating environment which encourages exploring, problem solving and promotes learning.*
  - ⊙ *Parents should ensure the baby's safety.*
  - ⊙ *Raising the child in a loving, supporting and respectful environment enhances self-esteem and self-confidence.*
  - ⊙ *Try to create a 'village' around you. Since it is hard to raise a child on your own, seek support from your family, friends and community. Talk to other parents.*
  - ⊙ *As a parent, know that your actions affect your child. You are at the center of your child's universe. Provide consistent guidelines and rules. Be sure you and other caregivers are working with the same rules. Be sure that your own rules and guidelines are consistent while taking into account your child's growing competence. Consistency helps the child to feel confident as to what to expect from their environment.*
  - ⊙ *For a baby's development, do not rely on your genetic code only, as a significant role is played by the environment you create.*
- ⊙ *Early Brain Development – During the first three years of a baby's life, the brain grows and develops significantly and patterns of thinking and responding are established. As a parent you have a very special opportunity to help your baby develop socially, physically, and cognitively. The first years last forever.*
    - ❖ *A child needs to feel special, loved, and valued.*
    - ❖ *She needs to feel safe.*
    - ❖ *She needs to feel confident about what to expect from her environment.*
    - ❖ *She needs guidance.*
    - ❖ *She needs a balanced experience of freedom and limits.*
    - ❖ *She needs to be exposed to a diverse environment filled with language, play, exploration, books, music, and appropriate toys through play and stories. During this period a baby's brain is twice as active as an adult's brain.*





- ⦿ *Parents should not undermine each other in front of kids: Fighting about parenting in front of children is bad for the children as it shakes their confidence in their parents, undermines parental authority, confuses them and puts them in a position of having to choose sides.*
- ⦿ *Do not shame your child in front of others: Shaming your child in front of others (even if well intentioned), is emotionally wrong and can lead to childhood depression with long term devastating effects.*
- ⦿ *Do not compare your child to her siblings or other children: Each child is unique. Many parents fail to realize this. They believe that by comparing one child to another, the “errant” one will improve. However, it does quite the opposite, and many such children feel worthless.*
- ⦿ *Some parents want their children to be physically/emotionally flawless. They believe individualities are flaws that need correction. This may result in a child's poor self-image.*
- ⦿ *Do not continuously harp about mistakes: Making mistakes is an integral part of a child's learning and growth process. It is important to remember that childhood is a time to freely explore and mistakes would happen.*
- ⦿ *Criticism by parents, especially mothers, is a significant risk factor for depression in children: Persistent criticism breeds resentment and defiance, and undermines a child's initiative, self-confidence and sense of purpose. We need to prevent the buildup of these unhealthy attitudes in the minds of our children.*

*Children respect those who respect them*



“

*If children live with criticism,  
They learn to condemn.  
If children live with hostility,  
They learn to fight.  
If children live with ridicule,  
They learn to be shy.  
If children live with shame,  
They learn to feel guilty.  
If children live with encouragement,  
They learn confidence.  
If children live with tolerance,  
They learn to be patient.  
If children live with praise,  
They learn to appreciate.  
If children live with acceptance,  
They learn to love.  
If children live with approval,  
They learn to like themselves.  
If children live with honesty,  
They learn truthfulness.  
If children live with security,  
They learn to have faith in themselves and others.  
If children live with friendliness,  
They learn the world is a nice place in which to live.*

”

**-- Dorothy Nolte**



Ministry of Health & Family Welfare  
Government of India