



• YOUR GUIDE TO • EASY BABY CARE

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Acknowledgements

Foremost I would like to thank the parents of my patients for their belief in whatever I teach them about childcare in my busy pediatric clinic, which inspired me to write this book. I would like to thank Dr Prof.A.Parthasarathy for writing the forward because of which I received the courage to continue with the project. My sincere thanks go to Dr. Prof. M.K.C.Nair for peer reviewing and editing the original manuscript. I also thank Bushra Zia Nadwi, mother of two lovely girls, and my daughter Anindita Mitra for giving me valuable suggestions and help in editing. They are both graduates in psychology and therefore their knowledge was very useful for chapters on behavior problems in children. Bushra, specially being a young mother herself, kept me up to date me on the trials and tribulations of being a mother to children of the current generation. I would also like to thank Indyra for the artistic touch she has given to the book. Lastly, and certainly not in the least, I thank Shahana Chowdhury for making it possible for the book to be available on the World Wide Web. Without her help it would still be hibernating on my laptop.

FOREWORD

I have great pleasure in writing this Foreword to the first of its kind 'state of art' Parent Education Guide Book by not only an eminent pediatrician but also by an experienced mother. Dr Raj Rani Mitra has nicely blended her pediatric knowledge and motherly experience in this book on child rearing and care of the newborn, infant, the child and the adolescent.

Each and every chapter is well written with updated messages on the topics chosen with practical guidelines. The excellence of one chapter excels that of the other making every chapter a treasure to cherish. Every parent will find in this book, guidelines on their parental role and how to bring up their children as healthy and responsible future citizens of our proud Nation.

Every aspect of the science and art of both preventive and curative aspects of Pediatrics has been dealt with in a reader-friendly and lucid language with scientific explanation. How to take care of the newborn right from the time of birth, how to feed it during infancy and child hood, about the vaccines that should be given to prevent vaccine preventable diseases at appropriate age, the importance of play and education etc... have been dealt with in a comprehensive yet concise manner for which the author deserves rich appreciation and congratulations.

I strongly recommend this book as a desktop reference in every practicing pediatrician's consulting chamber and Pediatric Nursing Homes for parent guidance and distribution to their clients.

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PREFACE

One of the greatest moments in a couple's life is when they come to know that they are going to have a child. It is like being promoted to the highest post in their life by God Almighty. They are going to be given the responsibility of looking after a child and hopefully more children later on. They will have to meet all her/his needs with love and care, and guide her/his throughout her/his childhood so that she/he can grow up into a responsible, successful, and unique adult as God had intended her/him to be. It is not an easy task and they usually realize that. Therefore they naturally want help which they often do get from their parents, other relatives, friends and doctors. However when parents do seek consultation, most of the time the doctors can devote so little time to each patient, that all their concerns are not always dealt with. With this in mind, I have written this book. I think the best part of one's life is when our children are young. This is the time when we live our childhood all over again. We relearn the nursery rhymes, fairy stories, visit the zoo and funfairs, and sit on the giant wheels. We play hide and seek, cricket and football with them. When I see some parents who are constantly worried because of their children falling ill, I want to help them. Therefore, my main aim in writing this book is to help these parents to stop worrying so much and enjoy looking after their children. In the first section of this book I have talked about the concerns the parents might have about their newborn baby. Their Pediatrician might have discussed about these problems with the mother before she left hospital or nursing home but many times mothers are discharged early from the hospital and all the problems are not talked about. This is the time when many visitors, relatives and friends come to visit the mother and baby and each one gives some advice. Each person gives different advice and then the mother gets very confused and then she starts worrying about all the small problems. Advice given on these pages will help her clear some of the doubts. The mother must be relaxed and without any worry at this stage, as she has to build her strength to look after her lovely baby and I hope this book will help her do that.

I find that among mothers of my patients, feeding a newborn baby usually is not much of a problem as long as they follow certain guidelines, although some mothers can have difficulty with breast-feeding in the beginning. I have given the guidelines about breastfeeding as well as formula feeds (although breast-feeding is obviously the better choice). Feeding toddlers and children is more of a problem as most parents come to us with the complaint of 'my child does not eat and has no appetite'. The reason most children do not eat on their own is because they know that their parents are concerned about them and making a fuss while eating often becomes

an attention-seeking device. In the second section I have given a few suggestions about solving this problem. In the third section I have given some guidelines as to how to deal with minor illnesses of children and given explanations as to why children fall ill so often. Lastly, in section four, I have discussed about behavior problems of children and about disciplining the child.

I will certainly be very happy and feel that the mission of my life has been achieved, if this book does help the parents to look after their children.

Best of Luck and Very Warm Wishes!

Dr Raj Rani Mitra

Chapter 1

NEW BORN BABY

It is certainly a great pleasure when a baby is born and there is an additional member in the family. This is the moment that you have been looking forward to all the previous nine months. If your baby is born by normal delivery or Caesarian section done under spinal anesthesia, then you will be able to hear your baby's first cry and will be able to hold, cuddle and breast feed your baby soon after birth. If your baby is born by Caesarian Section done under general anesthesia, your baby will be given to you after a few hours, after you wake up from the effect of General anesthesia. However your husband will be able to cherish those first moments and, if allowed by your Obstetrician, may be able to take a video clip which you can see later on. Thereafter comes the task of looking after your precious baby and naturally you will be a bit anxious. However, all you need is a lot of self confidence and a little bit of advice from health care providers, friends, relatives and baby books. It is easier if you can get some help to look after your baby for about one month after delivery until you can regain your strength. Probably the best help you can get is from your mother or mother in law. If that is not possible then you may need to hire a nanny. However it is essential that whoever helps you should be up-to-date with their knowledge about baby care. She should not be bossy and should not make you feel inadequate and undermine your confidence. Your husband's help is the best help you can get, especially if he can take leave from his work. Neither of you may have any experience but if you try to get some knowledge about baby care from various sources you certainly will be able to cope. This will also help in building a strong bond between the baby and her father. In this chapter on New born baby I will guide you in meeting your baby's needs and answer the concerns that you may have about her.

1.1 Bathing the baby

There was a time when a baby was given bath soon after he was born. With this practice, babies at times became very cold and therefore this practice has been abandoned. Now as soon as the baby is born, he is kept warm under a heater or hot lamp and cleaning of baby is done after the

baby has warmed up. Cleaning is done by wiping with moist cotton. Thereafter, cleaning of the baby should be done in a similar manner daily. Regular bath in a tub should be given only after the baby is 5 to 7 days, mainly after the umbilicus dries up, because dipping the baby in the tub will make the umbilicus moist and thus can cause infection. Baby soap and shampoo should be used 2 to 3 times a week. Baby cream should be used over the nappy area and other folds in the skin. It can also be used all over the body of the baby if the skin is dry. Do not rub the cream but leave a thin layer over the skin. This will protect the skin from stool and urine. It is better not to use powder, as it forms paste with moisture and this causes irritation of the skin.

1.2 Oil massage

In our culture, almost all the babies are given oil massage daily. Some parents massage the baby 2 to 3 times a day. They believe that the baby's skin will become better with the massage and the baby will become stronger. Little bit of oil that is massaged on the skin can get absorbed, however it is not necessary for the baby's well being, as the baby will get its full nutrition from the breast milk or the formula milk that the mother gives to her baby. Usually oil massage is followed by passive exercise and then the baby is kept in the sunshine for 10 to 15 minutes, followed by a bath. This is certainly good for the baby as the exercise will make her muscles stronger, build up an appetite and sunshine will give her vitamin D. However if you cannot do this do not worry too much, as your baby will get enough vitamins from the milk and baby's muscles will become stronger by the normal movements of her legs and arms. If you are doing passive exercises, be very careful that you do not use any force while doing the exercises, as this can produce fractures of the baby's bones. Also, when you keep the baby in the sunshine, be careful that the sun is not too hot and there is no strong wind. Keep the baby in the sunshine for a very short time and cover the eyes as too much light can damage the eyes.

1.2.1 Which oil to use

In different parts of India different types of oil is used, for example in East India and U.P., mustard oil is used, in South India coconut oil is used, and in Punjab Ghee is used. All these oils are fine, and it does not make any difference as to which oil is used. Olive oil can also be used.

1.2.2 When to start oil massage

It is best to start oil massage after the baby is one month old. It is easier to handle the baby by this time and also there is less chance of rashes occurring due to oil massage.

1.3 Taking care of the umbilicus (navel)

It takes 7 to 14 days before the umbilicus dries up and falls off. You have to take care that it remains clean and dry otherwise there is a chance that germs may collect over it and it may get infected. The best way to take care of the umbilicus is to dry it with soft cloth and then apply surgical spirit (with alcohol swabs) 3 to 4 times a day. However, some doctors may advice ointment or antiseptic powder to be applied over it.

How do I know if it is infected or not? If the base is red, some pus is oozing out of it and has bad smell then it may be infected. Contact your doctor in such a case. He may take a swab from this for testing and prescribe antibiotic if necessary.

1.4 Jaundice

About 50% of the babies become jaundiced when they are 2 to 3 days of age. This is called physiological jaundice in contrast to pathological jaundice that may occur before 2 days of age. Pathological jaundice may be due to the fact that you and your husband may have different blood groups and because of this, antibodies are produced in the baby's blood. These antibodies destroy the baby's red blood cells very rapidly and thus cause jaundice. Pathological jaundice can also be due to the fact that baby may have some deficiency in certain enzymes like G6PD.

Physiological jaundice is mild jaundice and occurs after 2 to 3 days of birth. This jaundice is not due to any infection. The reason for this is that baby's liver is not yet mature and cannot handle the extra bilirubin that is collected in the baby's blood due to normal breakdown of red blood cells (breaking of old red blood cells is a normal phenomena that occurs in everyone's body). After 7 to 10 days, the baby's liver becomes mature and the jaundice disappears. In some babies, it may last up to one month of age, especially in breast fed babies. If jaundice is mild, there is nothing to worry. However, if it lasts more than 1 month or disappears and reappears again then you must contact your doctor.

1.4.1 How do I detect jaundice and how do I know if it is mild or severe?

You may see the baby's eyes are yellow and may come to know that baby has jaundice. However, the best way to know whether a baby has jaundice is to press over the baby's forehead, and then you may find that the skin is yellow. There after you should press over the chest, the abdomen and then the legs. If the jaundice is detected only over the face, this is mild however, if it has spread over chest and abdomen, it is moderate and if it has spread over the legs it is severe. If it is mild and has occurred after the second day of age and baby is well, there is nothing to worry about. If it is moderate or severe then you should contact your doctor.

1.4.2 If the jaundice is physiological then why should I worry about moderate jaundice or severe jaundice?

If the jaundice is moderate or severe, it is not physiological. It is due to some other reason although at times we cannot find out the reason even after doing all the investigations. Anyway, if jaundice is moderate or severe, then the baby needs investigation and treatment. In such a case, your doctor will ask for a blood test to detect the percentage of bilirubin in the blood. Usually if the bilirubin exceeds 15mg% in the blood, baby is given phototherapy in a hospital and if it exceeds 20mg% then exchange transfusion is done (i.e. baby's blood is exchanged with compatible adult blood slowly, 10- 20ml at a time). Fortunately with proper preventive measures and early phototherapy (keeping the baby under many tube lights), it is very rare that we have to do exchange transfusion nowadays.

So if you detect mild jaundice in your baby do not worry, however if you think it is more than mild or if you have any doubt, do contact your doctor, because very severe jaundice can cause brain damage.

1.4.3 Does keeping the baby in sunshine help?

Yes it does, but only if you keep the baby naked. You cannot do that if the weather is cold or sun is too hot. If the baby's blood bilirubin is more than 15mg %, you have to give phototherapy in a hospital. You cannot rely on the sunshine.

1.5 Head of the baby: swellings, lopsided head

When the baby is born by normal delivery there is a soft swelling at the top of the head and is sort of dome shaped. This is because of the fact that the head had to come out through a narrow passage of the womb, so it got molded in that shape. This is nothing to worry about. In 2 to 3 days time the head shape becomes normal. At times there is a small swelling on one side of the head. Other times a similar swelling occurs on both sides. This is due to collection of small amount of blood under the skin of scalp. This may take 3 to 4 weeks to disappear. No treatment is required. No harm will come to the baby because of this.

At times if the baby has the tendency to sleep only on one side, the head's shape becomes lopsided. This happens mainly with preterm babies (babies born before expected date of delivery). In such cases, you should try to keep on changing the child's position. Once the baby starts sitting up, the head will take its normal round shape.

In certain regions in India, it is believed that the head of the baby should be kept on a sand pillow. This according to them gives a good shape to the head. Nothing like this is required. Sand pillows can be very uncomfortable. Babies normally do not require any pillows under their head, as their neck is very short.

1.6 Pink and salmon colored spots and bluish black spots

You may find that your baby has some pink patches over the forehead, nape of the neck and over the eyelids. These are due to dilatations of blood vessels. These are quite normal and will disappear in time.

Bluish black spots are found over the back and sometimes over legs and other parts of body. These are known as Mongolian Spots (nothing to do with the Mongolian race). Why these occur is not known. This is not a cause of worry; the spots will certainly disappear after 1 to 2 years.

1.7 Vomiting in new born babies

Many babies spit out small amount of milk after feed. In some babies it is more and for other babies it is less. This is because the junction between the food pipe and stomach does not close properly. Hence after the baby has had milk, some of it comes out of the stomach into the food pipe and the baby throws out this milk.

To prevent this spitting out, you should keep the baby in your lap with the head raised, for 5 to 10 minutes after feed. Thereafter, when you put the baby down on the cot check that the head end is kept raised for about half an hour. If you use a pillow, it keep under the head as well as the shoulders. You can also put the baby on her abdomen after feeds for some time, as this may reduce the spitting but never leave the baby in this position when not supervised. In spite of all these measures, the baby may still vomit small amounts. As long as the baby is well and gaining weight normally, you do not have to worry about this.

1.7.1 Conditions under which vomiting needs to be investigated

Sometimes vomiting can be serious and needs investigations and treatment. Contact your doctor if:

- The baby spits out large amount and is not gaining weight
- The vomiting is projectile, i.e. the milk comes out in a jet and is thrown far away
- If the vomit is yellowish green in color

1.8 Diaper and diaper dermatitis

You can use either cloth diapers (nappies) or disposable nappies. Cloth diapers are cheaper and do not pollute the environment but they are inconvenient as compared to the disposable ones. If you use the cloth ones you will need at least 20 to 24 of these, so that you can collect the soiled ones in a bucket with a lid, and wash them once a day. If you use disposable ones, you will need to change 8 to 10 times a day in the 1st year and less often later on.

1.8.1 Diaper rash

Babies get this commonly because of the use of the diaper. This is due to the irritation of the skin by the contact of stool and urine. Typically, there will be red colored rash at the diaper area and at times, in a severe case, there will be peeling of skin.

1.8.2 Prevention and treatment of the nappy rash

Change the diapers as often as possible. Before putting on the diaper, clean the skin with cotton soaked in lukewarm water, tap dry it and then apply a thick layer of nappy rash cream. It is better to use a zinc based one (see the contents), but any other cream can be used. The idea is to create a barrier between the skin and the diaper. This should be done at every nappy change, even if the baby has no rash. Do not use powder as it forms a paste with the moisture and this irritates the skin. If the rash is very severe, you will have to contact your doctor. He may prescribe a rash cream, which may contain antifungal medicine with or without hydrocortisone. This should be used according to your doctor's advice only. Hydrocortisone is corticosteroids. Too much use of all these medicines should be avoided as these can be absorbed by the skin and cause side effects.

1.9 Prevention of infection in a newborn baby

Newborn babies can get infection very easily as they have very low immunity. Therefore, to prevent this, the caregivers should wash their hands or use hand sanitizers before touching the baby and, as far as possible, those who have cold and cough should not come near the baby. Difficulty arises when many visitors with their children come to visit your baby. Children usually suffer from cold and cough more often than adults and they can pass infection to your baby when they cough or sneeze while handling the baby. However, you will have to try to prevent this and, if you tell their parents tactfully, I am sure most people will understand. In spite of this, if you cannot avoid children handling the baby then ask them to wear a mask and clean the hands with hand sanitizers before touching your baby.

1.10 Hernia

In some babies, a swelling occurs over the umbilicus after about 1 month of age. The swelling increases when baby cries and reduces in size when baby sleeps. This is umbilical hernia. It is more common in preterm babies. No treatment is required for this. It will subside once the baby is 8 to 9 months of age. Sometimes it may take longer but eventually it will disappear and there is no need to worry about this. In olden days, a bandage was tied around the abdomen after keeping a coin over the umbilicus. There is no need for such treatment. It does not help. Very rarely a small similar swelling occurs at inguinal (groin) region. This is inguinal hernia.

This requires treatment in the form of a minor operation. You must contact your doctor as soon as possible if you notice the swelling in the groin area.

Chapter 2

FEEDING YOUR NEW BORN BABY

Breast-feeding is certainly best for your baby. You have probably heard or read about the advantages of breast-feeding.

- Its constituents are best suited to meet the nutrition for the baby and is easily digested
- Infections are less because milk comes directly from mother to the baby and therefore there is no chance of any germs entering it as it would from a bottle (even if you sterilize the bottles some germ contamination can still occur)
- It contains many substances that help the baby's body to resist the germs (viral and bacterial)
- Besides these, there are many other advantages including stronger bonding between the mother and the baby

Most of the mothers that I come across in my practice do want to breast feed their babies, but some mothers do not succeed. The main reason is wrong advice from relatives and friends. Some mothers do want to breast feed, but cannot breast-feed their babies because they have to go out to work. In this chapter, I will be discussing about breast-feeding as well as about formula feeding.

2.1 Breast-feeding

A baby should be put on breast as soon as she is born and is crying vigorously. In case of caesarian section, the baby can suck from the breast as soon as the mother wakes up from the effect of anesthesia, i.e. about 4 to 6 hours after birth. She can keep on lying down, while someone else holds the baby and let the baby suck from the breast. You should tell the nurses

in the nursing home or hospital that you want this to be done. Ask them not to give the baby a bottle at all. Only exception is when the mother is too ill and not able to feed the baby.

For the first 1 or 2 days, milk secretion is very little in quantity and yellowish in color. This is known as colostrum. If the baby sucks well on the breast, then this amount of milk is enough for her. Initially she will probably demand it frequently, but very soon, you will find that enough milk will be secreted and your baby will sleep well in between the feeds. Actually the more the baby sucks on the breast, more milk will be secreted, as when the baby sucks, mother's body gets the signal that milk is needed and therefore more milk will be produced.

At times, there is a problem initially in making the baby latch on the breast and thus she is not able to suck. This usually occurs if the baby has been given bottle feed before putting on the breast, but it may occur otherwise also. It may be because the way you are holding the baby, you and your baby are not comfortable or it may be due to flat nipple. You can try giving baby breastfeed while lying down.

Flat or inverted nipple is one of the commonest reasons for difficulty in making the baby latch on to the breast. The treatment for this should start when the mother is pregnant. She should pull the nipple out a few times a day after applying some cream. When the mother, who has flat nipple, is having difficulty in trying to feed the baby in spite of all the attempt of pulling out the nipple, she can use nipple shield for a while. After a few days, she will find that the baby will be able to suck without the nipple shield. Once the baby latches and sucks well on the breast, there is no reason why she will not succeed in breast-feeding.

If your baby is born prematurely then the baby may not be able to suck well on the breast. In such a case, you may have to express the breast milk and give it to the baby with a bottle or a spoon. However if the baby is very premature the baby will have to be given expressed breast milk with a feeding tube. This is always done in a hospital or nursing home and by the nurses, who are experts in feeding these babies.

When the baby sucks over the breast, see that the areola (the dark portion around the nipple) is in the baby's mouth. Sucking directly over the nipple alone causes cracked nipples. Also too much cleaning the skin over the nipple also causes dryness of the skin which causes cracked nipple. It is not advisable to clean the nipple before each feed. Cleaning once a day while taking bath is enough. Once cracked nipples occur, as this is very painful, it becomes very difficult to feed the baby. You can apply some lubricating cream over the nipple, after feeding, to ease the pain and help in healing. If the cracking is very severe, then you may have to stop feeding the baby for a day or two and give the baby expressed breast milk with a spoon or bottle. Do ask someone, who has experience in breastfeeding to help you.

2.2 How often to feed the baby and at what interval?

Nowadays, we tell the mothers that the baby should be fed whenever the baby is hungry i.e. cries for feed and wants to suck. We call this demand feeding. You will find that after the first week of life your baby will usually set up her own routine. Some babies will finish their feed

within 10 to 20 minutes at one go, while others will take a longer time. Some babies will have a set pattern of feeding; that is they will feed for 10 minutes, rest for 10 minutes, again feed for another 10 minutes, and then rest for 30 minutes. During this 30 minutes they may sleep (light sleep) and then wake up and feed for a short interval and then sleep for 3 to 4 hours. I observed this pattern with my baby and many other mothers have told me that their baby have had a similar pattern of feeding. When babies keep on demanding feeds again and again at short intervals, some mothers think that the milk secreted by breast is not enough and therefore they supplement breast milk with bottle feeds. This is one of the reasons because of which many mothers do not succeed in fully breast feeding. If your baby is passing urine frequently, and gaining weight after the first week of life, your baby is getting enough milk.

Usually by 3 months of age, babies drink milk at interval of 3 to 4 hours. They will probably sleep for 3 hours, stay awake for 3 hours, and then again sleep for 3 hours. At night, many babies do sleep for 6 to 7 hours. During this time, they may wake up only once for feed and then sleep again after that.

In 24 hours, a 3-month-old baby will sleep for about 15 hours. However not all babies follow the same pattern and if your baby follows a different pattern you do not need to worry about that.

2.3 How often will a baby pass urine and stool?

In the first week of life baby may pass urine 5 to 6 times a day but after that the number of times increases and by around 1 month of age baby will be passing urine 15 to 20 times a day. However, when one is using disposable nappies it is difficult to count the number of times baby passes urine. If you are not sure whether the baby is passing enough urine or not you may use cloth nappies to check.

As far as stool is concerned, the number of times the baby will pass stool varies a lot. A breast fed baby usually passes yellow semi liquid stools. Usually in the first week of life the number of stool passing may be 5 to 10 a day or sometimes more. At times the baby will pass small amount of stool when she passes gas. Usually the number of times that baby passes stool decreases as the baby grows. By 1 month to 2 months of age, baby may pass stool once a day or at times she may not pass stool for 3 to 5 days and after that she will pass large amount of soft formed stool. This is normal and not constipation, and does not require treatment.

2.4 What should be the diet of a mother, who is breast-feeding her baby?

A mother who breast-feeds her baby should eat a well balanced diet; which means she should be drinking plenty of milk or eating milk products, eating meat, beans and dals, vegetables and fruits. She should be taking more than what she takes normally. She needs about 400 to 500 calories extra than her usual requirement. Drinking milk or eating milk products are essential

because the calcium content is necessary for the baby's bones and teeth. If the mother does not like milk or cannot tolerate it, then she should take calcium tablets with vitamin D daily. The mother, who breast-feeds her baby, usually loses the weight that she has gained during the pregnancy within 3 months. She should keep on checking her weight. If the weight loss is too much she should increase her calorie intake.

2.5 Should she avoid certain food items? Does anything she eat cause "cold" or "gas" in the baby?

Unfortunately, even nowadays, mothers are blamed for the colds or stomach pain that the baby gets. Mothers come to me with the guilt that they ate ice-cream or some other cold food item and probably because of that, their baby has caught a cold. There is no scientific evidence that any thing you eat affects the baby or any logic in it. Some say eating cabbage or too many chocolates produces gas in the baby but that also is doubtful. Any way there is never any need to eat too much of cabbage. If the mother has a cold and cough, baby may get this not through the milk but through the droplets when she coughs. Therefore, when she has cold and cough and she wants to prevent her baby getting the cold, she can wear a mask while handling the baby and wash her hands or use a hand sanitizer after touching her nose, so that the germs are not transferred via hands.

2.6 Expressing breast milk

You may need to do this if the breast becomes very congested and painful due to too much milk in it. Or you may want to express the milk and store it so that it can be used in your absence. You can do this with your hands or with a pump. You have to compress the breast gently behind the areola, in a steady rhythm and in clockwise fashion. It may take you around 15 to 20 minutes to empty the breast. Start with one breast and then empty the other breast. It is essential to wash your hands and sterilize the bottles and cup, which you will use to collect the milk.

2.7 Storing the milk

You can store the breast milk in the refrigerator for 48 hours. Before giving the milk to the baby, the bottle can be warmed by keeping it in a bowl of hot water. Once warmed it should not be put back in the refrigerator. When a food item is warmed (not heated to boiling point) bacteria starts growing in it and they continue growing until the food is very cold. As cooling can take few hours, by that time, enough disease producing bacteria have grown and, if this food item is eaten or drunk these bacteria can cause stomach infection.

2.8 Giving bottle-feeds along with breast feeds

Many mothers do give formula feeds 2 to 3 times a day along with breast feeds. The reason they do this is because they want the baby to get used to the bottle as they think that otherwise baby will not drink from a bottle later on. The problem with getting a baby used to a bottle is that the baby will get so used to the bottle, that very soon she will stop taking breast milk. Therefore, if you really want to breast feed your baby for more than 9 months of age, then you should never give a bottle to your baby. However if you want to feed your baby for a shorter time and for this reason you want your baby to get used to bottle, you should give bottle to the baby only after the baby is 6 weeks old. If you give bottle to the baby before this age, most probably you will not succeed in breast-feeding even for the short time you had planned for.

2.9 Formula feeding

You may have decided not to breast feed right from the beginning or may have resorted to formula feeding after unsuccessful attempts at breast feeding or you may want to partially feed the baby with formula milk because you want to go out to work or have a busy social life.

The babies who are fed on formula milk do have more chances of getting infections and digestive problems but fortunately, if you take all precautions, this can be reduced to a minimum.

2.10 Which milk to use?

Fresh cow's milk, goat's milk or sheep's milk etc. are not suitable for babies who are less than 1 year of age as these do not contain the type of nutrients that baby needs. Powdered formula milk is better as these have been modified to suit the needs of the baby. They are usually made from skimmed cow's milk and treated in such a way that babies can digest it. Vitamins, minerals, vegetable oils and fatty acids are added so that these meet the requirement of babies. Many different brands of powdered milk for infants are available in the market; you can use any of these. You should take your doctor's advice to know if your preferred brand is appropriate for your baby.

2.11 Preparing the feeds

The bottles should be thoroughly cleaned and then sterilized by boiling. Milk should not be kept in the room temperature for more than 1 hour. After your baby has taken the feed, you must throw the remaining milk and rinse the bottle and nipple thoroughly. The water that is used for making the feed should be boiled or you can use bottled sterile water. Do not use very hot water for mixing the feeds, otherwise the vitamin-C will get destroyed.

Proportion of the water and the powder to be used should be strictly according to the instructions written on the tin of the powdered milk because if you add less amount of powder,

baby will get less nutrients and thus will not gain weight and, if you add more than required, baby may get constipation and also can get dehydrated. Some brands of milk powder provide big size scoop, which has to be mixed in 60 ml of water while others provide small scoop, which has to be mixed in 30 ml of water.

2.12 Amount of feeds

Although the amount of milk that your baby will take is also written on the tins of milk powder, it is a very rough estimate. Some babies will take more and some less. So do not worry if your baby is taking less as long as your baby is satisfied and gaining weight.

2.13 How often to feed the baby

As with breast feeds with bottle feeds also, we advocate demand feeding. However you should try to keep a three hourly schedule. That does not mean that if your baby is demanding feed before her feeding time you should not give it or if baby is fast asleep you should wake her up to give the feed. Do not offer a bottle each time the baby cries, or sucks her fingers or thumb, because if you do that, the baby may drink a small amount and rest of the milk will be wasted. If the baby cries before the feed time, try in the beginning, to calm the baby by talking to her softly or rocking her or if necessary, give water. In giving water, do not add any sugar or glucose in the water. At times, you can use dummy (pacifier). If a dummy is kept clean, it is okay to use it (but do not use a dummy before the baby is 6 weeks old). Babies do like sucking so some may suck their thumbs or fingers while others will get used to the dummy (pacifier). Neither of these two habits do any harm unless it continues beyond three years of age.

It is very important that you should be sitting comfortably with the baby in your lap while feeding the baby. This will produce same amount of bonding between you and your baby as with breast feeding. Do look at your baby while you are feeding your baby and try to make an eye contact. Soon the baby will love to look at you while she is feeding and will have a very satisfying look. Never leave the baby on the cot with the bottle propped up with a pillow or cloth.

Looking after a baby, whether you breast feed or bottle-feed is time consuming. It is a 24 hours and 7 days job. However, it is one of the most satisfying phases of your life. For a career-driven mother, if there are no financial constraints and if it will not affect her career too much, she should try to take some time off from her work and spend at least 1 to 2 years looking after her baby. I did that and I still consider that as the best time of my life.

Nowadays many grandmothers and even grandfathers are willing to look after their grandchildren so that their daughters or daughters-in-law can pursue their career. It is a very good gesture on their part. The only problem is that the mother misses out on the pleasure of looking after her baby.

2.13.1 Weight gain in the baby

For the first few days, the newborn baby loses weight and thereafter she starts gaining weight. By 15 days, most babies will regain their birth weight. Thereafter babies will gain weight as follows.

TABLE 1

AGE	Approx. weight gain / day	Approx. weight gain / month
0-3 months	30 gms	900 gms
3-6 months	20 gms	600 gms
6-9 months	15 gms	390 gms
9-12 months	12 gms	360 gms
1-3 year	8 gms	240 gms

The above table gives an approximate idea. However the best way to monitor your child's growth is by growth charts. These allow you to monitor weight, height and head circumference. Your doctor may give you one or you can download this from <www.cdc.gov/growthcharts>.

2.14 Vitamins, calcium and iron preparation

Baby, who is fully breast-fed, does not need these if the mother is taking proper diet. However if the mother does not take enough of milk and does not get enough sunshine as is common among women who use 'abaya' / 'burqua' one should give extra vitamin D to the baby after the age of six weeks.

Breast milk contains less iron but whatever is there, is well absorbed and babies who are breastfed usually do not get iron deficiency anemia unless of course mother herself has iron deficiency anemia and does not take iron containing food or iron containing medicines regularly. In such cases, it is wise to start baby on iron drops at 6 weeks of age. All the babies should be given semisolid foods, which are fortified with iron and vitamins from four to six months of age.

Babies who are fed formula feeds do not need extra vitamin or iron drops as the infant milk formulae are fortified with required amount of vitamins and iron. However, preterm babies may need extra vitamins and iron drops. You should follow your doctor's advice as to whether extra vitamins or iron should be given to such babies.

2.15 Water

In earlier days mothers were told that babies should be given water in between the feeds otherwise they will get dehydrated. Now it is realized that babies do not need extra water as they get what they need with the breast milk, even in hot climates. In fact, if you offer it to the babies, they refuse to drink it because they are not thirsty. Formula fed babies may feel thirsty and may take water; in that case, you can give water but do not add sugar or glucose in it. However, when babies are ill and have loose motions, water should be given in small quantity and frequently.

For breast-fed babies, it is best to give this with a spoon than a bottle. This has an added advantage of the baby getting used to spoon-feeding and so later, on when babies are given semisolid feeds with a spoon at 4 to 6 months of age, they will take it readily. When the baby has erupted teeth at around 5 to 6 months of age, then babies should be given water after they had milk feeds (bottle or breast feeds) so as to rinse the teeth and thus prevent tooth decay.

2.16 Weaning from breast-feed

For how long you want to breast feed your baby is something you have to decide. You can continue breastfeeding until up to 2 years and after that, you should try to stop it. By this time the baby will be taking semisolids feeds 3 to 4 times a day and will have learnt to drink water with a glass or feeding cup. There are some mothers who get the babies used to bottle before they stop the breast milk. I will never recommend doing that unless you are trying to stop breast feeds before 9 months of age, because later on, it becomes very difficult to stop bottle-feeding.

When you stop breast feeding it is unlikely that baby will take fresh milk or formula easily but if your baby is consuming products like milk cereals with a spoon, there is no need to give extra milk. When you stop breast milk, you should try to give more of such cereals to the baby. You can also give homemade milk cereals made with fresh milk like rice kheer, suji kheer etc. . . These are tastier and the whole family can eat these.

Initially when you stop breast-feeding, your baby may cry more than usual. Someone else in the family will have to help you by taking the baby away from you and trying to give her something else to eat. You may also face the problem of your breast being congested. You can take paracetamol tablets to reduce the pain. Sometimes when you have decided to stop breast feeding the baby falls ill due to some other reason and at that time you may have to resort to feeding her again because babies who are used to breast feeding do not eat anything else when they are ill, but do take the breast milk. In such cases, you will have to try again after few days. Once your baby does not drink breast milk for 3 to 4 days she will forget about this and congestion in your breast will also reduce.

2.17 When a mother becomes pregnant while she is breast-feeding her child, should she stop giving breast feeds to her child?

No harm is done if she continues to breast feed. She will have to take about 800 to 900 extra calories to cope with her growing baby in utero as well in breastfeeding her baby in her lap. If she is fond of eating, and as most of us are, taking this much of extra calories should not be difficult. However if she has nausea and vomiting, and is not generally well, then she can stop breast feeding slowly; which means that she has to give more of other milk or semisolid food to

her baby, until she gets used to it and does not demand breast feeds any more.

2.18 Weaning from bottle feeds

Weaning from a bottle should be attempted before one year of age, and it certainly should be stopped before 18 month of age. The sooner this is done, the better it is because of the harmful effect on the teeth. Babies are capable of drinking with a cup or glass after 9 months of age so there is no need to give bottle after that. When bottle feeding is continued for a long time, comfort sucking on a bottle becomes a habit and in that case it becomes very difficult to stop it. Unfortunately weaning from a bottle is not done until quite late. I have seen 5 to 6 years old children who go to bed with a bottle. The reason for this is that the mothers or other members in the family either do not know the harmful effects of the bottle-feeding or are not convinced that it does any harm to the children. I realize that it can be difficult at times. Quite often, when you are trying to stop giving bottle to your baby and the child is crying for the bottle, someone in your family will probably get annoyed at you for refusing to give the bottle. In that case, the child learns that when he cries, he gets what he wants. Therefore, the main prerequisite for success in weaning from bottle feeds is that other members in the family should cooperate with you.

Chapter 3

CRYING BABY

Crying is the only way a baby can communicate with their parents and parents can usually understand why their baby is crying. She will cry when she is hungry or uncomfortable or wants to be cuddled or wants to be talked to. She may cry after she has passed urine and stool.

However, some babies between the age of 1 month and 4 months cry too much, especially in the evening. Usually at a certain time of the day, the baby will start crying, non-stop, and will refuse to bottle feed or suck on the breast. In this chapter, I will be talking about this problem.

The cause of this sort of crying is not known. It is called colic because most people think that it is due to too much of gas in the abdomen and the failure of the baby to pass this gas, but this may not be the reason. There could be other reasons like overfeeding, or allergy but in most cases one does not know the cause of this problem.

Certain facts about evening crying in babies:

- It is as common with breast fed babies as with bottle fed babies
- In breast-fed babies there is no relation with this sort of crying and the mother's diet
- In bottle-fed babies, changing of milk does not usually help. However there are some anti colic formulae milk available in the market and you can try these according to your doctor's advice
- It is not due to any disease and all the babies after the age of 4 months or 5 months grow out of this problem and so will your baby
- Medications do not help very much. However medications to help passage of gas are usually prescribed and given to the baby and at times, they just may help

What should be done when a baby cries like this?

- Cuddle the baby and keep on rocking her
- Talk softly to the baby; do not talk loudly

- Do not get tensed and anxious; remain calm. Your baby will soon stop crying
- Try using a dummy (pacifier); if the dummy is kept clean, it is not harmful
- Sometimes taking the baby out for a drive helps. No one really knows why. It may be distraction or it may be that the baby likes the movement of the car. As babies cry in the evening, keep your evening free for cuddling. Excessive cuddling or keeping babies in your lap does not spoil the baby
- Talk with other parents and share your problems with them

Chapter 4

TEETHING

Usually babies have their first tooth erupt at around 5 to 6 months of age. However many babies may have their teeth erupt much later, some after 1 year of age. There is no reason for this variation. So, if your baby is well, active, growing normally, even if there is delay in eruption of teeth, it is okay and there is nothing to worry about.

In some cases, however, the delay can be due to calcium deficiency especially if the baby is being exclusively breast fed and mother is not consuming adequate amounts of Calcium and Vitamin D rich food. It could also happen if the mother is not getting adequate exposure to sunlight as may happen when a mother wears burqa /abaya when she goes out. To prevent this mother should take enough calcium containing food and if necessary calcium and vitamin D tablets. If in doubt one should consult a doctor.

During the eruption of teeth, the baby often appears irritable and tends to put everything in her mouth and also drools a lot. Many people think that diarrhea, fever, cold and cough are due to teething but that is not so. Actually babies usually remain well until 5 to 6 months of age but thereafter they start getting minor illnesses like cold, cough and diarrhea. This is because by this time the immunity that they get from their mothers, while in utero, starts to decrease. They also tend to put everything in their mouth and they may get germs because of this. Since this period also coincides with teething there is a common perception that the fevers and diarrhea are because of the teething. Most of the time these are mild infections and children may only need paracetamol for cold or fever. At times, they will have to be taken to a doctor if they are ill or not getting better in 2 to 3 days.

Many mothers want their doctors to prescribe some medicines so that their children can go through teething without much of a problem. Unfortunately, there is no such medicine. Teething is a normal process. In fact, some children have no problem while teething, while others may be a bit irritable. If they tend to put the fingers in their mouth, it is worthwhile giving them a teether to chew on. Be careful that whatever you give to your child is not breakable and its color does not come off. If baby is very irritable then a dose of paracetamol can be given, even if she has no fever. This will reduce the pain she may be having and will make her comfortable.

Chapter 5

STARTING SEMISOLID FEEDS

This is one of the aspects of childcare where there has been a great swing of opinion from one extreme to another. At the turn of last century, i.e. in early 1900's, solid foods were not started until one year of age in England and America. Later on, probably in 1960s, the trend was to give solid feeds very early. In fact, some babies were given semisolid feeds at 1 to 2 months of age. After some years, it was realized that solid feeds given very early cause many problems because the baby's kidneys and digestive system have not matured enough to handle this type of food, and also it interfered with establishment of breast feeding. Post that, the trend started of giving solid feeds not before 3 to 4 months age.

Current WHO advice is to start semisolid feeds after 6 months of age.

In some of our Indian societies e.g. among Bengalis there is a rice ceremony, when the baby turns 6 months of age. At that time, she is given rice porridge and fish with rice. Incidentally, this is considered to be the right age for starting semisolid feeds nowadays.

However, one does not need to be very strict about the timing of starting solid feeds. If your baby is demanding milk feeds very frequently when he is 4 to 5 months of age, you can start baby on semisolid feeds at this stage. You can start the baby on mashed banana, boiled apples or mashed boiled potatoes. Rice milk cereals can also be given at this age especially to a breast-fed baby, when a mother feels that her baby is beginning to not be satisfied with breast milk alone.

Therefore, instead of giving formula milk in a bottle at this time, she can start her baby on rice milk cereals once or twice a day. Some babies refuse to take solid feeds initially, especially bottle-fed babies. Getting them used to solid feed is hard work. Some mothers get so fed up that they start giving cereals in the bottles. This practice has lot of disadvantages -

- This can cause your baby to choke
- Such babies may not learn to eat even when they are 2 to 3 years of age
- They may gain too much weight and will become obese

- Weaning them from bottle may become very difficult and prolonged bottle-feeding after 2 years of age is certainly not good, as it causes tooth decay

If your baby refuses to eat solid feeds, do not give up; keep on trying. Feed your baby in your lap or in a high chair. Let your baby pick the food with her hands so that she puts it in her mouth herself. This way she will gain interest in eating. Meanwhile, you can keep on feeding her yourself. It may take some time, but certainly, the baby will learn to eat. Try the same food daily until the child starts taking that particular food; try another food only after baby gets used to taking one type of food. Use a very small spoon that fits the baby's mouth or you can feed her with your hands after washing your hands thoroughly with soap and water.

Initially the child will spit the food out. This is because she does not know that the food has to be taken in and swallowed. Slowly she will learn to swallow. Once the child learns to swallow, you can increase the amount gradually, until the child takes $\frac{1}{2}$ -1 small bowl of food. Thereafter you can try new food items. It is quite likely she may not accept the new item in the beginning, but soon she will develop the taste for it and start taking it. If, after trying for 5 to 6 days the child stills rejects that particular food, then perhaps you should abandon the attempt and try again after 2 to 3 weeks. Keep at least 6 days gap between trying two different items.

Do not worry too much if your child is taking a long time to get used to solid foods. A child at 6 months of age is getting enough nutrition from milk feeds. A little bit of delay in taking semisolid feeds will not affect the nutrition of the baby.

Once your child starts taking semi solid food, try to reduce milk feeds to 3 to 4 times (bottle or breast) a day. By this time the child should be getting 3-4 semisolid feeds, 2 of which should be milk cereal and one or two of this should be, if possible a homemade lunch (like khichery, i.e. a mixture of rice, dal, vegetables with a little bit of oil or other fat like ghee). Beside this, one or two snacks like biscuits or rusk, about one ounce of fruit juice, and half a fruit like banana, should be given to your baby daily.

If you are a vegetarian, the aforementioned diet is good one for your baby. The type of dal mixed in the khichery should be one which is easily digestible like yellow mung or masoor (lentil). If you are non-vegetarian, you can start giving chicken or fish with lunch. For fish, give a small amount initially to be sure that the child is not allergic to it. Be sure that all these items are well cooked and mashed. Bones from the fish of course should be carefully removed. Eggs should be started only when the child is 8 to 9 months of age because some babies are allergic to these. Initially give a small amount of boiled egg, and if you find no problem with it, then the amount can be increased gradually until the child eats one whole egg.

When a child is 1 to 2 years old, a more lumpy food can be given so that slowly she gets used to eating the food that is cooked for other members of the family. One has to be careful not to give nuts etc. to the child as she may inhale this and this can obstruct her airways. You should encourage the child to eat with a spoon or hands by herself. She will make a mess, which is okay. Unless you allow her to eat, she will not be interested in eating.

Salt

Try not to add salt in baby's food as excessive intake of salt in food is one of the causes of high blood pressure later on in life. However adding a little bit of salt will not harm the baby especially in our hot and humid climate where babies sweat a lot. If there is history of hypertension in the family then salt intake for the whole family, including the baby, should be reduced.

Spices

A small child naturally cannot tolerate spices as their mucous membrane (lining) of the mouth, stomach and intestines are very delicate. However, since spices are used in the food we eat, very soon we have to get our children used to eating food cooked with them. I personally think that only after the age of 3 to 4 years they should be given small amount of spicy food. However, I have seen many children of 2 to 3 years of age eating spicy food without any problem. Therefore, you can decide yourself as to when to start giving spicy food to your child.

Chapter 6

DIET OF A CHILD

Most of the parents do want to give the right type of food to their children and are concerned about their growth. Quite often they compare their child with other children of the same age and are worried if they find that their child does not eat the same amount of food or do not have same weight. In this chapter, I will give some guidelines about feeding children.

6.1 My child has no appetite and she is not gaining weight!

This is a common complaint one hears from parents in a Pediatric clinic. More than 50% of parents of my patients complain that their children are poor eaters. In 90% of such cases I find that the children have normal height and weight, are active and do not suffer from any nutritional deficiency, which means that they are eating the right amount and the right type of food. Therefore, in such cases I reassure the parents that their child is normal and they need not worry about her.

It is useful to have some knowledge as to what your child should eat and how much calories she should consume. (Ref. Table 1 and 11). A child of 1 to 2 years should be getting 2 to 3 main meals plus 1 - 2 snacks in a day. The amount of milk that she consumes should not be more than 500 ml. There is practically no iron in liquid milk (as compared to formulae milk) so if a child consumes too much of milk, she will take less of other food and thus will get iron deficiency- anemia. Try not to give fizzy drinks, or too much of chocolates and potato chips to your child as these items contain too many calories in the form of carbohydrates and no other nutrients, so if you give these to your child she will suffer from lack of essential nutrients.

Usually feeding problems arise when the child is 1-2 years old. Most of the time, it is due to over anxiety on part of parents. Until the age of 6 months, children have rapid gain in weight, thereafter it normally slows down and after 1 yr of age; the weight gain is only 200 gms per month. Therefore, the food requirement is also less. As many parents do not realize this, they try to push or force their child to eat more food. This is the main reason for feeding problems.

So if your child is an active child and her weight is fine, stop worrying that your child is not

eating enough, In fact the more you keep on saying that she does not eat, the less she is going to eat. You do not need to take the weight of a child of this age every month. You can weigh her every 3 months and if you find that, she has gained about 300 to 500 gms in 3 months, that is fine.

Most parents still think that being healthy means that children should be fat and chubby and so they try to over feed the child. Children usually eat as much they require. But if you force them to eat, they will eat too much or they will eat less than what they need. The amount of food that a child needs is not same for every child, as all the children of same age do not have the same metabolic rate. The weight of the child depends not only on age but also on height and also whether one is thin boned or thick boned. Height is genetically determined. Therefore, if you are short, your children are going to be short. Short children weigh less than tall children and will eat less amount of food. You should realize and accept this fact, otherwise you will always be worried about your child and this will produce lot of tension at meal times. You will keep on trying to make your child eat more when he is not hungry and eventually he will probably hate eating. So relax. Do not worry too much and make meal times fun time, when you can tell your children stories or some amusing anecdotes.

Sometimes, it's not your anxiety that is the cause of fuss during mealtimes and your child may really create trouble with eating. The reason is that children of this age want and rightly need a lot of attention from their mothers or caregivers. Therefore, they realize that if they make fuss while eating, their mothers will spend time feeding them, and thus spend more time with them. Since your child needs the attention from you, you have to give this to her, which means you must spend more time playing with her, especially running games. By this, she will also get exercise and thus will build up an appetite and then she will eat better. Perhaps you can use this as an incentive. You can tell your child that if you finish her meal quickly then you will play a game or tell her a story. It is important to let your child eat by herself with either a spoon or hand. While she is eating on her own, you can keep on feeding her as well. This also means that she may make lot of mess and play with the food but if you do not allow her to do so, she will not have any interest in eating. The most important thing is to reduce tension about her not eating, so do not keep on saying that my child does not eat anything. If you do that, she will eat even less.

There are some children who eat more than what they require and their mothers have no problem in making them eat. These children are those who may gain too much weight and may become obese. The reason why they eat more and become obese is not known. It may be genetically determined or there may be some psychological reasons for this. As obesity may cause medical problems, it is important to prevent this. If your child is overweight, you should try to reduce her weight. However, one should not put a child of 1 to 2 years on strict diet because she needs food for her growth. You can give her low fat milk instead of full cream milk and do not try to feed her when she refuses to eat. Also, see that she gets plenty of exercise in form of running around.

6.2 Medicines to increase the appetite

There are certain anti-allergic medicines that can increase the appetite but they all have side effects, especially drowsiness. Beside that, these medicines will act as long as you are using them; after that, the child will again become a fussy eater.

If your child has not been eating well for a long time especially during an illness, it is worthwhile giving multivitamin and mineral preparation to your child for a short time. Sometimes this increases their appetite.

There are some herbal preparations in the market which are supposed to build up the appetite. You can try them if your doctor advises.

6.3 Hot and cold food

There is a belief among Asians that there are some food items that are hot and some cold. They believe that in some diseases hot food items should not be given and in others cold food items should not be given. According to the belief, hot and cold is not always thermal but there are some other criteria also which makes the items either hot or cold.

Actually, there is no scientific evidence about this belief. Personally I have no objection if they believe this but the main thing is that they should not eliminate so many food items from the child's diet that he starts suffering from nutritional deficiency. One of such items is citrus fruit which is stopped because the parents think that they cause colds. The result is that the child gets very little Vitamin C and may, in fact get more colds and coughs because of Vitamin C is essential to build up immunity. However if they think that child is allergic to citrus fruit, then they should give a vitamin C supplement to the child.

6.4 My 8 year old child wants to eat only junk food. He refuses to eat vegetables and fruits!

This is another common complaint one hears from parents. Making the child eat the right type of food was easier in older times. During those times, traditional food was cooked in the house (and most of the traditional meals in India are well-balanced meals) and children had to eat whatever the mother gave them. Some tasty food items like Indian sweets, samosas and kachoris were available but they were cooked or bought from shops only on special occasions. But nowadays a variety of food items are available in the market and they are advertised on the television, so the children know about burgers, fried chicken, noodles, chocolates, chips and cold drinks and the list is never ending. Children are not mature enough to understand as to what is good for them and what is not. They will naturally like variety in food and as all these items are tastier than homemade food, so they prefer to eat these.

I realize that making your children to eat the right type of food is not easy but still as you love them and want to do the best for them; you will certainly like to do so. If you are

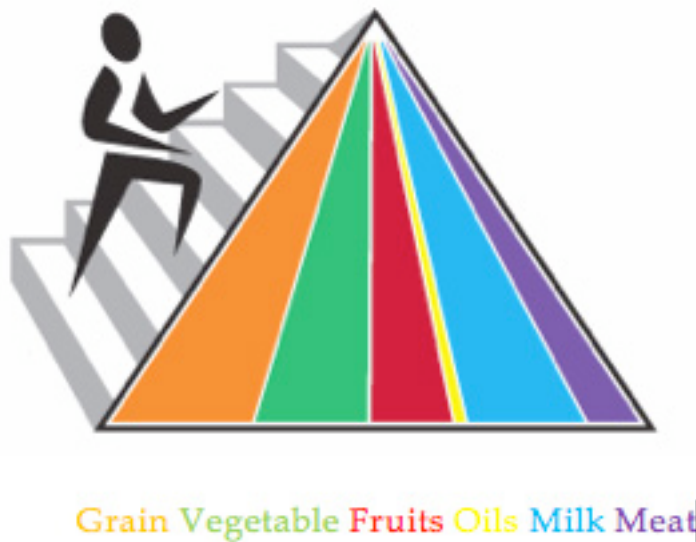


Figure 6.1: Balanced diet

determined you will certainly succeed. You will have to be firm with your child. You can use certain incentives like, you will let him watch his favorite television program only if he eats his vegetables or you will let him go out to play after he drinks a glass of milk. Perhaps you can promise him that you will give him his favorite food on weekly holiday if he eats his meals properly throughout the week. But this should not become a point for bargaining. Both the parents have to agree on the same strategy and not give in to any temper tantrums. Children can remain hungry for a long time because they know that their parents will be so worried about them remaining hungry that they will eventually give in. If your child has already got bad eating habits it will take you sometime to change his habits, however if you persevere, you certainly can succeed.

6.5 Diet chart for children

Parents do not need to keep a strict record of what the child is eating unless it is medically indicated as for example in case of children who are obese or suffers from some chronic disease. However it is necessary to offer them a well balanced diet.

Fig 1 shows the pyramid by which you can get an idea as to how much of each food group should be given daily to your child. Table 1 and Table 11 will give you a rough idea as to how much your child should eat. After 2 years of age, a child should be eating whatever the whole family eats and giving a healthy diet to your child will be easy if the whole family eats a healthy diet.

6.6 Some facts about different types of food items

Grain Food

Any food made from wheat, rice, oats, barley, and corn are grain foods. Grains are divided into 2 types, whole grain and refined grain. Examples of whole grain are wheat flour (atta), brown rice, cracked wheat (dalia), brown bread. Refined grains have been milled, a process that removes the bran and the germ. This is done to give grains a finer texture, but it also removes dietary fiber, iron and many B vitamins. Examples of refined grains are white rice, white flour (maida) and white bread. Therefore it is essential that the diet should consist of more of whole grains rather than refined.

Vegetables

Different types of vegetables are as follows-

1. Dark green vegetables like spinach, mustard green and other greens
 2. Orange vegetables like carrots, pumpkins
 3. Dry beans and peas {dals, chola, (chick peas), dried peas}
 4. Starchy vegetables like potatoes, corn, green peas
 5. Other vegetables like cabbage, egg-plant, cauliflower, tomatoes, onions, cucumber, and beet
- Different types of vegetables from each group should be eaten on different days of the week, but it is not necessary that one should eat all of these vegetables. If a child has strong dislike of a particular type of vegetable, one need not keep on insisting that the child should take it.

Fruits

There are many varieties of fruits available but it is not necessary to give all the varieties. However, it is necessary that the child eat fruits that contain vitamin C, for example orange, lemon, grapes and guava. One banana or a mango and an orange or a guava given daily is best for children. Apple can be given but usually children do not like it and it is not essential to give this. Alternately one cup of fruit juice can also be given although, fresh fruits are better as these provide roughage also.

Oils

Those oils which are liquid at room temperature like sunflower oil, olive oil, soybean oil, corn oil, mustard oil, are high in monounsaturated or polyunsaturated fats. They do not contain any cholesterol. Few plant oils, however, like coconut oil, palm kernel oil, are high in saturated fats and should be considered as solid fats. Solid fats are butter, ghee, margarine. These contain saturated fats, trans-fats and cholesterol.

As far as possible, vegetable oils should be used. Small amount of solid fats can be used especially by those who are vegetarians. Although one should restrict the amount of oil one consumes to prevent obesity, no restriction should be imposed on children who are less than two years of age and older children who are underweight.

Milk Group

These include milk, cheese, paneer, chhaana, yogurt, milk based puddings. For those who are lactose intolerant, lactose free products are available. These include hard cheese and yogurt.

Meat and Beans

Different meat and beans may be eaten on different days of week. One should try to include fish and/or nuts and seeds in meals, as these increase the intake of monounsaturated fatty acids (MUFAs) and polyunsaturated fatty acids (PUFAs). Omega-3 fatty acids (commonly called "EPA" and "DHA") are type of PUFAs that are found in certain type of fish. There is some limited evidence that these fatty acids decrease the risk for heart disease and are also necessary for the development of the brain of children. If the family eats fish, then these fish can be given to the child as well. ("EPA" is eicosapentaenoic acid; "DHA" is docosahexaenoic)

Extra Calories Allowances

Children can use these for items like ice cream, potato chips, biscuits, cakes and other sweets, or, extra butter and sugar can be added in regular meals.

Table 1 AMOUNT OF CALORIES NEEDED ACCORDING TO THE AGE AND WEIGHT

Age in years	Calories per kilogram
1 to 3	90 to 100
3 to 6	80 to 90
6 to 9	70 to 80
9 to 12	60 to 70
12 to 15	50 to 60
15 to 18	40 to 50

When calculating the calorie requirement you should know as to what is the expected weight of your child and the calculation should be done accordingly. Expected weight depends not only on the age of your child but also on the height. You can calculate this from the height and weight chart, which your doctor may give to you or you can download them from the website (cdc.gov/growthcharts). So if your child is 2 years old and weighs 12kg, he needs $100 \times 12 = 1200$ calories per day. Calorie requirement also depends on the activity of your child. The more active the child is more calories he will require. On the whole boys will require more calories than girls.

Table 2 **DAILY AMOUNT OF FOOD NEEDED FROM EACH FOOD GROUP**
(adapted from mypyramid.gov)

Calories	1,000	1,200	1,400	1,600	1,800	2,000
Fruits	1 cup	1 cup	1.5 cups	1.5 cups	1.5 cups	2 cups
Vegetables	1 cup	1.5 cups	1.5 cups	2 cups	2.5 cups	2.5 cups
Grains	3 ounce equiva- lent	4 ounce equiva- lent	5 ounce equiva- lent	5 ounce equiva- lent	6 ounce equiva- lent	6 ounce equiva- lent
Meat and Beans	2 ounce equiva- lent	3 ounce equiva- lent	4 ounce equiva- lent	5 ounce equiva- lent	5 ounce equiva- lent	5.5 ounce equiva- lent
Milk	2 cups	2 cups	2 cups	3 cups	3 cups	3 cups
Oils	3 tsp	4 tsp	4 tsp	5 tsp	5 tsp	6 tsp
Extra calorie allowance	165	171	171	132	195	267

Calories	2,200	2,400	2,600	2,800	3,000	3,200
Fruits	2 cups	2 cups	2 cups	2.5 cups	2.5 cups	2.5 cups
Vegetables	3 cups	3 cups	3.5 cups	3.5 cups	4 cups	4 cups
Grains	7 ounce equiva- lent	8 ounce equiva- lent	9 ounce equiva- lent	10 ounce equiva- lent	10 ounce equiva- lent	10 ounce equiva- lent
Meat and Beans	6 ounce equiva- lent	6.5 ounce equiva- lent	6.5 ounce equiva- lent	7 ounce equiva- lent	7 ounce equiva- lent	7 ounce equiva- lent
Milk	3 cups	3 cups	3 cups	3 cups	3 cups	3 cups
Oils	6 tsp	6 tsp	8 tsp	8 tsp	10 tsp	11 tsp
Extra calorie allowance	290	362	410	426	512	648

What counts as one ounce equivalent of grains?

- One slice of bread or one small chapatti
- One cup of ready to eat cereals
- Half a cup of cooked rice, pasta, noodles, or cooked cereals

What counts as one ounce equivalent of meat and bean group?

- One ounce (28 grams) of meat, poultry, and fish

- One egg
- A quarter cup of cooked beans
- Half an ounce (14gms) of nuts

What counts as 1 cup of milk?

- 1 cup of milk or yoghurt
- 2 ounces (56 grams) of processed cheese
- 1 and half ounce of natural cheese

Example: If your child is 6 years old boy and weighs 20 kg (If his height is approx. 115 cms, 20 kg is expected weight for him) he will need $80 \times 20 = 1600$ calories per day.

So throughout the day he should be getting 3 cups of milk, 1.5 cups fruits, 2 cups of vegetables, 6 ounces of grains (which may consist of 1 cup of rice, 2 slices of bread, and 2 small sized chapatti), 5 ounces (150gms) of meat and beans and 4 to 5 tsp (20ml to 25 ml) of oil. He can eat a piece of cake, one packet of chips or sometimes an ice-cream in addition to these.

Chapter 7

MINOR ILLNESSES IN CHILDREN

Cold, cough, vomiting, diarrhea and fever are minor illnesses which every child gets now and then. Some children get these more often than others do. Fortunately serious diseases like polio, diphtheria, tetanus, etc. are prevented by timely immunization, but there is very little you can do to prevent minor illnesses.

Many parents, who come to me when their child is ill, want instant cure, not only because they are worried about their child but because they do not want the child to miss school especially if the child has to take some examination.

The parents should try to get some knowledge about these diseases by reading about them. You must understand that most of these illnesses are due to viral infection. Most virus infection lasts for 4 to 5 days and there is no way that this time can be shortened. Medicines are given to make the child comfortable; they will not cure the disease. (Fortunately for some of the serious viral infections antiviral medicines are available.) Children, when they are ill, will usually refuse to eat anything so you will have to keep on giving them small amount of liquid so that they do not get dehydrated. A child who is ill needs rest, so do not send your child to school when he is ill. Although schooling and examinations are important, they are not more important than your child's health. In the next few chapters I will be discussing about these minor illnesses and how to deal with them.

Chapter 8

FEVER

Fever in children is mostly due to some infection. Fever is not due to teething, although teething and infection may occur at the same time in a child. It is possible that at the time when a child is teething, her immunity is less and that is why she gets the infection. The infection is due to virus or bacteria.

Infection in children is usually due to respiratory tract or gastro intestinal infection. Respiratory tract infection is associated with sore throat, cough and cold and gastro intestinal tract infection is associated with vomiting and diarrhea. Of course, there are many other causes of fever like malaria, typhoid fever, dengue, tuberculosis, urinary tract infections, and many other known and unknown diseases. But when your child gets fever there is no need to think about all the serious diseases and get worried about those, unless of course your doctor suspects any of those diseases.

Some parents, when they come to me with their child, who has had fever for one or two days and but is not very ill, ask me to do the tests on their child because someone they know had dengue fever or some other serious disease. Firstly, one must remember that many of the tests for various diseases become positive only after few days of illness so tests are not going to help you in any way initially. Common reasons for fever are respiratory-tract infections or gastroenteritis, so most of the times this is what your child has and surely your child will get better in 3 to 5 days. Unless signs and symptoms of certain disease is obvious right from beginning, if a child is not better in 5 to 6 days, only then one goes for elaborate tests; or if the child is very ill, in which case she may need hospital admission.

Whenever children get an infection, body produces certain agents which fight the infection. These agents produce fever also. Fever itself does not harm the patient unless it is more than 41°C (106°F). However, there are two reasons to try and reduce the temperature; (1) to make the child comfortable and (2) there are some children (5% to 6%) between the ages of 1 to 5 years who can get convulsions with fever, i.e. febrile convulsion. Convulsions usually occur on the 1st day of infection with onset of fever, or sometimes with high fever. For these reasons one should try to bring the temperature down.

So when your child gets fever you can start giving him antipyretic medicines like paracetamol

or brufen which you should keep with you all the time. Besides that, when your child gets high fever, tepid sponging can be done. Although temperature will come down with these medications, it is quite likely that fever will keep on coming and going till your child is cured of infection. This may take three to seven days depending on the infection your child has.

Children do not have adequate resistance against various diseases and, it is only natural that they keep on falling ill when they come in contact with various germs. You can reduce these germs in the environment by taking hygienic precautions, especially frequent hand washing. In spite of all the precautions it is not possible to get rid of all the germs and also it is not necessary to do so. Every child will fall ill now and then, and when they grow up, they will eventually get immunity against many diseases. There are, of course many serious diseases against which we have vaccinations and so you must see that your child gets all the vaccinations that are available.

Remember, if your child gets fever there is no need to get too worried about this. Accept the fact that your child will get this now and then. With proper treatment your child will definitely get better.

Chapter 9

FEBRILE CONVULSIONS

These are convulsions, associated with fever that may occur in some children. The child will suddenly become stiff, will have a staring look and may have jerking of hands and feet. He may also become red or blue on the face. This will last for a few minutes, and after that the child will regain consciousness. Thereafter he may be completely normal or may be sleepy for a while.

9.1 Some facts about febrile convulsion

- Only 4-5% of the children get febrile convulsion
- So only if a child has the tendency to get febrile convulsion he will get it
- It usually occurs between the ages of 9 months and 4 years
- There is a chance that a child who has a tendency of getting febrile convulsion will get it when he has fever but not necessarily each time he has fever. Some children may get convulsion only once and may not get it again
- It usually occurs on the first day of fever, at the time when the body temperature is rising
- Though the child may keep on getting fever for several days after the convulsion, the convulsion usually does not occur after the first day of fever
- These convulsions do not do any harm to the child and do not damage the brain
- When should the parents worry about the convulsion and consult a doctor?
- If it is the first time the child ever had a convulsion • If convulsion lasts for more than 5 minutes
- If the child remains drowsy, or has a stiff neck, or is generally not well, even if the fever has come down after giving paracetamol
- If the child has more than one convulsion on the same day

9.2 What should one do when the child has convulsion?

Remain calm. Do not panic.

- Place the child on his side on a firm surface, and wipe the secretions from the mouth with a cloth or tissue
- Give paracetamol suppository (medicine put in through the anus) if you have one, do not try to give oral medicine
- Do tepid sponging, i.e. place a cloth soaked in tap water over the body, underarms and groin. Do not take the child in the bathroom to give bath with the intention of lowering the temperature by this means.
- Contact a doctor as soon as possible or take the child to the emergency department of a hospital if convulsion has not subsided within 5 to 10 minutes

Chapter 10

VOMITING AND DIARRHOEA IN CHILDREN

10.1 Vomiting

There are some children who vomit now and then, for example, when they are traveling; others may vomit every morning especially when they are forced to eat what they do not want to eat, or they may vomit due to bad odor. There are also some babies who vomit since birth due to gastro esophageal reflux. In this chapter I am going to talk about acute vomiting. A child who is well but suddenly starts vomiting whatever he eats or drinks.

This sort of vomiting is usually either due to indigestion, (when something that a child has eaten or drunk has not been digested properly), or it could also be due to infection, the germs of which may have come from some food or drink that child has taken. There are some germs that produce infection within a few hours and there are some germs which may produce infection after 3 to 4 days, so it is not always possible to know as to which food has caused the infection.

When vomiting is due to infection in the gastro intestinal tract, it is usually associated with diarrhea but diarrhea starts later on, sometimes after a few hours and sometimes after 1 day. At times vomiting is associated with fever also.

Of course, there are other causes of severe vomiting, but they are not as common.

10.1.1 What should I do when my child starts vomiting?

When any one vomits too much, the main thing to worry about is dehydration i.e. loss of excessive water from the body. So you should try to give sips of water to the child. You could give either plain water or oral re-hydration solution (ORS), which is available in readymade solution or in powder form. If your child does not like to take ORS, then other fluids can be given. You can prepare ORS at home; in one glass of water, add 1 teaspoon full of sugar and a pinch of salt. Rice water with a pinch of salt can also be given. Do not try to give any solid

food until the child stops vomiting. If the child does not eat anything for a day or two, there will not be any problem, but regular intake of fluids is very important.

If the child continues to vomit then your doctor will probably give some medicines to stop vomiting. As it is quite likely that your child will vomit out any oral medicine that you will give to your child, so medicine may have to be given either in a form of suppository or a small tablet placed under the tongue. At times it may have to be given in the form of an injection.

In severe cases your child will need IV fluids especially if she is dehydrated.

10.1.2 How do I know that my child is dehydrated?

Signs and symptoms of dehydration are lethargy, restlessness, irritability, dry tongue, sunken eyes, and not passing urine. If in any doubt, contact your doctor immediately or take the child to an emergency department of a hospital.

10.2 Diarrhea

The main cause of diarrhea is infection. This can be either due to virus or bacteria. Chronic diarrhea can be due to mal-absorption, one of which is lactose intolerance about which I will talk later on.

In most cases diarrhea is due to viral infection. Rotavirus is one of these; stool in such cases is watery. A child may pass such watery motions many times a day, at times even 10 to 20 times. There is no medicine that will cure rotavirus infection (although an oral vaccine to prevent rotavirus infection is available nowadays). Fortunately as this is self limiting disease the child gets better in 4 to 5 days usually.

In some cases, infection can be due to bacterial infection. In these cases also, especially in E coli infection, one does not need antibiotic but if the child has dysentery, i.e. stool is green in color with mucous and blood, then antibiotic is useful.

With loose motions the child will lose salt and water, so they need to be replaced by giving oral re-hydration solution (ORS). The type of ORS fluids is same as used when a child is vomiting. Fizzy drinks and fruit juices should be avoided as these contain too much of sugar and this will make the diarrhea worse. You can continue giving breast milk but giving other milk may have to be discontinued for up till 24 hours in severe diarrhea, and then it can be restarted. Some would prefer to use diluted milk. Child should be given food like rice, dal, lean meat, banana, boiled apple, toast, yoghurt as soon as she wants to eat. Boiled raw banana with rice and lentil helps control the diarrhea, so do try to give this to the child. Food which contains too much of sugar and also oily food items should be avoided. It may happen that when you give something to eat or drink, the child passes stool soon after that. That does not mean that you should stop giving that particular food item. Your child will get better with time. Our task is to see that she does not get dehydrated and weak during this time and therefore we must keep on giving him stuff to eat and drink.

Sometimes, especially with viral infection, child may get transient or temporary lactose intolerance. Lactase is an enzyme which is present in the mucous membrane (lining) of intestines. Its action is to digest lactose which is present in the milk. When a child has prolonged diarrhea (infection of intestines) the cells which produce this enzyme gets destroyed and with that the enzyme is not produced adequately. The result is that the milk you give to your child does not get absorbed and therefore the child keeps on having loose motions. In such cases you may have to stop giving milk to the child. In an older child who takes solid foods, there is no problem but in infants and young children who are dependent on milk diet, one may have to give lactose free or low lactose milk. The only problem is that lactose free milk has a bad taste. However if you do not give the other milk at all to your child, she will eventually learn to take this. You may have to give this for a few days to a month; thereafter your child will most probably be able to tolerate normal milk. Some children or even adults have permanent lactose intolerance genetically. Permanent defect is not related to infection. They cannot tolerate milk throughout their lives. However they may be able to tolerate small amount of yoghurt or cheese.

In conclusion, vomiting and diarrhea in children is a self limiting disease. Your child will certainly get better. Drugs are not going to help much. See that the child gets enough to drink so that she does not get dehydrated. In case she gets dehydrated, you should take the child to the emergency department of a hospital immediately, so that the child can be given Intravenous drip. Start giving solid food to the child as soon as possible so that child does not lose too much weight.

Chapter 11

RESPIRATORY INFECTIONS IN CHILDREN

Respiratory infections include common cold, cough, infection of the throat and tonsils and infection of the bronchus and lungs. It is the most common reason that a child is brought to a doctor. Many other diseases are prevented nowadays with vaccination and with proper hygienic measures, but it is difficult to prevent respiratory infections. However, fortunately, some of the very serious respiratory infections, which are due to pneumococci and H-influenza bacteria, and some influenza virus can be prevented by vaccinations. These infections are due to germs which pass from one person to other, either through droplets or via hands. Although keeping your child away from someone who has cold and coughs prevents infection to some extent, often it is not possible to keep the children away from family members with cold.

Most parents are very concerned as to why their children get these infections, in spite of the fact that they take so much care. There are many misconceptions among the parents about these infections, therefore in this chapter I have tried to clear these doubts by trying to answer the questions which most parents ask me.

Why does a child get respiratory infections so often?

Almost every child after the age of 6 months gets respiratory infection about 4 to 6 times in one year. The reason for this is that there are many germs in the atmosphere against which the child has no immunity. When the baby is in mother's womb he gets passive immunity (antibodies) from his mother and after that if he is breast fed, he gets more immunity through that. However after 6 months of age this immunity decreases and then the child starts getting infections. Most children will get about 6 to 7 infections in one year until they are 5 years of age. Most of these infections are due to viruses; sometimes it can also be due to bacteria.

Does one need to use antibiotic each time child gets infection?

No; most of these infections are due to viruses and antibiotics have no role in viral infections. If your doctor, after examining your child thinks that child has bacterial infection and needs an antibiotic, he may prescribe an antibiotic for your child. Sometimes he may also prescribe

antibiotics for viral infections, so as to prevent bacterial infection complicating viral infection. However this always does not help, because there are some bacteria which may not be sensitive to that particular antibiotic and these may attack your child. In fact because of overuse of antibiotics, more and more bacteria are becoming resistant to antibiotics.

After examining a child, can the doctor always say, definitely, that the child has viral or bacterial infection?

For some cases it is quite obvious but in others, it is difficult to differentiate definitely. For those cases, help of investigations like CBC, ESR, CRP and throat and blood cultures are taken, especially if the child is very ill.

My child's throat swab grew some bacteria but my doctor said that there is nothing to worry about and did not prescribe antibiotics!

There are some bacteria which do not cause disease. These are present on surfaces like skin and mucous membrane. They are in fact good bacteria and prevent pathogenic bacteria (disease producing bacteria) from attacking these surfaces, so one should not try to get rid of these by giving antibiotics. In fact there are quite a number of such bacteria in our intestines and these produce certain essential vitamins. Too much of antibiotic usage can kill these good bacteria and we can have deficiency of the vitamins they produce. Besides that, some other pathogenic bacteria as well as fungus can colonize these surfaces if antibiotic are used for many days.

What are the side effects of antibiotics?

Antibiotics have many side effects like diarrhea, loss of appetite, nausea, allergic rash, emergence of resistant strains etc. . . However, when your doctor prescribes an antibiotic for your child and tells you that it is necessary, do not hesitate to give it, because in certain conditions you have to use it. For example in cases of acute tonsillitis due to streptococcal germs, antibiotic should be used for 10 days; otherwise there is a chance of getting rheumatic fever later on. Also in cases of ear infection it has to be used, because untreated ear infections can cause deafness. In cases of serious infections like pneumonia and meningitis it is life saving and antibiotics have to be used even for 14 days often intravenously.

What should I do if my child has cough, cold and fever? Should I go to the doctor immediately?

If child has mild fever, slight cold and cough and, the child is active and playful, there is no need to go to the doctor immediately. These are viral infections and there is no specific treatment for these. Child will get better by herself. However you can give symptomatic treatment like paracetamol to make the child comfortable.

Pseudoephedrine and other cough and cold medicines should be avoided, especially in children less than 2 years of age, as these have many side effects. If the baby's nose is blocked and he is finding it difficult to breathe you can use normal saline drops to clear the nasal passage. Nasal mucous extractor can be used for small babies; it is available in chemist shops. With this, you can clear the baby's nose after using normal saline drops and he will find it easier to breathe.

If you live in a place where the climate is cold and dry, using steam to humidify the air is useful but be careful that the hot water is not kept very near the baby, as the steam may burn the baby's skin. A child with common cold can take about 5 to 7 days to get better, so if your

child is active and not distressed too much, you do not need to worry.

However if following circumstances exist you must contact your doctor:

- Has very high fever
- Has severe cough
- Has breathing difficulty
- Is inactive
- Is less than 6 months of age
- Is not getting better after 3 to 4 days of observation

My child gets respiratory infection every month and when he gets infection he does not eat anything and therefore, he is not gaining weight?

There are some children who get infection more often than other children and there are some reasons for this-

1. He may have been a low birth weight baby or prematurely born. These children do get infections more often. However once they grow up, they do develop enough immunity, and then they will not fall ill so often.
2. Your child may not be eating the right type of food. A child should get well balanced diet, which should include vegetables, (green as well as other type of vegetables); fruits especially vitamin C containing fruits like oranges, grapes and guava; grains (rice, wheat etc.); proteins (dals, meat. fish etc.) and milk or milk products + oils and fats. If your child does not like milk, you can give milk in porridges. Yoghurt is very nutritious and good for preventing intestinal infections so do try to give this to your child. Many people think that yoghurt and certain fruits cause cold but there is no scientific evidence that these cause cold or sore throat.
3. A child who goes to crèche, play school or comes in contact with many children at home, gets infection from other children very often , so you may find that as soon as he recovers from one infection he catches another one. Parents naturally get very distressed about this. Most of the children get over this problem very soon, maybe in 6 months or one year's time, and your child will also get over it. During this time, see that your child gets rest, and good nutritious food. If necessary, ask your doctor to prescribe a multi vitamin preparation for him. There are many products in the market which are supposed to enhance the child's immunity and increase the appetite. There is no definite scientific proof that they help. Most of them are herbal products. Consult your doctor, and if he thinks these are harmless you can try them.

Each time my child gets respiratory infection, she starts wheezing and treatment with a nebulizer becomes necessary. Why is that and what I can do to prevent this?

This unfortunately is a very common problem nowadays. This is due to allergy and nearly 25% of children nowadays have allergy manifestations. Most of the time allergy is due to pollution, house dust mite, cat and dog hair, cockroaches, pollens and certain grasses. In some children cold air or cold water can trigger an allergy attack.

You can reduce the attacks by taking precautions as listed in chapter 16. However usually, in spite of taking all the precautions you may not be able to completely prevent the attacks; nevertheless they will become less severe and less frequent so it is worth while taking the precautions.

If the attacks are too frequent and severe, your doctor may prescribe inhalers for your child. Inhalers do not do any harm as the amount of drug taken in directly to the lungs is very low as compared to oral medications. Inhalers are not addictive and once your child grows up, most probably he will be able to stop using them. However, a few children require these when they grow up and they are usually those children who have family history of asthma. Even if one has to use inhalers for many years, they are not harmful and do not suppress the child's growth.

My child has phlegm in his throat but he does not know how to take it out. Give me some medicine so that he can take it out!

There is no medicine by which phlegm can be taken out. All one can do with medicine is to make the phlegm less thick so that it comes out easily. Giving plenty of fluids to the child also helps. The only way phlegm can come out is when one coughs, so one should not give any medicine to suppress the cough. Adults will spit the sputum out but children usually swallow it. That is okay because it has come out from the airway passages and will eventually come out with stool or vomit. Once the infection gets controlled, there will not be any more phlegm.

Chapter 12

WORM INFESTATION

Children can be infested with various types of worms. Most of these worms are common among children who live in villages or live in an environment which is not very clean. For such children we give medications to get rid of the worms, about 2 times in a year. Medications are usually given without doing a stool test, because if there are only a few worms in the intestines the stool test may not be positive.

Pin worms are tiny thread like worms. These are the most common among almost all children, even if they live in clean environment. These spread from person to person, so usually, whole family suffers from these worms. They come out of the rectum at night and lay eggs around the anus, and in girls at times they travel up to vulva and into the vagina.

Sometimes, if you examine these areas at night, when the child is crying because of severe itching, you may be able to see these worms. Children with these worms will have itching around anus region and girls will have itching and burning sensation at the vulva region also. After itching at these areas, when the children put their hands inside their mouth, the eggs are transferred inside the mouth and then travel to the stomach and the intestine, where the eggs hatch in to the worms. Thus children keep on getting the worms infestation again and again. You can prevent this by making the children wash their hands with soap as often as possible. However even after you have taken all the precautions, the children may still get infested by these worms, so you will have to use medicines to get rid of these.

Diagnosis can be made by scotch tape test done in a pathological laboratory but usually, as the problem is so obvious we give the medicine to the children without doing the test. Medication should be repeated after 15 days and the whole family should take the medicine on the same day.

Chapter 13

GROWING PAINS

Some children, between the ages of 3 to 5 years, complain of severe pain in the legs. Pain is usually at night and is over the calves or thighs and sometimes at the back of knees. Children are well otherwise. There is no swelling and redness over the legs. Sometimes it occurs in older children also.

The cause of this problem is not known. It is called growing pain only because it occurs in children who are growing. The pain is mainly in the muscle and not in the bones. It occurs usually when the child runs and jumps too much during the day or may have viral infection, but it may occur otherwise also. At times the child may get up from sleep at night and start crying because of the pain.

This is not due to any disease and, after a few days or months, the child usually stops getting these aches.

What to do when the child has the leg ache –

- Massage the part with oil
- Tying the legs with crepe bandage sometimes helps
- If the pain persists then you can give a dose of paracetamol or brufen to the child
- During the day when the child does not have pain, make him do muscle strengthening exercises
- See that the child is taking a well balanced diet which includes milk or milk products. If he does not take or cannot tolerate milk then give him medicine that contains calcium

Chapter 14

CONSTIPATION

Before understanding about constipation one needs to know the normal pattern of passage of stool in babies and children.

A new born baby may pass stool soon after birth or any time within 24 to 48 hours after birth; thereafter the baby will probably pass stool many times a day. Breast fed baby may pass a little amount of stool after each feed.

At times, usually when a baby is about 6 weeks old the number of stool passing decreases significantly. Sometimes baby may not pass stool for 3 to 6 days and when he does pass stool, it is usually a large amount of normal stool. This is not constipation and no treatment is required. Bottle fed babies pass stool regularly but in comparison the stool is more firm. However at times stool can be very hard and baby may cry while passing stool. There may be streaks of blood with it. This is constipation and requires treatment.

In toddlers constipation may also occur and this is due to less roughage in their diet, which means that he is eating less of vegetables, fruits or whole grains.

In older children constipation also occurs because of less roughage. Another reason is that they do not go to the toilet when they get the urge to pass the stool, perhaps because they are too busy playing or not allowed to go to the toilet if they are in school. The result is that the stool inside the rectum becomes very hard as the moisture from the stool gets absorbed, and so, when they go to the toilet they cannot pass it. Besides this, the hard stool causes fissure (that is, it produces a cut at the side of anus) and because of the pain, children are reluctant to pass stool. As the stool remains inside the rectum, it becomes harder. At times, the stool which is above this hard stool passes involuntarily by the side of hard stool and into the child's under pants. This is known as encopresis.

Problems with constipation:

- Child will be irritable
- May have abdominal pain
- Appetite will be less

- Will cry when passing stool
- There will be blood streaks with stool
- Encopresis
- May get urinary tract infection because of constipation

Treatment for constipation is

1. Proper diet
2. Regular toilet habits
3. Medications

In mild cases changes in the diet and encouraging the child to sit on the toilet seat at fixed times daily may help. However in most of the cases medications are usually required in the initial stages. Medications may be necessary for a few days to several months.

Proper diet

In small babies who are more than 4 to 6 months of age and who are on formula feeds, giving some sort of fruit juice may help. There are some milk formulae available in the market meant for babies who have constipation. One can use these formulae feeds.

In older children following diet changes should be made -

- Two to three servings of fruits should be given daily
- One or two serving of vegetables with each meal
- Give less of meat and chicken and more of vegetable protein like lentils and beans
- Make porridge with broken wheat (dalia) or oats, do not use cornflakes as it is refined and has very little roughage
- Use whole wheat flour (atta) for bread and chapattis etc. and not use refined flour (maida)

Regular toilet habits

Child should be encouraged to go to the toilet whenever he gets the urge to pass stool. He should go to the toilet daily at the same time, perhaps after breakfast or after he comes back from school and after drinking or eating something. The child should sit on the toilet seat at least for 5 to 10 minutes. He can read some book or comic book during this time.

Medications

Medications are usually required in most cases of constipation especially when change of diet has not worked. Laxatives (medicine to soften the stool)

1. Lactulose: This is a mild laxative. This softens the stool so child can pass stool without pain. This has practically no side effects and can be given for several months if needed. Once the child starts passing stool regularly then this can be stopped and if the constipation recurs then it can be restarted.
2. Bisacodyl tablet: This acts by irritation of the bowels, so with this, child will feel some pain before passing stool. It can be used in older children with severe constipation. 3. Macrogol 3350 This is available in a sachet. It has to be mixed with water and then taken. It works by softening the stool.

Suppositories

1. Glycerin suppository
2. Bisacodyl suppository

These are given in case where a child is reluctant to push to pass stool because of hard stool, especially if there is a fissure. In mild cases glycerin suppository is used but in severe cases one may need bisacodyl suppository. This should be first lubricated and then pushed up the anal passage. Child will probably pass stool after 10 to 20 minutes. You may need to use this daily until the fissures heal and child starts passing stool without suppository. Along with suppository, a laxative also has to be given. In few cases, local anesthetic cream may have to be used to relieve severe pain while passing stool.

Enema

At times when suppository does not help, enema may need to be given. Enema is given by pushing a certain amount of glycerin or saline water up the rectum through the anus by means of a rubber tube. It can be uncomfortable but is not painful.

All the above medications are not habit producing and do not harm the child in any way. With constipation there are many problems and you should not let your child suffer from constipation.

As soon as the child starts passing stool regularly, one can stop the medicines. However if the constipation recurs, do not hesitate to use the same medications again. With changing the food habits and training your child to go to toilet regularly, your child will certainly improve.

Chapter 15

ASTHMA

Asthma is a disorder of airways (i.e. larynx, trachea and bronchus) through which air has to pass before it reaches the lungs.

The main problem, in case of patients with asthma, is that the airway passage becomes narrow, due to spasm of the muscles and accumulation of the mucous; therefore the air cannot pass easily. Obstruction is more when the air comes out of the lungs. Because of this problem the child will cough, have difficulty in breathing and a whistling sound (wheezes) will be heard when he breathes.

The main cause of this disease is allergy, which is usually due to substances that are present in the air, which the child breathes. The main allergens are house dust mite, pollens, grasses, furs and dander from pet animals, and cockroaches. Environmental pollution also contributes to the allergens in the atmosphere. A child who has allergy tendency may also be allergic to many food items but it is doubtful whether these cause asthma.

Asthma in children is mainly caused by allergens which are present in the air. Beside these, there are some triggering factors which precipitate an attack of asthma like smoke, strong odors, cold air, drinking cold water, and sudden change of climate i.e. from hot to cold climate or from cold to hot. Some parents tell me that drinking fizzy drinks, eating chocolates or eating ice creams triggers attacks in their children. Triggering factors are different for each child, so avoid such factors only if you are sure that they are the triggering factors. If you are not sure, do not put too many restrictions on your child, because if your child finds that in spite of taking the precautions he is still getting attacks, he may become rebellious.

Unfortunately asthma is very common nowadays; about 15-20% of children suffer from this.

As I have mentioned before, children with asthma have dry cough, difficulty in breathing and wheezing. Some children may have attacks only when they have respiratory infection, about once in 3 to 4 months, otherwise they have no problem. In some children it may be only in the form of cough, mainly at night. The usual story is that child had viral infection which got better in 3 to 4 days but the cough persisted. The child may have cough at night or after he runs around or when he laughs. There may or may not be accompanied by wheezing.

Some children may have mild wheezing about 2 to 3 times a week and get a severe attack

about once a month. Others may have wheezing all the time and also get severe attacks now and then, when they may need hospitalization. In conclusion, some children may have very mild asthma, while others may have severe attacks. Naturally the treatment will differ in each case.

15.1 Treatment

15.1.1 Prevention

In chapter 16, I have listed some of the measures that you can take to minimize the attacks.

You can also get allergy tests done to find out what your child is allergy to and then take precautions against those allergens. Allergy tests can be done over the skin by skin prick test (for children who are more than 6 years of age) or it can be done by blood tests like RAST test (Radioallergoabsorbent test).

Unfortunately, in spite of taking all the precautions, your child may still have attacks. At times allergy tests show allergy to so many items that it becomes impossible to take precautions against all the allergens. Nevertheless, by taking precautions, attacks will certainly become less, so do take precautions as much as possible without making life difficult for your child and other members of your family.

15.1.2 Medication

Although we all wish that the child who suffers from asthma remains well without taking medications, unfortunately he will most probably need them. Some children may need them regularly while others occasionally. If he needs medications occasionally then oral form can help, but if the child needs medicines very frequently then it is better to take them via inhalers.

15.1.2.1 Inhaler

Inhaler medicines have very minimal side effects (less than oral medicines); they are not addictive and it is not true that once children start taking inhaler medicine they will always need this. Your child may grow out of this disease as many children do and then your child will not need these inhalers any more. However, even if your child needs inhalers for many years, it is not harmful and does not suppress the growth of children.

Inhaler medicine is mainly of two types. One contains corticosteroids (prevention medicine), and other is a beta agonist (relief medicine) like salbutamol (ventolin). The former clears the mucous that has collected in the airway passages and also is used for prevention and latter reduces the spasm of the muscles which lines the air passages and thus provides immediate relief. Corticosteroids, when given orally for a long time have many side effects, but it can be given orally for 4 to 5 days safely and with inhalers regularly for many years. There have been studies where it has been given for many years and there were no adverse effects.

There are three ways by which inhaler medicine can be given:

1. With a nebulizer pump

2. Metered dose inhalers (MDI); children can use these with a spacer device. Children above 12 years of age may be able to take MDI without the spacer device, but for younger children you will need the spacer. Using MDI with spacer is as effective as a nebulizer. It is less expensive and, less time consuming. You can carry it with you wherever you go and it does not need electricity. The preventive (containing corticosteroids) inhalers are orange or brown colored and the reliever inhalers (contains beta agonist) are blue or green colored.
3. Dry Powder Inhalers (rotahalers, turbohaler); children above 5 years age can take these

Different varieties of these medicines and devices are available in the market; your doctor will prescribe for your child as to what suits him the best. Your doctor should also write down for you an action plan which you can implement if your child has a severe attack of asthma.

Although we may not be able to cure your child who has asthma, by taking precautions and giving him proper medications, we can make his life comfortable so that he can lead normal life, attend school regularly and take part in all the activities. There is a 50-70% chance that as he grows up he will not suffer from asthma anymore and he will be able to do without medications. The reason for improvement is that when a child grows, his air passages also grow in width and do not get clogged so easily. Also because of increase in immunity he will not catch viral infections so often, and thus not get viral induced asthma frequently. The children who have very severe asthma, need hospitalization frequently, and also have family history of asthma may grow up to be asthmatic adults and may need medications in form of inhalers most of the time. As I have said before these inhalers medications do not have any long-term side effects and adults who have asthma can lead a normal life without too many restrictions.

15.2 Action plan for severe attacks

Signs and symptoms of severe attack:

A child with severe attack breathes rapidly, his chest wall goes inside with each breath, he will not be able to talk, and in a very severe attack may become blue.

Action Plan:

- You must immediately start giving him his relief medicine, salbutamol (ventolin) with MDI through a spacer. Give 2 to 4 puffs one after the other.
- Ask your child to take 4 breaths after each puff (for babies, give puffs at interval of 15 seconds.) Wait for 5 minutes. If he is not better give him puffs again. Give puffs 3 times but if he still does not improve, you should arrange for taking him to the emergency ward of a hospital as soon as possible. Continue giving him puffs whilst you are going to the hospital.



Figure 15.1: Small Volume Spacer (e.g. Aerochamber or Space Chamber)

- If he improves you can continue giving puffs 2 to 4 hourly. However if he needs puffs very frequently, then you must contact your doctor.
- If you use nebulizer instead of MDI, then you can give salbutamol (ventolin) via the nebulizer 3 times in 1 hour and thereafter give it 2 to 4 hourly.

Chapter 16

ALLERGY PRECAUTIONS

16.1 Precautions to be taken to prevent allergy in cases of asthma and allergic rhinitis

1. Remove pets
2. Try to get rid of dust in the house by using vacuum cleaner and mop drying
3. Use impermeable (plastic) mattress covers and pillow covers
4. Get rid of cockroaches
5. Control growth of mold in the house. Wash moldy surfaces with weak bleach solution (Clorox)
6. Get rid of house dust mite over the soft toys by keeping them in the freezer over night or in the sun for 3-4 hours
7. Hang bedding, bed covers, comforters etc. in the sun for 3-4 hours or keep them in extreme cold
8. Bed sheets should be washed frequently in hot water and soap
9. Air conditioner can be used, but change or clean the filters frequently
10. Remove carpets
11. Use washable curtains
12. Remove upholstered furniture if possible and use wooden furniture and leather covers
13. Allow no smoking inside the house

16.2 Triggering factors that produce asthma attacks and therefore should be avoided are

1. Tobacco smoke
2. Smoke from wood burning in the house
3. Fumes from kerosene heaters
4. Strong odors such as disinfectant, wet paint and perfumes
5. Cold drinks 6. Sudden change from hot to cold or cold to hot environment
6. Humidity should be kept around 50% inside the house

Chapter 17

PREVENTING TOOTH DECAY

Tooth decay is a very common problem nowadays. About 50-70% of children have caries teeth. This is due to the action of acid on the tooth enamel. The acid is formed by the action of bacteria (which are normally present over the plaque on the teeth) with the carbohydrates. If the child eats anything that is sweet and rinses his mouth after that or drinks water, it does not cause any harm. But if the sweets remain in the mouth for a while, for example candies, chocolates, dried fruits (dates), and especially if these get stuck between the teeth, then they will cause tooth decay.

If a baby is put to sleep with the milk or fruit juice bottle in the mouth the milk pools around the teeth and remains there for a long time thus causing caries teeth. This can also occur with breast feeding if breast feeding is continued for more than 2 years and baby sleeps while breast feeding.

17.1 Problems associated with caries teeth

- The child will have pain because of this and will not be able to eat properly. Thus his nutrition will suffer
- Because of the cavities, the food will remain inside the cavities. The bacteria grow in these cavities and cause tooth abscess. The germs from these cavities also can pass into the blood and cause serious infections
- The child who has caries teeth can also get repeated throat infection
- Lastly, caries teeth do look ugly and everyone including children want to have beautiful teeth

17.2 Measures to be taken to look after your child's teeth

- Formation of teeth starts when a baby is in mother's uterus from 4 months onward. So it is important that mother should take lot of calcium containing food (dairy products) and calcium tablets throughout her pregnancy. She should also continue taking these when she is breastfeeding the baby.
- As soon as the first tooth erupts, it should be cleaned daily by wiping with a clean damp cloth. Brushing of teeth should start as soon as possible and certainly when the child is 2 years old. Brushing of the teeth should be done at least twice a day, in the morning and before sleep.
- Baby should be given water after bottle or breast feeds (after the age of 6 months when the baby's teeth has erupted). She should not be allowed to go to sleep with the milk bottle in the mouth. Bottle feeding and breast feeding should not be continued beyond 2 years of age.
- Avoid chocolates and toffees. Sweets like puddings or other sweets can be given to the child but the child should be given water to drink after eating or should rinse his mouth.
- The child should be taken to the dentist for routine checkup and especially if there are cavities and get filling done. If there are multiple cavities then the dentist may do fluoride treatment.

17.3 Fluoride drops

Fluoride helps to prevent caries teeth. In some localities enough fluoride is added in the water supply, and then there is no need to give fluoride drops to your child. On the other hand, in some places excessive and naturally occurring fluoride is present in the water supply and this may do harm to the teeth. So you must know how much fluoride is there in the water supply in your locality.

There should be 0.6 to 1ppm of fluoride in the water. If there is less fluoride in the water the fluoride drops can be given to the children. Fluoride toothpaste can also be used but parents must supervise while children are using the tooth paste, otherwise the children may use too much of it (a pea size tooth paste should be used).

Dose for fluoride drops

- 6 months to 1 year - 0.25ml (5 drops) daily
- 3 years to 6 years - 0.5 (10 drops) ml daily
- 6 years above 1 ml - (20 drops) daily

Chapter 18

TIPS ABOUT GIVING MEDICINES TO CHILDREN

If your child refuses to take medicine and vomits it, give a spoonful of sugar or honey soon after you give the medicine. You can mix the medicines with sugar or honey before giving it but giving these after giving the medicine is more effective. If you have to give medicine to a small baby, give it with a dropper, slowly drop by drop under the tongue, then the baby will accept it easily. If the baby still tends to spit out the medicine, press two sides of the cheek with your thumb and middle finger for a few seconds after giving the medicine. You will need someone else to hold the baby firmly while you are giving the medicine.

Children refuse to eat when they are ill. Many parents think that medicine cannot be given on empty stomach, so they are in a dilemma as to how to give the medicine when their child does not eat. Most medicines can be given on empty stomach. There is no harm if you give antibiotics and multivitamins on empty stomach.

Paracetamol, brufen, iron medicines and corticosteroids can cause irritation of the stomach if given on empty stomach. Paracetamol can be given as suppository to reduce this side effect or if you have to give this orally, you can give antacid before giving this. If your child is on iron medicine you can omit it for a few days when your child is not well. Corticosteroids are very rarely needed. If these have to be given during an acute illness, your doctor may give this in injection form or may prescribe an antacid with it.

Chapter 19

BREATH HOLDING ATTACKS AND TEMPER TANTRUMS

Breath holding attacks occur in some children between 6 mnths to 1 $\frac{1}{2}$ years of age. The children will start crying excessively and then will hold their breath. They may also go blue and then recover immediately. Fortunately, they all recover and after the age of 1 $\frac{1}{2}$ - 2 yrs, they grow out of this problem. Although many children cry excessively but why some children hold their breath is not known. It is a very frightening experience for the parents, but since all babies do recover from this and no harm comes out of it, there is no need to worry too much about this.

It is natural that after the child starts this behavior, most parents try their best to give whatever the child wants to avoid breath-holding attacks. The child slowly learns that he can get what he wants by crying and therefore he starts crying too much and for prolonged periods. This becomes a learned behavior perpetuated by the anxiety of parents.

My suggestion is that both the parents and other caregivers like grandparents should sit and discuss and come to a conclusion as to for what behavior they should say yes or no to the child. There should be more 'yes' and less of 'no'. A child of this age does not understand why you are saying no. When he wants something and you do not give it, he cannot understand why those who love him are not giving him what he wants and gets frustrated.

On this note, I would like to say that it is essential to make the home 'child friendly': which really means covering all the electric switches or keeping heavy furniture in front of them; removing all breakable decorative pieces; removing medicines, kerosene, bleach and acid containing bottles and keeping these in a place where the child cannot reach to. Keep the television set at higher level. It is not possible to teach a one-year-old child not to touch these things. They cannot understand the reason why you are saying no and can get very frustrated, and this frustration can take the form of breath holding attacks or other similar problems. So after taking these and other measures, you can reduce the number of 'no' and then it is likely that your child will not cry too much. The important thing is that once you have decided to say no, do not give in, because if you do that, your child will learn that he will get what he wants

by crying. When he starts to cry for something you cannot give, try to distract him away and give him something else. If he is reaching out and wants you to pick him up, do pick him up and hug him. However, you will have to find a balance between too much picking up the child and too little picking up. Some children will demand being picked up so much that it leaves the mother exhausted. So after the child has calmed down, do put him down and try to entertain him by some other means.

Temper Tantrums

This usually occurs when the child is $1\frac{1}{2}$ - 3 yrs of age. The reason for this is almost the same as breath holding attacks. The child will start crying at the top of his voice and sometimes bite himself. At other times may bang his head against the wall. This is the age when children want to explore everything possible. They want to touch everything, put it in their mouth or throw it to see if it breaks. If they are not given what they want, they cannot understand why. They cannot express themselves, so this produces lot of frustration and anger and that probably is the reason as to why they start throwing tantrums. At times, your child may want you to pick him up and cuddle him but you may be busy doing something and so do not respond immediately, but the child does not understand why you do not pick him up, so throws a tantrum. Very soon, he learns that whenever he throws a tantrum he is given what he wants or you leave whatever you are doing and pick him up. He learns that this is one way he can get what he wants and therefore increases this sort of behavior.

The best way to deal with temper tantrum is to prevent it. When your child gets into a temper tantrum, do pick him up and try to calm him down. But do not give him the object of his demand after he throws a tantrum, otherwise you will not be able to break this habit. Once he has calmed down, in a soft voice explain to him as to why you did not want to give him what he wanted. If you explain to him repeatedly, he may understand what you are trying to say or at least come to realize your consistent behavior. You will be surprised to know how much your child understands.

Chapter 20

TOILET TRAINING

There is great controversy as to when one should start toilet training a child. There was a time when the pediatricians advised that babies should be put on the potty after the age of 6 months and sometimes even earlier. However, later on, it was believed that one of the causes for bed wetting at night was due to this strict toilet training regime. (This is not the only cause for bedwetting, see chapter 21 on bedwetting.) So nowadays it is advocated that toilet training should start at a later age.

The greatest problem about starting toilet training late is the nappies. Disposable nappies are expensive; also they pollute the environment. Nappy creams are an added expense and in spite of taking the best of care, most babies do get nappy rashes, which one must agree do cause lot of discomfort and pain to the babies. Besides that, in countries like India and Pakistan most people do not have air conditioners and if even if they have it, very few people use them 24 hours a day. Wearing nappies, whether disposable or cloth ones with many folds in them, is certainly very uncomfortable for the baby in the hot humid climate. And because of the intense humidity, babies can get fungal infection in the nappy areas. Of course, the other alternative is the age old custom of keeping the baby without nappies by which he will pass urine and stool wherever he is sleeping, sitting or playing. This is of course a lot of work for the mother to keep on cleaning the floor, clothes and bed sheets many times a day.

So now we have to decide as to when a mother should start making her child sit on the potty. I do not think that there is any harm in putting a child on the potty, after meals, and after he gets up from sleep when he is about 9 months old, that is when he starts sitting up properly. If the child does not want to sit on the potty do not force him. If he passes stool and urine at that time it will save on the nappy. Of course the babies will still need the nappies, because a child cannot be trained at this age.

Active training can be started when the child is more than 1½ yrs old. The best time to start training is when the child can start communicating in some form or other that he wants to or has passed urine or stool. If there are other children in the house, your child will see them sitting on the potty and may like to do so. Quite often potty training is a smooth process, whilst at times it can be difficult. You should not punish or scold the child but try to train him by giving

rewards and praising him. Rewards can be in the form of stars and after he has earned certain number of stars he can be given a present.

Every child is different in the way he responds to potty training. Some children get trained easily while others take a longer time. Eventually all the children do get trained and so will your child.

Chapter 21

BEDWETTING

Most of the children are toilet trained by 2 to 4 years of age. They may continue wetting their beds at night for another 6 months to 1 year and thereafter they are dry at night also. But there are some children who continue passing urine in their bed while they are asleep. Some may be dry at night for a while and then again start wetting their bed. The percentages of children who are bedwetters are roughly as follows:-

TABLE V

Age in years	Percentage
4	30
5	15
6	10
8	8
12	5
15	2

So you can see that there are many children who have this problem. Why this problem occurs is not known. In very rare cases, there may be some disease because of which this may be occurring. So you should ask your doctor to examine your child and if necessary certain tests should be done. There is a familial tendency in some cases. However many times you may find that one or two of your children may be bedwetting while others are dry at night. There are many theories also as to why this occurs. One of these is that the particular part of the brain that controls this function in your child takes time to mature. The other theory is that kidneys of these children produces too much of urine at night. Most of the time it is not a behavior problem and it is neither the parents' fault nor the child's fault that he has no control over his bladder at night. I am emphasizing on this fact, because in our societies, the mothers are blamed for everything including also when their children have bed wetting problems.

21.1 How to solve this problem

Firstly since your child is not doing this on purpose, no amount of punishment is going to work, so do not scold or spank him for this.

- Motivation is the best way of dealing with the problem. These children do not like wetting their bed, so if you motivate them not to wet their bed they will cooperate
- Give them drinks throughout the day but less before he goes to bed especially caffeinated drinks (cocoa containing drinks)
- Make him go to the toilet before he goes to bed and if possible wake him up after 3 to 4 hours to take him to the toilet to pass urine
- Ask him to keep a diary where he will write down daily the night he was dry and the night he was not. This will be his secret diary and no one except you and his doctor should see it. To a younger child you can give stars daily for the nights he is dry and when he earns certain number of stars you can give him a present. No one in the family should make fun of him for this and other children in the family should also encourage him to keep dry
- Tell him to withhold urine during the day when he gets the urge to go to the toilet. This will increase the capacity of his bladder and thus help him get better control over his bladder at night

21.2 Medicines

A.D.H (antidiuretic hormone)

A.D. H. is a natural hormone that is present in our body. Its action is to reduce the amount of urine that is formed by the kidneys. D.D.V.P (e.g. miniran) is a man made similar medicine. It comes in nasal spray form or tablet form and has to be given to the child before he goes to bed. It has some side effects like headache, running or stuffy nose. It works in 60% to 70% of cases but when it is stopped, bed wetting may reoccur again. However it can be used again. It is worth while using it for older children who want to go and stay with friends overnight or go to a camp.

Mattress bed wetting alarm

This is kept under the child's bottom. When a drop of urine falls over the mattress an alarm rings and wakes the child up. Then he can go to the toilet. It can work in an older child who is well motivated; otherwise it will wake up every one in the house except the child.

Chapter 22

STRANGER ANXIETY

Earlier most South Asians lived in joint families where children, right from the time they were born, interacted with many adults in the family. Therefore, if the parents had to go somewhere, they could easily leave their children with their grandparents, uncles and aunts. However, nowadays many couples have to move out from their hometowns and live in other parts of their country or in other countries. You may be one of them.

Your baby might have been born in your hometown and then you moved to the place where you reside now or might have been born at the place where you reside. After spending a difficult year, when you had no one to help you look after your child, you would be planning to take a vacation to go to your hometown. Before going there, you may be dreaming that your parents or sisters and brothers will look after your child while you will be able to go for shopping, movies, or the other places where you enjoy going. However, once you go there you may find that your child clings to you and refuses to interact with anyone else. Naturally, you will be disappointed and you will have to take your child wherever you go. In fact, some children cry at the top of their voice even when their mother goes to the bathroom. This is because they feel very insecure without their parents. This is known as stranger anxiety and is a normal phenomenon. Your child has never seen these adults before and it will take him sometime to trust them and get used to them. Stranger anxiety starts when a baby is 5 to 6 months old. Before this age, babies are not afraid of people. They will smile whenever any person approaches them in a friendly manner. They get so excited that they will start kicking their arms and legs and will like to be picked up. However, the child's behavior changes around five to six months of age. Now he cries if anyone else, beside his immediate care givers, approaches and tries to smile at him or talk to him. As he grows older, this sort of behavior takes another form. For example, a $1\frac{1}{2}$ yr old child clings to the parents when any one approaches him.

Actually it is a good thing that the child has stranger anxiety. It is probably God's way to ensure that an evil-minded person cannot touch your child, or take him away from you. Therefore, an adult who wants to be friendly with your child has to give proof to your child that he has good intention. After saying a brief hello to a child or smiling at him, he should chat with the parents for sometime in a friendly manner. During this time, the child will probably

be clinging to the parent or may pretend to be busy with his toys. Meanwhile he will be looking at the adult from time to time and try to assess him. After some time the child will decide that 'yes' he is a good person as his parents like him and then he will approach him slowly and may offer him a toy, or take a toy or toffee that the adult might be offering to him, and slowly he will get friendly with the adult.

So when you go to your hometown, your child will naturally take a while to get friendly with his grandparents, uncles and aunts. Unfortunately, probably by then it will be time for you to come back. God willing, your next vacation will not be so trying. Whilst you are away from your parents and relatives, you should see that your child keeps in contact with them by talking over the phone. You should also keep on showing him their photographs, which they send to you from time to time.

Chapter 23

DISCIPLINING A CHILD

Children are gifts given to us by God. Our task is to love and nurture these treasures and guide them through out their childhood, so that they become responsible, successful, and unique adults, as God has destined them to be. During their childhood, we build the foundation of their adult life and if this foundation is strong, they will be able to withstand all the pressures of their lives and world.

Most of us learn parenting from our parents and therefore we apply the same principles in disciplining our children as they applied for us. However, circumstances change with each generation so naturally we should make certain changes in the style of our parenting.

It is important that both the parents should have the same parenting style and they should agree with each other as to what values should be taught to their children. They have to discipline their children regarding regular habits of sleeping and eating at the right time, keeping themselves clean, doing their homework, having a fixed time for playing, viewing the TV and using the computer.

They have to be taught about socializing, getting along with friends, brothers and sisters, sharing their toys and books, caring for others and also they should be taught not to hurt other's feelings. They have to be taught to respect elders. They also have to be taught the religion that the parents follow and the basic set of moral values like not to tell lies, cheat, or steal. It is easier to discipline a child if both parents agree with each other as to what should be basic do's and don'ts. Above all, the parents should never argue in front of their children and should never talk disrespectfully to each other.

The main problem that parents nowadays complain about is that their children do not eat the right type of food. They always want to eat junk food and do not like vegetables and milk. You must realize that you are the role models for your children. The main role model for a girl is her mother and for a boy is his father. So you have to eat the right type of food, control your temper, pay due respect to each other, so that the children follow your example. Fathers are sometimes so busy with their work that they do not have much time for their children and they do not realize that how much their children need them. For this reason it is more difficult to discipline a boy than a girl in our societies.

Children have an active brain and body and they need to use these all the time. It is not possible for a child to sit at one place and do nothing. So if you find them jumping on sofas, picking up everything, perhaps breaking a few things, or running around inside the house, there is no point in just shouting at them and telling them not to be naughty. It is very important that you must tell your child exactly what he is allowed to do and what he is not and if he does what he is not allowed to do he shall be punished.

So if you do not want your children to create rumpus, you must tell your children exactly what they should do, for example play with toys, or building blocks or puzzles or painting. As parents, you need to constantly create new activities for them. You must also take them out to places where they can run around. If possible make arrangements that they can join a play group in your locality where they can interact with other children of their age group. Making friends and arranging a get together with other parents who have children of the same age group as your children is also a good idea. I realize that it is not easy. Looking after your children is 24 hours/ 7 days job and no less important than a job in the office.

23.1 Punishment

Most of the time, by talking to your children, you will be able to make them do what you want. However, sometimes you have to use some sort of punishment. Spanking a child as a way of punishment is used by many parents. It is an age-old way of punishment used in some families. Fortunately, it is used less often nowadays by most of the educated parents and those who do spank the child usually say that it does not work. It probably will work if someone spans a child so hard that it causes physical injury but that will certainly cause lot of psychological problems to the child. It should not be used as a form of punishment and is not acceptable in any society as it is a human rights violation.

Light spanking is probably okay, it just reminds the child that his behavior is not acceptable. However, before you punish a child you must always tell him before hand that what is acceptable and what is not and he will be punished if he repeats the unwanted behavior again. You must talk to your child, not in anger, but in a firm tone. You can talk to a 1-2 year old child also and explain to him what he should do and what he should not. With a young child you may have to tell him the same thing again and again as ‘right’ versus ‘wrong’ behavior is learned behavior which needs repeated reinforcement. It is like when you teach a 2yr old the parts of a body (where is your nose and where is your eyes?), you have to teach him many times before he learns.

Another way of punishment is ‘Time Out’. A child is made to stand in the ‘naughty child’s corner’. You must of course warn him that you will do this if he repeats the unwanted behavior again. The time for ‘Time Out’ punishment depends on the age. For a 2 year old child it will be 2 minutes, 3 minutes for a 3 year old child and so on. Be sure that the corner is in such a place where he can watch neither TV nor do what he likes doing. This sort of punishment is usually used in nursery schools and it works.

23.2 Praises and Rewards

Love, respect and caring are the best way of disciplining a child. When he does what you want him to do you should praise him, hug and kiss him. Of course you should do this according to the age of a child. A 6 to 7 year old boy may not like to be hugged and kissed in front of others, but he may like it when no one is around. You can also make him do what you want him to do by giving him rewards. You can give him stars in his diary daily and when he has 5 to 6 stars, you can buy whatever you had promised that you will buy for him. You must never break a promise you made. Children get very hurt if you do that, and they will never trust you after that.

Children like to form a good impression in front of their grandparents, uncle and aunts, teachers, and even doctors. So you should always talk about some positive things about your children when you visit them. You can use this tool to discipline your child. You can tell your child that if she does what you want her to do you will tell her grandma as to what a good child she has been. However do not ask these people to punish your child; that is your job and not their job.

23.3 Disciplining a teenager

To discipline teenage children is usually quite difficult. I will not go into details of this as this is a vast subject. The most important thing that I want to say is try to understand your children. Read the type of books they read and TV programs that they see. Nowadays there are many external influences like TV, movies, books, and internet that will influence your child. Some influences are good and some bad. Besides that, there are so many more items that are available in the market than ever before.

Some people give their children more gifts than what they can afford. Your children may also ask for expensive clothes and latest models of mobiles etc. . . I think the main way to solve this problem is to talk to your child frankly. Every child has a different personality. Some may do exactly what you tell them to do while others may rebel and try to argue with you. Try talking to such children, negotiate with them, and then come to a decision. The final decision should be yours, because although your child may be very intelligent he is not mature enough to know what is good for him and what is not.

While making a decision, listen to what he wants to say and then explain the reasons behind your decision. You of course can always change your decision but only if you think it is right. In that case, explain to your child why you did that. Though your child may resent it, if you do not allow him to do or buy what he wants to, later on he will appreciate your way of dealing with the problem.

You should decide upon certain set of rules and regulations along with your children and should let them know exactly why the rules are needed. These rules should be same for all your children. You may have to make few changes for girls and boys but if the rules are very different, girls may rebel. Actually, boys need to be protected as much as girls, so usually same

rules can be applied for them. When children know what they are allowed to do and what they are not allowed to do, they realize that you care for them and they in turn feel secure.

Appendix A

Milestones

Social smiles - 6 weeks to 2 months
Laughs - 3 months to 4 months
Holds neck up - 3 months to 6 months
Sitting with support - 6 months to 7 months
Rolls - 5 to 6 months
Holding objects and transfers them to their mouth - 6 months
Turning to a familiar voice - 6 months
Playing games like pat a cake - 6 months to 8 months
Sitting without support - 8 to 9 months
Speech words like papa mama (non specific) - 9 months
Holding very small objects with thumb and index finger - 9 months
Crawling - 8 to 9 months
Standing with support - 11 to 12 months
Drinking from cup – 9 to 12 months
Walking without support - 12 to 15 months
Walking up the stairs -15 to 18 months
Single words (specific) - 12 months
Running- 18 months to 20 months
Kicking objects like balls - 24 months
Speech connecting two to three words and makes short sentences- 22 to 24 months
Dresses self, stands momentarily on one leg and can make three to four sentences - 3 years

Appendix B

Basic Vaccination Schedule*

Birth: BCG and Hepatitis B

2months: IVP * Hib * Hepatitis B * DPaT *Rota virus * Pnuemococcal

4months: Oral Polio\IVP * Hib * Hepatitis B* DPaT * Rota virus *Pnuemococcal

6months: Oral Polio\IVP *Hib *Hepatitis B *DPaT *Pnuemococcal

9months: Measles 18months: Oral Polio *D.Pa.T *Hib *Hepatitis A 1* Pnuemococcal

24months: Hepatitis A 2 *Typhoid *Menigococcal

4-6years: Oral Polio *D.Pa.T *MMR* Chicken Pox 10years: Tdap* Hepatitis B

*Vaccine Schedules differ slightly in different countries