YOUR BABY

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INTRODUCTION.

The first twelve weeks of a child's life are a time of challenge and intense learning for parents. Pregnancy is a time of great expectations and of varying health. After months of waiting and for most women a certain degree of tiredness, labour begins. Labour varies dramatically in its ease or difficulty. The fortunate few have strong contractions for less than one hour and then deliver easily. After this they walk back to their rooms, smiling at the staff as they go. At the other extreme, an unfortunate few, labour hard for more than 24 hours, require extensive pain relief, become exhausted and finally have a difficult delivery or are assisted by forceps, caesarean or some other technique. These few take days to recuperate and wonder why they ever planned to get pregnant.

The majority of mothers lie somewhere in between. Labour lasts between four and twelve hours, is handled with dignity and results in the delivery of a healthy child from a healthy and tired but pleased mother. While labour requires courage, strength, composure and co-operative effort it is largely not a learned skill. By this I mean that the events of labour are largely determined by the body without conscious effort by the mother.

Usually the body determines when labour starts, its rate of progress and the details of the delivery. In today's world I know that the medical profession of which I am a member have a tendency to become involved. However I wish to highlight that if the medical profession are ignored, labour does occur and does not require the cooperation or learned skills from the mother. My point being that delivery is not an intellectually "learnt" skill. If the mother knows nothing about it, it will still happen. As long as she is attended by a companion, or midwife or medical attendant with experience, then in the majority of occasions a live birth will occur.

Once the baby is born however, the "auto-pilot" is off and learned skills become all important. Advice from those providing care to the mother with a newborn child is very important. The quality of that advice varies dramatically. When we have our first baby in our arms we will receive "tit bits" from many *helpful* people. Some is helpful, some useless, some dangerous and quite a bit will be contradictory. How does one decide for example between the advice from a paediatric psychologist that a child should never be struck and the women next door who encourages a smack on the backside every time a child is naughty. There is no perfect answer to that problem. My attitude is that life is a balance between forces, that no single answer will fit all circumstances. Harmony for the family unit is achieved by a balance of many things, often a balance between conflicting interests or contradictory modes of behaviour. Interests of parent and child may be different. Love and discipline are contradictions in some people's minds but must exist in adequate balance for a child to develop successfully.

BALANCE AND HARMONY

When dealing with human behaviour there is rarely a rigid point of view which applies to all people at all times. It is the ability to choose the appropriate action at the time which makes us successful when interacting with others. One code of behaviour exists at home, a modified code in another's home. One set of rules exists for one's children and a modified set for someone else's. By and large as we grow older we recognise these differences more and by being less simplistic and rigid, by becoming more flexible, we are more successful and useful to those with whom we interact.

The aims and purpose of human interaction vary from person to person. Some for one reason or another are unable to interact at all, for example the severely retarded or mentally distorted. A very few people regard others as only a means of achieving their own ends for increasing their power, or wealth or pleasure. Despite these extremes the vast majority of people wish to live in harmony with others. To achieve a balance between privacy and satisfying social interaction. To feel the security of receiving good leadership from some and the satisfaction of taking on the mantle of giving leadership to others. To feel a sense of belonging and at the same time to feel that your individuality is recognised. To give and receive love, both in reasonable measure.

It is the balance of these things, often contradictions, which leads to harmony and contentment within our lives.

As parents, perhaps one of our aims is to help place our children on a path which will make it more likely that they can achieve harmony in their lives.

No stable house can be built on an unsound foundation. A rounded, stable individual is the result of a sound foundation at home. My aim in this document is to assist parents in the first twelve weeks of life to begin work on a sound foundation for their children. By finding the compromise between conflicting answers, to produce a rounded, harmonious and constructive solution to some of life's problems.

A child needs in the first twelve weeks are relatively simple.

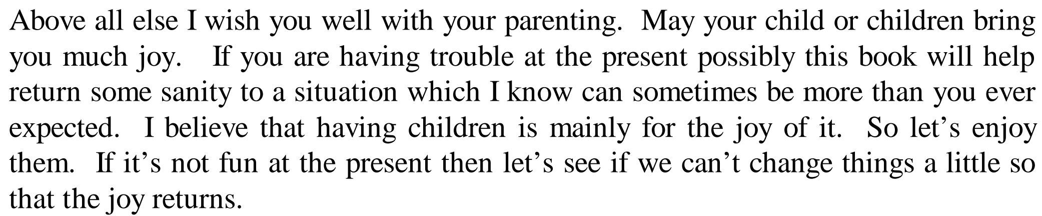
FOOD, SLEEP, LOVE and SHELTER

It is the first two which cause the most problems.

This book has been written as an aid to the care which I provided for my patients as a General Practitioner initially in a country town and later as a city doctor with a special interest in the success of families with young children. Hopefully it will be of some assistance to you. The book has been written with the expectation that few parents will have the energy to read it from cover to cover in a short time. Many readers will probably look at the one or two chapters which seem most appropriate to them right now. The chapters have thus been written to attempt to be fairly complete in their own right. This has led to a degree of repetition if you do read everything. Please accept this explanation if you find that a problem.

The sequence of chapters in the book has been chosen to reflect the way that I handle children’s problems. In the first few weeks of life my main focus is on the child’s feeding regime and weight gain. In these consultations I do not talk too much about sleep. The reason being that if the baby is receiving adequate nutrition and if overtiredness is avoided then often the sleep pattern will develop to the parents satisfaction anyway. The chapter on starting solids thus comes quite early in the book to keep it logically with the chapter on feeding even though it relates to a later age for the infant. Issues about sleep are then discussed at length in the middle of the text even though this may be where many of you wish to start.

Issues of sexuality and parents needs are discussed in a chapter of their own because they are important. A child is an extension of a family. A child will thrive only if the family is successful. It is difficult for a family to thrive if the parents are not receiving adequate rest, nutrition and emotional support. Some of the issues of loving are not obvious and I hope some of you find that section helpful.



Above all else I wish you well with your parenting. May your child or children bring you much joy. If you are having trouble at the present possibly this book will help return some sanity to a situation which I know can sometimes be more than you ever expected. I believe that having children is mainly for the joy of it. So let’s enjoy them. If it’s not fun at the present then let’s see if we can’t change things a little so that the joy returns.

CHAPTER 1. FOOD, FEEDING AND BREAST CARE

A child at birth has been growing rapidly in the womb. To achieve normal health the newborn will continue to grow rapidly. The source of nutrition for growth varies with the child's age and the mother's circumstances. There is no debate that the best source of nutrition for the newborn baby is breast milk from a healthy mother. The complexity of breast milk will never be equalled by an artificial feed. This is partly because breast milk varies according to changes in the environment of the family. A mother in contact with a virus will develop antibodies and pass a degree of immunity on to her child. Such a development is impossible with artificial feeds.

If breast milk is available then the next requirements for the baby to achieve good growth are quantity and quality.

BREAST MILK QUANTITY

Quantity of milk relates to the volume of milk that the breast is able to produce. Later in this chapter we will discuss **quality**. Please note that when breast feeding a baby both these issues are interconnected.

Most women in our society are able to eat well. Their bodies are presented with enough calories and nutrients to allow the breasts to produce milk. What needs to be made clear is that each woman is unique. Her ability to produce breast milk varies. Some women are so well supplied with milk from their breasts that they could feed twins easily. Other women are unable to produce useful **volumes** of milk despite their best efforts. This variation is due to normal differences between individuals. Some of us are tall, some short, some produce much breast milk, others produce a little.

Breast milk is the best feed as long as there is enough of it. The volume of milk being delivered to the baby can be checked quite easily and in a number of different ways.

CHECKING QUANTITY BY OBSERVATION OF THE BABY.

A child who sucks vigorously, swallows well, becomes comfortably sedated at the end of the feed and then settles into a deep useful sleep is probably getting enough milk.

Urine.
The normal, adequately fed baby passes urine as often as every fifteen minutes. Despite the mother's best efforts, which may include nappy changes as often as 12 or more times per day, the baby is "always wet". This indicates that the child is probably receiving an adequate volume of milk.

Bowel action.
If the bowel is being presented with adequate volumes of milk it will produce a soft, yellow, non offensive bowel action at least once per day and often more frequently. If the bowel action is hard, small and difficult to pass, this suggests that the total volume of milk may be inadequate.

Body shape.
A baby receiving enough nutrition becomes "rounded" and chubby. Thick cheek pads form and the arms and legs fill out.

Behaviour.
The baby's behaviour is an excellent indicator of the adequacy of milk supply. If the child is well enough to suck and swallow vigorously, becomes settled and "sedated" by the feed, settles to sleep quickly, sleeps for say three to five hours and then awakens to feed vigorously again, then milk supply is probably adequate.

Conversely the baby's behaviour may suggest that milk supply is inadequate. If the child is irritable at the breast, unwilling or too tired to drink, sleeps before the feed is finished or fails to settle within 15 minutes of the end of the feed, sleeps for only 1-2 hours **or** sleeps for 5-6 or more hours during the day, then milk supply may be inadequate. I will enlarge on the above by dividing babies into two groups.

a) Underfed but coping.
This baby is going to give you a hard time. He/she is not getting enough and plans to do something about it. The baby demands the feed vigorously, sucks hard, may continue to demand after the feed, settles poorly and awakens early demanding the next feed. If measured, weight gain is less than 20 gm per day.

b) Underfed and not coping.
This is a very dangerous situation. The child demands weakly or not at all. The feed is poor and is interrupted by episodes of "waking" the baby. The child sleeps quickly and sleeps through the next feed time. Production of urine decreases, bowel actions tend to be small, irregular and difficult to pass. If measured weight gain is low or negative eg: less than 10 gm/day or even losing weight.

This problem needs to be recognised and treated with additional feeding.

Check on milk quantity by weighing.
If in doubt about milk volume, measure it. The question is important to the mother and baby. If the question of the amount of the supply arises it can be so easily answered by weighing. If the volume is inadequate then that information needs to be available so that remedial action can be taken. At the same time the information that the milk supply is excellent will cause no harm and must boost the confidence of the mother.

a) Baby's weight.
If the baby is gaining weight on a daily or weekly basis then the milk volume is adequate. I set as a base line weight gain of at least 30 gm per day. So if over several days the average weight gain is 30 gm/day or more then the mother can be reassured that her milk supply is adequate. Weight gain over 30 gm/day varies greatly. 30,40,50,60 gm/day or occasionally even more may be quite normal for that child.

If the weight is less than 30 gm/day over several days then the milk supply **may** be inadequate. A weight gain of 15 gm per day or less is almost always inadequate and requires remedial action.

b) Test weight.
While in hospital the baby can be weighed before and after a feed giving the weight of milk ingested. The required volume varies with the baby's weight and the number of days after birth. Test weighs done over 24 hours rapidly answer the question "Do I have enough milk?".

BREAST MILK QUALITY.

Milk quality relates to energy density or the ability of milk to deliver calories to the baby.

Occasionally the breasts will produce adequate milk volume but of poor energy density. This tends to be determined by genetic factors in the mother and can not be altered no matter how she tries. It is important to point out that the woman is not responsible for this. It is similar to the woman's height or hair colour. It reflects the complex genetic factors inherited from her parents. If the genetic pattern determines that breast milk energy density is low then it can't be improved by trying hard any more than we can change our height by working out in the gym.

Other factors.
Sometimes for no easily defined reason a women will have a "poor" lactation. With the next child the milk production may be very different. I have certainly cared for women where one lactation was difficult but another was quite successful.

Occasionally a woman is attempting to lose weight and may be drinking only water to decrease her total calorie intake. In this setting the baby is feeding well, has ample urine and bowel actions but is not settled and has poor weight gain. I generally request that dieting and weight loss not be planned by the mother until the child's growth is well established, solids have been started and the baby is sleeping at least 10 hours a night. In fact dieting is rarely required in the breast feeding mother as her body's allocation of energy to the production of milk usually means that she is losing weight anyway.

WHAT TO DO ABOUT INADEQUATE MILK SUPPLY.

We have diagnosed one way or another that the milk supply is low. What do we do about it?

It is difficult to exaggerate how busy a mother is. The amount of work increases with every child. Once a mother has two or three children, a husband, a house, a social circle and perhaps some employment responsibilities she has become so busy that she is really being asked to do the work of more than one person.

Our culture is not set up to meet the needs of these women. In some cultures the mother’s responsibilities will be spread amongst other members of the group while she is given some months to concentrate on feeding and caring for her newborn. Our society does not provide that luxury.

The human body has a given number of "energy units" to spend each day. Some of those "energy units" will be used in the breast feeding mother for milk production. If the total number of "energy units" available to the body is inadequate milk production will suffer.

Milk supply may be inadequate for one or more of three reasons:

a) inadequate energy or fluid intake
b) excess energy expenditure
c) genetic factors which determine a low breast milk output.

INADEQUATE ENERGY INTAKE

A breast feeding mother should eat three meals per day. These should contain contributions from the five basic food groups. Protein, vegetables, dairy products, cereals, fats. The volume should give adequate calories to fill her energy needs. When choosing fluids she should choose those which give energy as well as water. Milo, milk, ice-cream, milkshakes, egg nog all give calorie value as well as fluid volume. I recommend at least a litre of milk-based fluid per day. If you do not like milk then cheese, yogurt or ice-cream can act as alternatives. If you are not thirsty enough to drink a litre per day then salted nuts will help create a thirst and at the same time provide energy.

A woman who is breast feeding well and eating adequately will often still lose weight. I generally request that a woman defer dieting until the baby is gaining weight well, started on solids and sleeping at least 10 hours per night.

EXCESS ENERGY EXPENDITURE.

A mother is busy to a level which is difficult to exaggerate. How many mothers say to each other "What did I do with my time before I had children?" The work of caring for children, house, husband and possibly employment uses energy. Assuming that the diet is providing adequate calories and nutrients, the milk supply can still be

impaired by an excessive work load. The single most helpful strategy when life is too busy is sleep. For the first few weeks of her baby's life mother will have disturbed sleep as there are feeds every three to four hours. If at all possible then mother should join the baby in a day time sleep. Two hours' sleep in the early afternoon can be a very "humanising" event. As the number of family members increases an afternoon sleep becomes both more necessary and at the same time less possible. When it is impossible, then going to bed at the same time as the children can be helpful until the baby is sleeping at least eight hours at night.

GENETIC FACTORS AFFECTING MILK PRODUCTION.

Being female, having a baby and having breasts does not mean that all women can produce milk. Humans vary in their abilities for every measurable parameter. Some are tall, others short. Some are dark, others light. The ability to produce breast milk and its energy density are biological parameters which will vary from woman to woman. Therefore it is not surprising that some women produce more and others less. There is no rule which makes it possible to predict milk supply. Despite this there are some guidelines which experience tells me are often, although not always, valuable. Often a bigger breast before the lactation produces less milk and the smaller breast more, once the lactation begins. A women of 120 kgm with pendulous breasts may have little milk supply despite her best efforts. A woman of 60 kgm with small breasts can often blossom in this area and to her own surprise be an excellent breast feeder.

Measuring baby's weight gain and test weighing feeds can help inform a women of her breasts' ability to produce milk. If there is little intrinsic milk production then she should be informed so that an alternative can be used. Nothing can be more cruel than insisting that a mother attempt breast feeding when her breasts just do not produce an adequate volume of milk in any circumstances. She feels frustration and a sense of failure, the baby fails to grow and is unsettled. The family becomes unhappy. There is no guilt in not producing breast milk. No more guilt than in being 150 cm or 190 cm tall or having black hair. If low milk production is the woman's norm, in this pregnancy, then so be it. Alternatives need to be found. This does not mean that breast feeding must fail completely, it may still be partly successful if supported. In addition, inadequate milk supply in one pregnancy does not mean that there will be an inadequate supply in the next pregnancy.

ALTERNATIVE STRATEGIES FOR BREAST FEEDING.

As mentioned above the ability to produce milk varies up and down the scale. Let us assume that an imaginary healthy, happy, growing baby requires 100 units of milk per day. If we measured the milk production of 100 women we would find that some could produce 200 units of milk. Some would produce very little. There would be a large majority whose production was near the 100 units required. There will be a significant minority who under ideal circumstances produce less than 100 units which our imaginary baby needs. These women **are** producing breast milk. It is of good quality and is beneficial to the baby. However, there is not quite enough. I have

never understood why feeding should be seen as only fully breast or only fully bottle. If a woman is producing good **quality** breast milk but in slightly inadequate volumes, why not compliment it with an alternative feed? There are many good milk substitutes on the market. They are not as perfect as human milk but they can be a very adequate supplement and if necessary can be the basis for total feeding. Some mothers will find that if they supplement from the bottle immediately following the breast feed the baby settles well, sleeps deeply and awakens to feed efficiently at the next 'meal' time.

This pattern can be made a little more specific. The supply of breast milk tends to decrease in the late afternoon. While feeds in the morning may be adequate for the baby’s needs, by late afternoon the milk supply may be inadequate to supply the baby’s whole requirement. Tea time can become less than the ideal family event. Baby has fed but is unsatisfied and crying. The children from school are tired, demanding and hungry. Husband is home for tea and being more or less useful. You are tired having been up once or twice overnight. It is a fun time!! The sort of time of day when being alone in the Simpson desert seems the easy option. One step in improving this time of day can be complementary feeding at the baby’s 'evening meal'. If the baby has settled after an adequate feed it becomes easier to concentrate on the needs of the rest of the family. So the suggestion here is to give a breast feed before starting to commence preparation of the evening meal. Follow the breast feed with a complimentary bottle feed to the volume which the baby desires. It might be 20 ml or it might be 100 ml. The correct volume is the one which returns sanity to the family.

A development upon this idea is for those babies where weight gain is a little inadequate. In this setting a top up for all p.m. feeds, that is between 12 noon and 12 midnight can support the milk supply through that part of the day when it is at its lowest ebb. The baby receives normal breast feeds overnight and in the morning. This is the time when mother is most rested and has the best milk supply. From 12 noon onwards, when energy is starting to decrease, offer a complimentary or top up bottle after the breast feed.

BREAST CARE.

Breast feeding should be a pleasant, relaxing time. Enormous satisfaction can be gained watching a baby suckle contentedly and then sleep soundly in a relaxed pose. It is a time when love blossoms, life's worries retreat and you just know that this is what you want to be doing at this particular time in your life. If you are tearful, upset or in pain things need to change. If baby is unhappy, angry, unsettled there is a problem.

PAIN.

Breast feeding can be sore if the nipple becomes 'cracked'. The pain is most severe as the baby attaches to the nipple. If left untreated feeding can become impossible. Nipple care is best carried out before the problem develops. In those years that I provided hospital care, the time that a baby was allowed to suck increased from a starting point of about 3 minutes per side on the first day. This increased by about 2

minutes per side per day until the feeds were approximately 10 by 10. This allows the skin of the nipples time to adjust to the new requirements being placed upon them. Anyone who has suffered from dry cracked lips as a consequence of excessive licking knows that it removes moisturising oils from the skin. Once the skin is not 'oily' it becomes brittle and prone to cracking. Application of an oily substance to the nipple can avoid painful cracking. The skin covering the nipple is thinner than skin in most parts of the body. Because it is so thin it is very prone to water loss and then cracking. Many agents are used in different institutions for keeping the skin of the nipples moist and oily. Wool fat, lanolin, moisturiser. I have had the best success with a proprietary product containing a local anaesthetic and an anti-inflammatory in an ointment base. The product is 'Proctosedyl' and it is a haemorrhoid cream. Seems a strange place to put haemorrhoid cream, but it works. If this was applied at the first signs of any pain or cracking I had good success in avoiding failure of breast feeding because of pain.

FRUSTRATION.

A) **Mother**.

If you are frustrated by breast feeding perhaps you should review why you are doing it. Occasionally a woman finds that it is an unattractive and unpleasant event. Perhaps a sense of obligation is not the best motivation for breast feeding. More commonly a mother wishes to breast feed but has a sense of frustration because it is not working for the baby.

B) **Baby**.

Very, very few babies will fail to display a sucking reflex. Even the most immature babies born before the reflex develops will at the appropriate time begin to suck. This reflex will be reinforced by the satisfaction of swallowing milk making the behaviour pattern stronger.

It is not uncommon to see a mother whose baby is getting angry at the breasts. Mother is upset because despite her best efforts, feeding times have become a time of dispute between her and the baby. The common scene is that the baby comes to the breast hungry. Initially there is strong sucking but after one or two minutes the baby comes off the nipple and starts to cry. After some persuasion he or she re-attaches but after a short time comes off and cries vigorously. Further attempts at re-attaching are not very successful and the baby turns away from the nipple. If the other breast is offered, after a short interval the same performance is repeated. Baby’s mother can often see milk on the nipples and in the baby’s mouth and believes the supply is adequate. The most common causes in this setting are inadequate milk volume or an overtired baby. Another problem which can exist is flat nipples. These can make it very difficult for baby to attach and medical assistance may be required. Diagnosing these problems and their treatment are dealt with specifically in other areas. The easiest diagnostic step is to offer a bottle. If the baby feeds well, then the problem is probably a slightly decreased milk supply compared with the baby’s needs.

CHAPTER 2. STARTING SOLIDS

There will always be a time for each child to commence feeding with solid food. For some children this will occur later and for others it will occur sooner. No-one should define to you a set and rigid time that a child should or should not be consuming solid food. I did see the point, made by one of my lecturers when I was a medical student, that if the child has teeth nature is probably giving you a strong hint. The last section of this chapter gives some guidelines on time frames.

For those who have read elsewhere in this booklet, you will be aware that I try to encourage the majority of children to be sleeping between 10 and 12 hours as an unbroken block of sleep at night by three months of age. The majority of children can achieve this target with guidance from Mum and Dad. Some children may start on solids very early in their lives as a part of achieving the above sleep target. This will depend on the amount of breast milk which the Mother is able to produce and the amount of growth which the child's genetics are attempting to achieve.

Let's start the discussion assuming that the child has achieved 10 to 12 hours sleep at night and is fully milk fed. At what stage do we start solids for this child ? The answer is that we allow the child to determine the age for progressing to the next stage of feeding. We wait for a cue from the child that he or she is not receiving enough total nutrition. The cue which will be used is a change in the child's night sleep pattern. Whereas the child has been sleeping for the whole night for many days or weeks, for no apparent reason there is a change. The baby is well, has had good days and we know or believe that he or she is not over tired. The baby begins to awaken during the night. Despite being in a good pattern for some time the baby is 'seriously' awake in the middle of the night and is very difficult to settle without a feed. Instead of 'crying down' from the episode of wakefulness the baby 'cries up', becoming louder and more demanding. You may recognise a 'Hungry' cry. The answer to this problem is definitely not to re-start night time feeds on a regular basis. You may need to feed once or twice at night to convince yourself that hunger is the problem but then switch the focus to the starting of solid foods during the day.

FEEDING VOLUME.

A child starting on solids will need only a small volume initially for a couple of reasons. Firstly the child needs only a small addition to the breast or bottled milk that the mother is providing. Secondly the child’s system of digestion does not contain adequate volumes of the chemicals required to break down the new foods to the point that they can be absorbed. The bowel is able to produce the chemicals, called enzymes, if it is given a gentle hint that a new food is to be introduced. A small volume of the new food can be given at any one time. Over a number of days the gut will develop the enzymes of digestion required for that food and the child will be able to handle a bigger volume.

An example of this from adult life may help you understand this idea. Imagine that you have not eaten meat for a long time, say for some weeks. Suddenly you eat a big volume of meat which contains a fairly high content of fat. In quite a number of people this can be a very nauseating experience. Part of the reason is that the body is producing less of the enzymes required to digest the meat and fat in the volumes required for that food. The point that I wish to make here is that sudden changes in the type of food that a child receives or increases in the volume given could be counter productive. There is no point in being overly enthusiastic and making the child sick. You will lose confidence and then there will be a delay in progressing to the next stage in the child's development.

The initial volumes are quite small. On the first occasion the child may only consume one half teaspoon of food. Please do not expect the child to cope with a new feeding implement and a new food taste on the first occasion with speed and enthusiasm. In fact the child will probably cross its eyes, make a funny face and 'tongue' the food forward onto the teaspoon from which it came. This may be accompanied by a facial expression of surprise. Occasionally a child will take to solids at the first time. Often however, the babies face gives a wonderful display of emotion as it tastes a new flavour and texture. It may take two or even three days before the 'penny drops' and the child's expression becomes one of enthusiasm. The baby will then move the food to the back of the mouth and swallow with greater efficiency.

The child is now able to commence solids regularly. The volume which you give will depend upon the baby's interest and the routine which you establish. Increase the volume at a slow regular rate. At the end of the first week the baby may be taking only one teaspoon and continue to increase at that rate. Routine is useful. Babies function best with a sensible, predictable routine. For example once the solids have started, let them be continued. The solids become a regular part of their nutrition. Do not give solids for a couple of days and then miss for a few days. Do not give the solids only on those days when the baby 'looks' as if he or she needs it.

TIMING (PRE OR POST BREAST FEEDING)

The question of when to give the solids while still breast or bottle feeding is a little complex. Initially the solid feeding is an **addition** to milk feeding. The breast feed is given first and the solids are a top up. At this stage the majority of the child's calories come from milk.

No one argues that breast feeding should continue permanently. At some stage the combination of solids and non breast milk fluids will become a more important source of calories. A time will be reached when breast feeding is given second. The timing of this change over is not critical. Some mothers even give solids before the breast feeding from the very beginning and claim that it can be very successful and does not interfere with their breast feeding.

TIMING (MORNING , NOON OR NIGHT ?)

As will be obvious from reading elsewhere in this booklet one of the major reasons for starting solids is to assist in the achievement of a full night's sleep for the child and thus the parents. As a parent I thought a full night's sleep was a great idea. Don't apologise to anyone for seeking a full nights sleep. If the parents are fresh and in good humour they are far more likely to provide good parenting.

I believe that it is logical to give the solids at the evening meal. The child thus has a supply of nutrition in it's stomach to settle for the night. Yet again this issue is not critical. Some mothers give the solids in the morning and argue that it is just as successful.

TASTE

The taste of the baby's food can be a factor in determining your success. For those of you who have tasted breast milk, you will have found that it is quite sweet. The taste is about half way between cow's milk and cordial. There is quite a significant and pleasant sweetness.

When 'designing' foods it can be helpful to mimic this degree of sweetness. For vegetables if a potato is being used as the base, then some apple, pumpkin, or carrot can be added for sweetness. If using rice cereal, which by itself is quite bland, then a little apple puree or banana pulp may give it a little more interest.

CONSISTENCY

Infants are not keen on lumps. Most children will be on at least some solids before they have teeth. The food should be a fine puree particularly when first started. This can be achieved using a food processor, vitamiser, or forcing through a sieve. In addition to avoiding lumps, the child requires a mixture which is reasonably fluid. For first solids I generally recommend a consistency similar to thickened cream.

FOOD CHOICES

What solid food to give young children is an area of great discussion. Foods which are commonly used in our society include rice cereal, various fruits and vegetables, and some other cereal foods.

Common sense must prevail and many adult foods are not considered. Young infants certainly have a decreased ability to handle a salt load and what some physicians refer to as a solute load. What this means is never add salt and choose foods with a higher water content. For example vegetables are often 80-90% by weight water.

There are certainly many fine books and booklets on infant feeding which I will not try to equal.

The most specific I will be is to describe what we used for our own children. Even though my wife had a very generous milk supply, we started solids early as part of

encouraging night sleep. We used vegetables to start. Boiled potato was vitamised with some other vegetable such as peas, pumpkins, or maybe apple. Introduce one vegetable at a time to detect any intolerance. The mixture ended up being either green or orange mush. One advantage of mixed vegetables is that they can be frozen as ice cubes and in an emergency ‘tea’ can be produced from the freezer in a couple of minutes by using the microwave. After vegetables we used weetbix made into a creamy paste with milk. This tended to be the breakfast meal, vegetables at the evening.

There are certainly many variations on this theme.

FOODS TO AVOID

Babies have a limited ability to handle salt. Do not add salt to infant food. For the majority of infants there is no need to add butter or margarine. Avoid foods which may have a strong flavour. Baby food tends to be fairly bland. Meats, fats and in fact most adult food will be introduced quite slowly and well over six months.

FOOD VOLUMES

Once started on solids the volume will increase slowly but steadily. Remember that growth is hugely energy expensive. It takes a lot of food to build a body, even a small body.

My personal experience is that boys will eat more than girls, but I have not seen any research to support that impression.

Do not be surprised if the baby, once started on the solids, comes to believe that they are a really good idea. The volumes which are taken are sometimes quite large. It is not uncommon for a healthy baby of six to nine months to be taking in addition to their breast or bottle milk a volume of food almost as large as an adult woman.

The other thing which goes with volume is speed. Once solids are a regular part of their nutrition many babies will want them delivered fast. The spoon can become a bit of a conveyor belt. If you are too slow you will hear all about it. I am told that feeding twins can be fun where it is almost impossible to keep up with the needs of two mouths.

Beware of increasing volumes too quickly. Some babies will believe that the food is a good idea and eat greedily to the point of being sick. That is counterproductive. You will set the upper limit. If the baby is finishing all that you offer, add a little more each day so that the volume gradually increases. On the majority of feeds the baby will lose interest at the appropriate point and simply stop opening the mouth in response to the spoon.

Once solid foods are a regular feature on the menu, you will also set the minimum volume. On some days they will not be so interested. Do not be discouraged and gently persist. Try to achieve at least half of their normal volumes.

WHEN TO START SOLID FOODS.

I have left this to last because it is quite controversial. Okay so I'm a coward.
All that I can say is that my private, unpublished research shows that the majority of babies are receiving solid food by four months. These results come from a survey of over two hundred city and country families which showed the following.

14% of babies had started solids at two months or younger.

47% of babies had started solids by three months.

73% of babies had started solids by four months of age.

When advising parents the specific answer depends upon a number of factors. The most important variable is the baby's weight gain. If the child's weight gain is low then start solids a little earlier.

If the weight gain is excellent, and the sleep is evolving nicely then delay solids. In fact this later group are fairly easy in that they make the decision themselves. Their sleep gradually develops. Lets say they are being perfect, with eight hours straight sleep at 8 weeks, ten hours at 10 weeks, and twelve hours at 12 weeks. Then out of the blue they begin to wake up at, say 2am, genuinely hungry. This is the signal. Time to start solids please Mum.

This gives us three groups of babies.

1. Solids started a little early, say 8 to 12 weeks of age to support poor weight gain.

2. Solids started a little early, say 8 to 12 weeks to encourage longer night sleeps. (These children will often be gaining weight well, but are still unsettled. Given more food they gain weight at an even greater rate, and become more content and sleep longer.)

3. Solids started late. Twelve weeks to six months. These babies did perfectly and then began to awaken hungry through the night.

CHAPTER 3. SLEEP BASICS

An understanding of sleep is needed to achieve control of your child's sleeping pattern. An acceptable sleeping pattern is essential for constructive family life. Good quality sleep is necessary for the baby's growth and development.

I do not believe that it is necessary to tell any young mother reading this that sleep is essential for well being. We all suffer quickly from a lack of sleep. Sleep deprivation affects our mood, our ability to think quickly, to learn skills, to cope with life's little frustrations and still smile. Who is smiling when the kids spill the cereal on the carpet and you've been up four times during the night?

To expand your understanding of sleep, I discuss various elements of sleep. At the end of the chapter are other related issues under separate headings.

SLEEPING

What happens when we are asleep? The answer to this is difficult to define although it is clear from recent research that it is a complex process.

It has been known for many years that sleep has different parts to it. Doctors sometimes divide sleep into levels such as REM or NREM. These letters stand for Rapid Eye Movement or Non Rapid Eye Movement. Another style of defining sleep components is simply 0, 1, 2, 3, or 4. Where 0 is awake, 1 sleepy and 2, 3, or 4 are different types of brain wave pattern while sleeping.

For the purpose of this book, however, I will focus on several details of sleep.

A block of sleep contains times of being awake.
Going to sleep is a process which is in part dependent upon the events which occur around us.
Achieving sleep is **usefully** regarded as a **learned skill**.
Tiredness interferes with the performance of all learned skills **including achieving sleep.**

We will return to these ideas under various sections of this chapter.

Sometimes it is easier to discuss the purpose of sleep by looking at the effects of not getting enough..

SLEEP DEPRIVATION.

Sleep deprivation is a terrible thing. When the mind does not receive enough rest through sleep its function is decreased. All of us have experienced sleep deprivation to some extent. I find that women with young children have a better understanding of sleep deprivation than men. This is simply because young women with children have more experience with sleep loss. On average, women spend more time attending to children through the night than do their men. This is not said in any critical way, it is simply a statement of common practice. As a consequence though, many women spend quite significant lengths of time feeling very tired while their children are young.

When we do not get enough sleep our bodies continue to function. Our hearts beat and pump blood, our lungs continue to expand and give us oxygen. The bowel still digests and the other organs of the body continue to function. The brain however complains. The brain is in fact totally unenthusiastic about sleep loss. Of course there is a degree of resilience. We can all function well after losing one or two hours' sleep. However as the number of hours of sleep loss expands and particularly if we are not able to get a full night's sleep to recover, the consequences of missing sleep increase. We all know about the tired mind. Memory is impaired. Things which we know that we know are more difficult to recall. I well recall a young mother having a difficult time who said to me, "Doctor, I couldn't remember my own telephone number". We all know about this as it is almost universally part of human experience to lose sleep at certain times in our lives. Most of us dislike it. (Although teenagers seem to need a phase in their lives where they actively seek out sleep deprivation.) With sleep deprivation mood is impaired. It is difficult to feel positive about the world when we are overtired. Once overtired we tend to see life through glasses which give a negative look to everything. The children's arguing is more difficult to handle. The pile of ironing looks even higher than normal. Frustrations are worse than normal. Problems are more likely to reduce you to tears.

Libido is decreased. Who feels like making love when we are so tired? This part of the brain seems to switch off early and turn back on late. It can be a cause of great worry in a relationship and requires great understanding and sympathy from the male partner. This is discussed at greater length in the chapter about sex. I enjoyed the comment from one of my more cheerful patients and a friend who suggested that the advice to men on sex should be repeated as every second chapter to get it through to them.

Moving back to babies for the moment however, I ask you to consider the effects of sleep deprivation on children. Our newborn infants have very little stamina. This "weakness" applies to all of their abilities. Would we expect a newborn to go without feeding for 12 hours? As adults we do routinely. Would we expect a newborn to walk 50 metres. As adults we do routinely. Would we expect a newborn to eat with a spoon without help? Babies are fragile in many ways. They are less tolerant of many things than are adults. This is normal and expected. It hardly needs stating. But remember babies are less tolerant of sleep loss. Their minds do not have the stamina to cope well with sleep deprivation resulting from a failure to receive enough sleep. Their mood will be irritable and tearful. Their ability to learn new skills and

then to perform them will be decreased. This is a very important point which will be discussed again under cues of sleep achievement.

To conclude this section. Sleep deprivation is easily recognised. Its main effect is upon the brain and shows up most clearly as irritability and a decreased ability to perform learned skills.

BLOCKS OF SLEEP.

We don't really think about sleep a lot until we don't get enough. It is a statement of the obvious that we sleep in blocks lasting hours. The average adult will have between 6 and 9 hours sleep per day. This is taken as a single block of sleep. During our sleep the brain does function. In fact sleep is a time when the brain is doing many things but we are largely unconscious of its functioning. Sleep contains periods of physical movement, periods of lying quite still, periods of dreaming and periods of no dreaming. Sleep contains important parts of the process of learning. Recent reports from the Institute of Technology in Arizona and the Weizmann Institute in Israel have shown that new skills are "replayed" by the brain during sleep. In addition if sleep is disrupted the learning of new skills can be disrupted. Sleep appears to be a time when learning is consolidated.

Children function differently in many areas. Blocks of sleep are shorter. For the newborn, sleep is interrupted for feeding which will occur at 3 to 4 hourly intervals. This is not surprising when we consider that before birth the baby receives continuous nutrition from the placenta. It takes time for children to develop the body reserves to cope with longer periods of fasting.

We understand as adults, particularly after parenthood, that broken sleep is not as useful as continuous sleep. For children too it is easy to observe that if their blocks of sleep are broken up, then there are consequences. If instead of 5 or 6 **blocks** lasting 3 to 4 hours a newborn baby gets say 10 sleeps each lasting 1 hour then there are particular problems. These babies become overtired, are tearful, feed erratically, occupy much of their mothers' time and in particular are **difficult to settle to sleep**.

One of our fundamental aims as parents needs to be the achievement of blocks of sleep. These blocks need to be of appropriate lengths for both our children and also for ourselves. This is the road to sanity and happiness. Constant sleep interruptions for our children and ourselves leads us in a different direction.

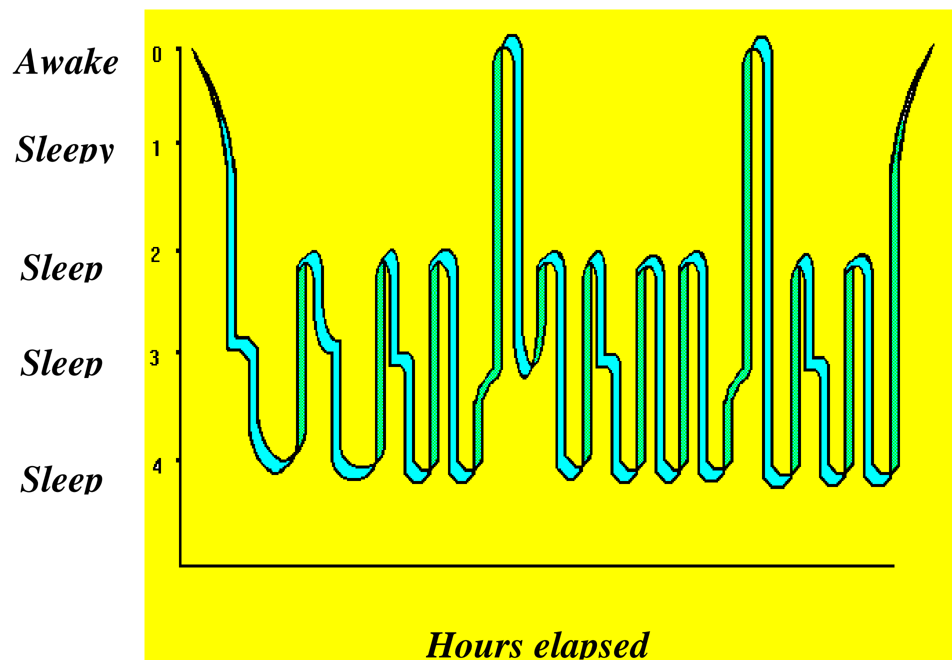
WAKING EPISODES

This is a key topic.

Please read this section carefully. If you understand this well it will aid your parenting tremendously.

Below is a graph of sleep levels. It shows a **"block of sleep"**. It is easiest to understand if we consider it for ourselves as adults. So for the present look at the graph and think of it as showing a full night's sleep from say 10 pm to 7 am. (Remember the days when that was normal. It will come again soon. Promise.)

Phases in a block of sleep.



At the left end of the graph is shown the change from being awake (0) moving through drowsiness (1) to various levels of sleep (2,3,4). Once asleep, our brain does what it wishes or needs. To the best of my knowledge we have no control over the activities of our brain once asleep. At some time during the night the line moves back to wakefulness (0 and 1). This waking is repeated a couple of hours later.

I need to make a few points about these waking episodes.

Firstly, all humans from very early in life have episodes of wakefulness during blocks of sleep. This includes babies.

Secondly, the waking episodes are short lived. Normally we recall the episode of wakefulness the next day as simply a period of becoming comfortable, rolling over, adjusting our pillow or cuddling into our partner. In fact as adults we often forget them until specifically asked. For newborn infants studied in sleep centres there are generally 2 or 3 per block of sleep each lasting 1 to 2 minutes.

Thirdly, being awake **always** needs to be followed by a sleep transition. Once awake our minds need to go through a sequence of step s which results in us being asleep again. This is a sleep transition. Thus for a baby a normal block of sleep will contain about 3 sleep transitions. This will include the first sleep transition at the start of the block of sleep.

Fourthly, a waking episode in a block of sleep is in normal situations a period of hazy consciousness. We do not wake completely. It is generally a time of minimal body movement and no language. For our babies, they should be silent. You should be unaware of them unless y ou were at the cot side.

In conclusion. All humans experience waking episodes in blocks of sleep. They are short and should be silent. They are a normal event in normal sleep. Their biological purpose is unknown. If you have any confusion about this concept please read it again. It is important to grasp this well to plan the development of our baby's sleep pattern.

SLEEP TRANSITIONS.

In the above section, I pointed out that blocks of sleep contain several sleep transitions.

Going to sleep is a more sophisticated thing than you might think. When I ask patients why we go to sleep they generally say because we are tired. While this is true it is only part of the story.

Achieving sleep is something which we can do in one of two ways. Firstly there is normal sleep achievement. We feel tired, it is the correct time of day, we move to our normal place of sleeping, lie down, close our eyes and go to sleep. For children this is equivalent to having a good feed, a nappy change and then being placed in their cot or bassinette. The child is awake, may whimper for a short time and then goes to sleep.

The second method of achieving sleep is the sleep of exhaustion. We are tired, overtired, profoundly tired. It is difficult to stay awake. When sitting we doze off, when horizontal the mind is unable to stay conscious. If awake we know that our mind is having great trouble functioning. For babies this is equivalent to a situation which you may have seen. I will describe it for o lder children. They, the children, have been busy, active, noisy. They are walking or running around. It is late at night. When encouraged to go to bed they refuse. If put down they complain vigorously. Eventually at 10 or 11 pm or later they crash. The unconscious children are found around the house in strange postures. They are then carried off to bed. For newborn babies this style of sleep occurs upon a background of sleep problems. They have short sleeps. Often they only achieve sleep with pa rental reassurance. The child may doze in mother's arms or be patted or rocked off to sleep and then awaken tearfully a short time later calling the parents back into service.

There are some major differences between these two methods of sleep achievement. I will ignore the effects of broken sleep here. That is dealt with elsewhere. For this section the important thing is that the two styles of sleep are fundamentally different.

In the first or "normal" sleep transition there is a sequence of events w hich must be gone through. There are a number of factors which need to be present which I will discuss under the heading of **Cues Of Sleep Achievement**. A normal sleep transition is a **skill** to which we are trained. It contains a **learned element.** It can be likened to gently applying the brakes of a car until it comes to a stop.

In the second or the sleep of exhaustion the mind is grinding to a halt. The mind is so fatigued that it is refusing to move any further. It lacks a learned element. It lacks predictability. It can be likened to a car stopping because it has run out of fuel. This will always occur eventually if we don't fill the tank. It may not occur at the most convenient place and it certainly interferes with the appropriate continuation of the journey.

To conclude. Achieving sleep involves a transition from consciousness to unconsciousness. This should occur predictably, at certain times and in certain places. It is useful for parental success to regard achieving sleep through a sleep transition as a **learned process**. The sleep of exhaustion lacks the elements of a learned skill and does not reinforce the development of that skill.

CUES OF SLEEP ACHIEVEMENT.

As explained above, blocks of sleep contain times of wakefulness. These are normal. Returning to sleep requires a sleep transition. I argue that these sleep transitions are usefully regarded as learned skills.

I now wish to expand upon the process of **learning** to go to sleep. I know that this sounds a strange concept. Please bear with me. This is a fundamentally important topic and needs to be well mastered before you can understand and develop your child's ability to sleep. We go to sleep everyday. The process is generally regarded as occurring because we are tired. We all understand that concept. I ask you now to regard achieving sleep as being dependent upon 2 factors.

Firstly, tiredness.
Secondly, everything else which is happening around you.

Tiredness does not require explanation. F or the audience who have an interest in this book tiredness is a part of most of your days. It is a constant companion whom you would love to leave behind. I hope that I help you succeed.

Tiredness is relieved by sleep. Enough said.
The really interesting part is the second factor or group of factors. The things which are happening around you at the time of sleep achievement are the **Cues of sleep**.

The Cues of sleep achievement for a baby may include:

the time	(relative to feeding and hunger)
the place	
smells	
sounds	
internal comfort	(eg. a full stomach)
external comfort	(eg. warm clothes, tight wrappings)
comfort objects	(eg. a soft toy or a dummy)
parental care	(eg. holding, patting or rocking).

Any and all of these can be learned as part of the process of sleep achievement. Now this may all seem a little obscure, so let me give some examples. I have to totally convince you of the importance of this concept. If I fail at this point then everything else fails. This is the key to it all working for you, your child and your family.

To convince you of the significance of cues of sleep transitions let's talk about us as adults.

Imagine that I am talking to a woman who normally lives in her own home with a stable family. In this example you, the woman, are going to a motel in an interstate hotel. You are alone, the bed is too small, the pillow too thick, the man across the corridor looked a little strange and the building next door is a bus depot. Will you achieve sleep normally? Will you stay asleep normally? The answer is no, and we know from life experience that when we change the cues of sleep achievement so greatly, it is difficult to achieve sleep and stay asleep.

Thankyou to the lovely patient who listened to my story from the beginning to end and then said politely "No, Doctor I can sleep anywhere. I'm an air -hostess". Luckily she could see my point and believed me. She and her baby succeeded very well. Now some of you may well say that the example is too severe. The situation has been changed too greatly from normal. So let's think of a less severe example.

You wake normally at 2 am. It is a normal episode of wakefulness in a block of sleep. It should normally last between 1 and 2 minutes or even less. Tonight your pillow is gone. You reach out for it, half asleep. (You are not allowed to steal your partner's.) It is not in reach. You wake up some more and reach for it again. Still not there. Eventually you would probably be sitting on the edge of your bed with the light on looking for the pillow. You find it, lie down and go quickly to sleep.

The points I am making are two fold.

Firstly, even small objects can be important parts of the process of sleep achievement. The presence or absence of a pillow can reinforce or interfere with the process of going to sleep. A pillow is one important cue of sleep achievement.
Secondly, in the absence of the correct cues, the process of sleep achievement is disrupted. **This results in an elevated level of consciousness**. As we fail in returning to sleep quickly we become even more wakeful.

Now I have convinced you that cues of sleep achievement exist. I mean it really is obvious when you think about it. Don't you agree? My next task is to show that cues of sleep achievement are learned. Again let's use adults as examples, as they are easy to relate to.

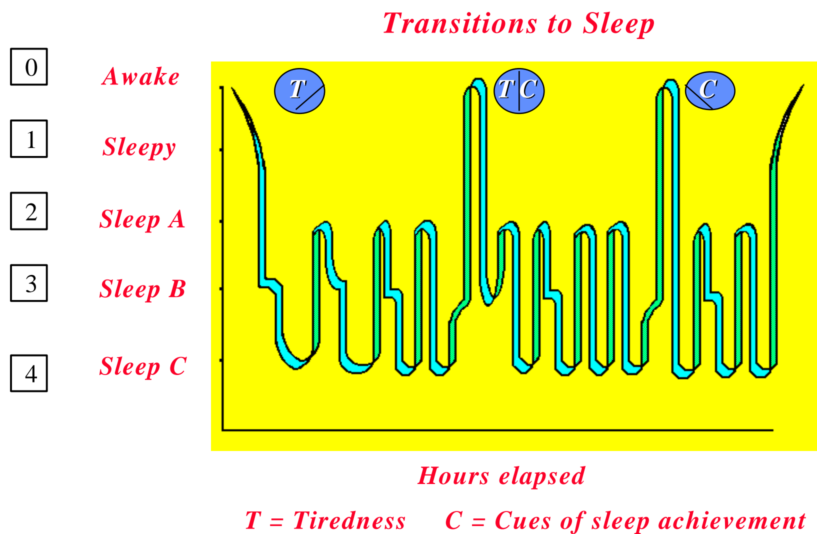
Imagine yourself as a single person. You sleep alone. You are used to sleeping in your bed, your room, your house. Then overnight everything changes. You are married (or whatever), you are in a big bed, a new room, a new house and there is another body in the bed. Going to sleep is different. For some days the process of sleep achievement is interfered with (not just by him). After a number of days you adjust to the new cues. You have erased the old cues and **learned** new ones. A similar thing happens when we move homes. After a few days in the new place we **learn** the new cues.

The process of sleep achievement is in part cue dependent. Cues are learned. They can be changed and re-learned.

What does this all mean? So what is the significance of these arguments?

Let me use the following graph to develop the argument.

In the graph below I have now added the two elements which encourage us to achieve a sleep transition.



This graph is the same as the previous one in this chapter with one addition. For each of the sleep transitions or waking episodes, if you like, I have entered a circle. Within this circle there are the two influences leading towards sleep. **T** for tiredness and **C** for cues of sleep achievement. Now the important point here is to notice the different contribution of each as the block of sleep proceeds. If we use an example from adult life again. Many of us can wake at say 5 am for a minute and then return to sleep. Obviously by 5 am our tiredness is largely gone. If need be, we could get up and go

about our day's work. However, we don't. We go back to sleep. This return to sleep is partly a response to tiredness, but is now largely cue dependent.

Thus as we go further into a block of sleep, the sleep transitions becomes more cue dependent. The cues which have been learned to help achieve sleep at the start of the block of sleep will become **more significant** as the person sleeping moves **further into the sleep**.

Now let me show how this affects our care of children.

Children rapidly learn cues of sleep in their first weeks of life. Within the first month styles of sleep are emerging. Let u s divide the cues of sleep for babies into two simple groups. Firstly those involving parental participation. Anything will do. Feeding, holding, walking, patting, rocking. For the really desperate there is driving around the block. They all work. They will all provide an environment within which sleep is achieved. The parental care will be taken on by the child and learned as part of the complex process of going to sleep.

The second group of cues exclude parents. Once there is a full stomach, clea n dry nappy, appropriate wrapping, their cot, their room, normal smells and background noises the child will achieve sleep. If details of the environment are provided consistently they will be **"learned"** as the cues of sleep.

Let's try putting this all together.

Our child is normal. During sleep the child will have episodes of waking which should last 1-2 minutes. The transition back to sleep is partly dependant on cues from the environment around the child. These cues can be changed and re -learned. As a child moves further into a block of sleep the cues become **increasingly** important in achieving sleep. If the cues of sleep achievement include parental participation then it is likely that we, the parents, will be called back later in the block of sleep to participate in another sleep transition.

Isn't it fun to understand why you are up every 90 minutes through the night?

Let's do something about it.

The cues of sleep achievement which are most useful for baby, mother, father and family are those th at are parent independent. A baby goes to sleep with a full tummy, a clean nappy, appropriate wraps, in an appropriate bed and room **AND ALONE**.

TIREDNESS AND SLEEP ACHIEVEMENT..

I once asked an eminent paediatric scholar as to the effect of fatigue on sleep achievement in children. He stated publicly that as children became more tired they were more likely to go to sleep. This answer staggered me. Mothers know that the reverse is true. This point appears to have received little recognition in the medical literature.

Those children who are sleeping well go off to sleep most easily.
Tired children are difficult to get to sleep.
Very tired children are very difficult to get to sleep.

Now these observations are so universal in young families that I will not defend the above statements. What I will do is try to explain why it is so.

In the previous section I argued that sleep was in part cue dependant and that this element of sleep achievement was learned. Now if going to sleep is a learned skill then it should behave like other learned skills. And it does.

As children become more tired they have more trouble performing their first learned skill. This is the skill of achieving sleep when certain parameters in the environment exist. Adults have increasing difficulty performing learned skills as we become increasingly tired. So do children. The tired child has trouble achieving sleep. The very tired child has great trouble achieving sleep.

The reverse of this situation is also true. The child who is well rested is better able to perform a learned skill. Thus the child who is ready for bed but has not yet become overtired achieves sleep efficiently. In addition the more often the child achieves sleep in a given situation the better those cues are learned. Just as we learn our alphabet and our tables by repetition, so repeated exposure to certain cues of sleep achievement helps their being learned.

The final aspect about tiredness and sleep achievement is that tiredness interferes with learning new skills. Overtired children have difficulty recognising the lessons that life is presenting. This is the same for adults. As we become more tired it becomes harder for new skills to be learned.

The better the child sleeps the better they sleep. The worse the child sleeps the worse they sleep.

I do not find many men who have experience of the situation of profound fatigue. Unfortunately a reasonable number of the young mothers who I see, do. In this situation the patient is so tired, so desperately tired, that once they get to bed and close their eyes, they can’t sleep. Once the eyes are closed the mind is spinning. You know that sleep is essential, you crave for it. You get to bed at last and the brain has trouble reading the code for sleep achievement. Eventually sleep is achieved but after much longer than normal. This is just the same for young babies. Once they are profoundly overtired they have very great trouble achieving sleep.

DEPTH OF SLEEP.

Once children have gone to sleep they become less responsive to what is happening in the house. Now just as there was a trap for young players with tired babies being difficult to get to sleep, so the same trap exists once sleep has been achieved.

The baby who is getting enough sleep, sleeps beautifully. They sleep through telephones ringing, doors banging, T V, radio, conversations, vacuuming and moving around in their room.

For the babies who are not getting enough sleep it is the reverse. As they become more overtired they are more easily roused. A telephone ringing, a door creaking, your footsteps. Sometimes you could swear to yourself that just the sound of your breathing wakes them. Because they are overtired they wake easily and begin to cry at once.

It is not fair for the world to do this. Where is justice? Where is common sense?

Well understanding is a wonderful thing. Once you understand the above concept then the answer is obvious. If the child is restless because of fatigue then everything else has to be put into second place to increase the hours of sleep which the child achieves. Once the baby has caught up on its sleep, it will achieve a more sound sleep.

The child who is getting adequate sleep is very easy to define. These children are calm, they go to sleep efficiently on their own, they sleep through all normal domestic noises. They return to sleep from their normal waking episodes without your help and almost always without you knowing they have been awake.

The tired baby is also easy to pick. It takes a long time for them to achieve sleep. They waken easily to normal domestic noises. They waken for their normal waking periods within a block of sleep and then are unable to achieve sleep alone, so they cry.

The moral of the story is to make sure that the baby is getting adequate sleep to perform the learned skill of sleep achievement. In the next chapter on sleep I describe sleep training and give guidelines on the amount of sleep that children usually need.

REWARDING BEHAVIOUR.

This is slightly complex section but it is important to understand. As soon as you understand it you will realise why it is important.

As the mother of the child it is important to understand your status. You the mother are wonderful. You in fact are the most wonderful person in the world. Your smell, your touch, your milk, the sound of your voice, your warmth. To a baby these things, each and everyone are attractive, pleasant and reassuring. As the mother, and also as the father, it is a joy to feel our child's security in our arms. This is how life is. These contacts provide some of life's great pleasures and contentments.

Contact with mother or father is a reward. Now there is a time and a place for rewards. 12 midnight and 2 am and 4 am and 5 am are not the times for rewards. These are times when as soon as possible after our child's birth we want and need to be asleep.

From the baby's point of view any behaviour pattern which is rewarded by parental contact is worth the effort. So if crying or kicking does the trick, so be it. I have even had older children who I believed had learned to cause vomiting in themselves as a way of blackmailing mum into coming to them during the night.

The first point that I am making is that contact with you is a reward even if it does not include a feed. It is to your advantage not to reward behaviour that you do not want to see reproduced. If you are happy that the child is well fed, is clean and dry, is in good health and has not got themselves into an uncomfortable or dangerous position in the bed, then leave them alone. If you know that the child is only one hour into a three hour sleep and they start to cry a little **do not** attend. Your attending is a reward to crying and will slowly increase the frequency with which that behaviour is exhibited. This is not being unloving but the reverse. Do you love your baby enough to allow him or her to learn the skill of sleep achievement alone?

Now the final point is a little more difficult to grasp but is easily proven by scientists. If you reward behaviour occasionally eg one time in three this is a stronger reward than if you reward the behaviour every time. Thus if a reward is given occasionally there is an increased chance of the behaviour pattern being repeated more often and for a longer period of time once the reward is finally withdrawn.

What does this mean?

If you have decided that your child needs to learn a sensible sleep pattern and you have stopped attendin g to crying between feeds, then stick to it. If you find that one time in 3 or 4 or 5 that you attend and give the child comfort then the lesson that is learned by the child is "If I cry often enough and long enough the reward will come." The sooner the pattern of rewards are consistent, the sooner the desired sleep pattern will emerge.

Cuddles, feeding, laughing, touching, loving are wonderful. Enjoy them to the full. But they are for wake times. Sleep times are for sleep and only sleep. Love your

baby enough to help them learn the skills of sleep. Babies need much more sleep than adults. They need it in blocks of at least 3 to 4 hours. By 12 weeks of age many of "my" babies can sleep ten or more hours at night in a solid block.

But enough of that here. More in the next chapter.

I hope that once you have mastered the ideas raised in this chapter it will give you confidence. Understanding why you are helping your baby to learn the skills of sleep will greatly increase your chances of success.

CHAPTER 4. SLEEP PROBLEMS

Sleep. One of life's great pleasures. Few things can start a day better than waking with the realisation that you have slept well. The body feels refreshed. The mind works with clarity. Your sense of energy is renewed. Your mood tends to be more positive and cheerful. At least, until the family works you over for the two hours before they go to school.

The absence of sleep is an interesting state of affairs. Assuming that we get **'some'** sleep we cope with several disturbances of a night's sleep fairly well. Initially. If the number of disturbances continues and our bodies or, more importantly, our minds are not allowed to recover, all of the above positive events move in reverse. The body is tired and listless. The mind does not work clearly or quickly and in fact becomes quite forgetful. Rational thought becomes more difficult. The mood becomes less than enthusiastic. Problems are approached with a negative attitude and we are more likely to burst into tears or be in a negative mood.

How many mothers of young children are left in this state? For days, weeks, months or even years?

While we can all relate to this situation the problem for children is less clearly defined. Some authors suggest that the need for sleep in young children varies greatly. While it is suggested a proportion of children cope with 20 hours of sleep per day others can cope with six or less. I am not so sure.

What is sleep for?

Some animal species cope with no sleep, ever. Others like humans require regular sleep for normal functioning. Experiments with enforced sleep deprivation show that after a variable period of time the mind begins to function incorrectly. When chronically sleep deprived, rational thought, concentration and memory are disturbed. Abnormal thought processes can occur.

All of us, as adults, can relate to the negative consequences of sleep deprivation. It is the central nervous system, the brain, which needs sleep more than any other human organ. In fact the majority of organs and functions continue while the mind is asleep. The heart beats, the lungs breathe, the bowel digests, the liver metabolises and the kidneys excrete.

My point being that **sleep is essential** for normal brain function. I would argue that it is part of the function of sleep to repair the wear and tear of the day's mental stresses. It is perhaps that time when growth of brain tissue can occur most rapidly.

The newborn child is undergoing dramatic development in brain size and function. The immature, growing, brain has a greater requirement for sleep than the mature one. In addition, the newborn has little in the way of resources of strength to handle the unprecedented inflow of information to which the brain is quite suddenly

submitted. Babies have a great need for sleep. Success in achieving the sleep which a baby needs is fundamental to the well being of the newborn infant.

The next section will discuss sleep disturbances and advice for mothers about babies.

MOTHERS' SLEEP PATTERN.

Pre-Delivery.

Occasionally a mothers tells me that in the weeks leading up to her confinement she finds that at some time of the early morning say one, two or three a.m. she finds that for no good reason she is awake. Wide awake. This lasts for an hour or so and then she returns to sleep. She is otherwise well and feels normal. (If anyone can describe the clumsiness and indigestion of being 38 weeks pregnant as feeling normal.) This change in sleep pattern may be preparation for the night feeds required by a newborn. It is not a problem and does not need treatment.

Post Delivery.

Almost universally the newborn will feed three to four hourly throughout the night for the first few weeks of life. The mother is thus woken on these occasions and misses her normal total sleep requirement. Just occasionally a baby starts sleeping through for eight or ten hours in their first weeks of life. I well remember a couple of worried calls from mothers asking if it was alright to let the baby sleep. As long as the baby is feeding well, gaining weight and normally communicative it is fine. However, for the majority, the routine of night time feeds can go on for several weeks.

For the first baby it may be possible for mother to join in a sleep during the afternoon, thus catching up on her total hours of sleep per day. For subsequent children when there may be a toddler or pre-schooler at home this can be difficult. The only strategy left may be to retire to bed with the other children in the early evening.

As soon as possible it is essential for the mother to be getting a full night's sleep. Every effort must be placed on encouraging the baby to sleep at least eight hours at night. For the majority of babies this can be achieved by six weeks of age. If you expect to be feeding your baby at three a.m. when he or she is six months old you probably will be. The importance of achieving a full night's sleep can not be overstated. Not only does the mother feel mentally and physically better, but her milk supply improves in volume and quality. This improved supply then means that the baby is more rested and settled.

BABIES' SLEEP PATTERN.

As mentioned above I believe that babies have a greater need for sleep than adults. This need is at its greatest at birth and gradually decreases as time passes. Sleep requirements are at their least in adult life.

One of the most important things I wish to say about sleep in children is the irony of over tiredness. The overtired adult behaves very differently to the overtired baby. As an adult the more tired we become, the more we desire sleep. This can develop to the stage that if we sit down when desperately tired, there is a danger of going to sleep in that position. How many young mothers caring for a family and a newborn child find that the horizontal position means instant sleep? How many young husbands observe that their partner's horizontal position means sleep and **only** sleep.

The overtired baby does not work that way. The overtired baby is a trap for young players. The overtired baby is the most common cause of problems in the first 12 weeks of life. The problem and the contradiction is that the overtired baby **can't and won't** go to sleep. He or she cries vigorously and long. They keep the whole family awake when what they and the rest of the family need is sleep.

I will now expand this area under the following headings.

a) **Establishing a sleep routine**

b) **Establishing a night's sleep**

c) **The overtired baby**

ESTABLISHING A SLEEP ROUTINE.

Philosophies vary as to how a child should fit into the family's pattern. At one extreme is the concept of demand feeding and sleeping where timing is controlled entirely by the baby. At the other extreme is feeding and sleeping by the clock irrespective of the baby's apparent needs.

From my experience the most successful path is a balance between the two.

I have been lectured to by eminent professionals on the virtues of demand feeding and constant physical contact between mother and child. I have been told of idyllic African villages where babies never cry because they are demand fed and are held in their mothers' arms or on her back 24 hours a day. The only problem with this philosophy is that very few of my patients live in idyllic African villages. Our culture sets other demands upon a mother. She is responsible for at least one child, a house, shopping, cooking, a husband or partner and variable commitments. Our culture does not allow the luxury of a mother sitting or lying with her newborn for 24 hours a day for three months. Any workable plan has to recognise the constraints placed upon the mother by our social norms. For most of her conscious day mother has to put her child down to allow her to continue with other tasks.

So what advice do I give?

As mentioned above I believe that the baby has a major need for sleep in the early part of life. My observations are that for the first five to six we eks of life a healthy baby feeds and sleeps and does little in the way of communicating. To establish a good foundation to allow the development of good communication, I emphasise the need for success in achieving a good feeding and sleeping pattern during the first six weeks.

Contact between mother and child is fundamentally important. It is essential to the normal psychological health of both the developing child and the parent. For the first six weeks the baby's important contact time is during feeds . Once the feed is finished, the nappy changed and clothing arranged, the baby needs to sleep. Mother is usually happy about that. If the baby is unsettled, there may be a feeding problem or reflux or colic. These problems should be handled as indicated elsewhere in this booklet. But assuming that the child is well and fully fed he or she will need to sleep at this time. Usually within five to fifteen minutes of being in bed the well fed, healthy, tired baby should be asleep. Other members of the fam ily can be a problem. Playful brothers and sisters, loving grandparents and doting fathers. All must be kept at arm's length once it is sleep time. If these attentive relatives wish to cuddle and stroke, kiss and play that's fine. But after feed time for a few minutes only or at bath time. Over handling at feed times is a potent cause of over -tiredness in the newborn baby.

Once the baby is fed and changed it is time to sleep. Good quality sleep for the **18 or more hours per day** is as essential for healthy development in these first few weeks, as is good nutrition.

A development upon this theme is whether a child should be disturbed once he or she is asleep. The temptation will occur to hold children once they are asleep. Sleeping babies are easy to love. Proud husbands may wish to show off their newborn to a visitor. I plead guilty to this offence which proceeded my "education". The golden rule is **"let sleeping babies lie"!** Once sleep is established, let it continue until the next feed time.

A healthy sleep will last for times varying between two and five hours in these first six weeks. Over a period of weeks a pattern needs to be established. The pattern needs to satisfy the baby's requirements and leave the family routine reasonably intact. It is helpful for the mother to have a plan in her own mind so that she can develop and encourage the baby towards this desired objective. I will discuss this plan in three ways.

A) Time interval between feeds (what is normal)
B) Age of baby (what to aim for)
C) Time of day (what to expect)

A) TIME INTERVAL BETWEEN FEEDS. (What is normal)

1 Hour.

A baby does not demand feeds one hour apart unless there is a problem. The most common problem is hunger ie: the previous feed lacked adequate volume of calories. Feeding volumes must be built up. The second most common problem is the over - tiredness. The irritable overtired baby can be woken by a minor stimulus and then cry vigorously. This baby needs to increase the number of hours sleep per day. (See overtired baby) The third most likely cause is reflux and then finally colic and other problems.

2 Hours.

A healthy thriving baby will not demand feeds 2 hourly. The comments for 1 hour apply but for one exception. This exception is the first two feeds of the day. As the child becomes stronger and is sleeping 6-12 hours at night; which can often be achieved at 6-12 weeks, then the early feeds change. The first feed of the day, say at 6 am is a full, successful feed, the baby sleeps and then perhaps by 8 am, only two hours later demands another feed. When offered, the feed is successful. This can be seen as perhaps a 'catch up' feed for the one missed during the extended sleep overnight.

3 & 4 hours.

Most newborn babies will sleep for at least 3 or 4 hours between feeds. The sleep should be deep, peaceful and not easily disturbed. The healthy baby in a deep sleep will ignore most noises, the telephone ringing, the radio on, the sound of normal conversation, the vacuum cleaner ie; normal house sounds. If the baby wakes too easily and if you are tip toeing around the house talking in muffled whispers the baby is probably overtired. (see that section).

5 Hours.

Within a few weeks, say by 3 or 4 weeks the thriving baby will begin to have at least one five hour sleep per day. Hopefully this will be overnight. Often it is in the afternoon.

6 Hours.

Again this tends to occur at about 3-4 weeks. If it is occurring during daylight hours it should be discouraged. Not for the baby's benefit, but the mother's. If baby is to receive five feeds in 24 hours and there is a 6 hour sleep in the afternoon it will probably mean two night feeds. Mother does not need that. So after four hours gently wake the baby (break the golden rule) and give a feed. Try and move the six hours sleep into night time.

7 Hours.

The baby is now several weeks old and growing well. He or she is strong enough to sleep this long. Again it should be at night. There is little to be gained by letting baby sleep this long in the day. If the baby is small, thin and gaining weight poorly it should not sleep this long at any time. A baby who is too weak to waken for a feed needs significant help. Seek medical advice and supervision.

8 Hours.

The thriving baby should be able to achieve eight hours sleep at night by six weeks of age. This is quite a land mark in the family's return towards normal sleeping patterns. Mother can have close to a full eight hours sleep and this create s an excellent platform for her next day. However if the baby is small due to poor or no weight gain, or if feeding poorly they should not sleep that long. It is a bad sign and requires medical supervision.

9-12 Hours.

For the thriving baby a night time sleep of this length can be achieved before 3 months of age. Again this is another landmark because it establishes a sleep pattern for the child for the next five or six years. Once sleeping say 7 pm to 7 am then the child should keep that pattern until school age. It also now gives mother and father time together after the children are in bed. The return to a new but manageable family life is reasonably complete.

The tired, thin, underweight baby should not sleep this long. It is short of nutrition and needs medical assistance.

B) AGE OF BABY. (What to aim for.)

At birth 3-4 hourly feeds for 24 hours averaging 6 feeds a day.

1-6 Weeks 3-4 hourly feeds, perhaps a single sleep lasting 5 -6 hours. About 5 feeds a day.

6 Weeks 3-4 hourly daytime feeds. A single night sleep of at least 6-8 hours. Perhaps a 2 hourly catch up feed in the first part of the day. About 5 feeds a day.

12 Weeks 4-5 hourly feeds a day. 12 hour sleep at night. Perhaps a 'catch up' feed in the morning. About 4-5 feeds a day. This pattern continues until solids are started.

C) TIME OF DAY (What to expect)

This will vary dramatically as your baby matures and strengthens.

6 am. Often regarded as the start of the day. For the newborn it is another feeding time of the 3-4 hourly routine. By 6-12 weeks of age baby is sleeping longer at night and may have two quick feeds ie: one at 6 am and one at 8 am.

10-12 noon - For the newborn the 3-4 hourly ritual continues. As they mature the feeding time will move towards the family's normal lunch time.

1-4 pm - The newborn is feeding 3-4 hourly. If the mother's milk supply is decreased for one reason or another it may be a time to start complimentary bo ttle feeds after the breast feeds.

5-6 pm - Perhaps the most demanding time of the day. What hotels refer to as the 'happy hour'. Mother is most in demand. She is attempting to divide herself into two or more equally capable and attentive parts. The milk supply is at its lowest ebb simply because of tiredness. If a complimentary bottle feed is needed this is the most likely time. If necessary give a top up feed, let the baby settle and free up your time for the rest of the family. Remember the wisdo m of having meals in the freezer and re-heating in the microwave. A little technology can help a great deal to return some sanity to this time of day.

7-10 pm - The newborn continues to have 3-4 hourly feeds. The more mature baby may have a late 'settling' feed before sleeping 8 hours. By three months baby should be sleeping through till morning and this time can be spent in the luxury of your partner's company. It is nice to have a time of day when you can talk to someone over school or pre school age .

11 pm-6 am - 3-4 hourly feeds for the newborn but by six weeks and definitely by 12 weeks these hours should be yours for sleep.

ESTABLISHING A NIGHT'S SLEEP.

As mentioned above a full night's sleep is a most refreshing event for the young mother. She is the axis of the young family and her mental and physical health is of fundamental importance to every other member of the family. Adequate nutrition and adequate rest are the principal requirements for her health.

The baby who is thriving will be able to sleep 8 hours at night by 6 weeks of age. Once it is known that the baby's weight gain is 30 gm/day or more and that all else is well then the baby can sleep for eight hours. Some babies will continue to awaken at 3 am for the 'night time' feed. Of course the angelic children will be sleeping through of their own accord but some will not. If the baby has good weight gain, is relaxed and comfortable and is otherwise well, then you can begin winding down the 3 am feed. For those babies who are looking only for a dummy and who are sucking lazily - give them a dummy. For those looking for some fluid and not satisfied by a dummy

then give the shortest feed which will allow the baby to settle. Keep cuddles and changing time to a minimum and get the child back to sleep as soon as possible. Sometimes just a bottle with some boiled water will allow baby to settle. Another strategy, if you are sure that the baby is well, gaining weight and thriving and is simply awake for some contact, is to ignore him. Often the chubby contented baby will cry for a few minutes in a half hearted fashion and then go back to sleep with no more attention than a nappy change.

If you, the mother have a clear desire to achieve 8 hours' sleep and are willing to 'urge' the baby in that direction it can be achieved. If you believe that 3 am feeds are normal until 12 months then that is what you will be doing. Remember that sleep is as important to the baby in its own way as nutrition. You a re not being unkind by 'insisting' that the baby increase its total hours of sleep. In fact by allowing the total hours of sleep to increase then everyone gains. Baby wakes next morning strong and hungry and most likely to feed well. You have had a good sleep and will have maximum milk supply. Nothing starts the day better than a full night's sleep, a rapid successful breast feed and then to sit for a few minutes gazing into the relaxed, sedated face of a well fed thriving baby. Allowing yourself a ful l night's sleep is in fact a significant contribution to the health and well being of the whole family.

THE OVERTIRED BABY.

Few situations cause more concern and family disturbance than the overtired baby. This problem is extremely common but I am greatly surprised at how infrequently it is recognised. There are few areas in medicine where I believe that my advice is more helpful. As mentioned above, sleep is fundamentally important to the normal functioning of the body and partic ularly the nervous system. Every mother who has had children recognises the significance and disruptiveness of being overtired.

Multiple nights of broken sleep result in emotional variability, irritability, a decreased ability for rational thought, a sense of tiredness and overwhelming fatigue. This occurs in a grown woman whose strength and stamina are much greater than that of a newborn. The baby's nervous system is undergoing dramatic growth both in size and function. Every moment awake is filled wi th new sensory information. All the senses are bombarding the central nervous system. The brain's ability to handle and filter information is very limited. It is not in the least surprising that the newborn is very susceptible to central nervous system fatigue. To understand the significant consequences of this I return to the purpose of sleep.

I am unable to say scientifically that sleep has an essential purpose in the human species to allow any particular chemical to be renewed. From a scientific pe rspective we still have much to learn about sleep. What we do know from life experience is that sleep has an essential function in maintaining smooth, purposeful, rational brain function. When fatigued we are able to rejuvenate during our sleep. The deprivation of sleep in the strongest and best trained of adults will eventually result in unstable brain function. Memory fades. Rational thought becomes imperfect. The ability to learn decreases. Emotional responses to situations become exaggerated and unpredictable. This is in an adult where the brain has matured and stabilised. The newborn has much less stamina.

In the newborn the nervous system is undergoing dramatic growth at the same time that it is learning to filter and process the large amount of information being presented to it. The strength to handle sleep deprivation has not developed. A baby will show the effects of sleep deprivation rapidly and will recuperate slowly (depending on the length of deprivation). The newborn is also develop ing new mental skills. Sleep deprivation **will slow this down**. At its most extreme, the child may become trapped in a stage of imperfect development. These chronically overtired children may show short attention spans, varying degrees of abnormal behaviour, disordered play, irregular feeding and immature personalities. I believe many children take years longer to achieve neurological maturity than they need due to sleep deprivation as newborns, which was never diagnosed and treated.

THE PRESENTATION OF OVER-TIREDNESS

If this problem is so common, what are the details of the presentation which suggest it?

Children of this age, less than six weeks, have a limited repertoire of symptoms and signs. Often a symptom, for example crying, can represent a multitude of problems. The history therefore needs to be taken carefully.

The major areas of the history which the mother will be able to report on are feeding, sleeping and crying disturbances.

I) FEEDING DISORDERS IN THE OVERTIRED BABY.

The overtired baby may feed satisfactorily but is often inconsistent. The child will suck for a short time and then become sleepy before the feed is finished. Mother will know that the feeding time is inadequate and attempt to wake the baby. Conversely the baby may start to feed but quickly become irritable at the breast and refuse the nipple. The feed may in fact be quite drawn out and not succeed in giving the baby the milk volume it r equires.

A crucial element here is that despite hunger and tears before the feed, the baby sleeps in mother's arms. The overall feeling at the end of the feed is that it has been unsuccessful.

II) SLEEPING DISORDER OF THE OVERTIRED BABY .

The overtired baby displays a clear and consistent contradiction in its behaviour. Whereas the tired mother sleeps rapidly once lying down the overtired baby does not. **The overtired baby is very difficult to get to sleep**. This behaviour is not 'logical', it is not how we behave as adults**, it is not expected**. It is this contradiction which can lead to difficulty in making the diagnosis and the ultimate worsening and prolonging of the problem.

After a difficult feed the baby settles in mother's arms. Upon laying the baby in its cot he or she rapidly begins to cry. The crying is long, long and distressing. If the parents are strong willed enough to leave the child unattended, the child will eventually begin to settle. After a long time, say 15 minutes the crying stops. Despite this, minor disturbances in the house interrupt the baby's sleep. These may be very minor- a child talking, a door opening or even the babies own movements. If disturbed from sleep the baby begins to cry at once. They will sometimes wake from a sleep quite suddenly and may sound loud and distressed. Once again baby is difficult to settle.

The majority of loving, attentive mothers facing this tearful distressed child give what their hearts tell them to give. Attention. The child is lifted and held or rocked in a cradle or walked around the house. The most extreme example I know of was a family who found that their child only settled when driven around in the car.

Handling the overtired baby is counterproductive. It simply prolongs the time when the baby is awake and should be asleep.

Many mothers say to me that their babies are in pain. They look upset. They shed tears, become red in the face, have a worried expression, draw their legs up . "Doctor there is obviously something wrong".

The clue to the problem is the child's response to comforting. When held or rocked or driven around, they settle. How many husbands have spent countless hours rocking the cradle bringing peace to the household. A child who really has 'something wrong' is not usually pacified by simple contact. A sore ear or colic or other true pain causes discomfort to an extent that rocking the cradle does not help.

The next clue is that when the child settles for a second time, as a result of this attention, they are not deeply asleep. Within minutes of putting the settled baby down or stopping the cradle the child is crying again. The intervention has not allowed the baby to go into a deep restful sleep. Even when the baby has started to doze in the parents' arms it has not achieved deep restful sleep.

III) CRYING DISORDERS IN THE OVERTIRED BABY .

The overtired baby is perhaps best described by comparing it with a well rested baby. A baby who is feeding and sleeping well is not particularly tearful. They wake for a feed and demand strongly but then feed well and go to sleep with a minimum of fuss. Once asleep the child achieves a great depth of sleep. People talking, children playing, telephones ringing do not wake the child from its sleep.

The overtired baby has an irritable nervous system. Many minor disturbances result in crying. The crying is loud and long. The baby is difficult to settle because of its deep seated irritability. It is so irritable and unsettled that many events result in loud distressed crying. To this baby the whole world is a bit of a pain really. The crying of this baby may be similar in volume and length to a fit but ravenously hungry baby demanding a feed. It is a noise which is difficult to resist.

IV) EXAMINATION OF THE OVERTIRED BABY .

The overtired baby has an interesting examination. Detailed examination of the baby is normal. Ears, throat, chest, abdomen are all normal. The clues lie in the general observations. If the baby is old enough to be making eye contact then in the overtired baby the eye contact is poor. When looking into the eyes of a healthy infant of more than six weeks of age two things emerge. There will often be a smile reflex and secondly the contact will be "meaningful". I am not sure how to describe “meaningful eye contact”. Despite this difficulty in achieving a word picture, every woman that I ask understands at once what it is. The overtired baby is very difficult to get to smile. It is also difficult to achieve "meaningful eye contact". These babies are difficult to establish emotional rapport with. They are a bit hard to give to emotionally. They certainly give little out.

The second general observation of overtired babies is their movements. Babies who are well rested move their arms and legs in a smooth fashion. When they are lifted or moved their muscle tone is relaxed. The overtired baby has movements which are tense rather than calm. At the most extreme the baby may lie in the cot with a slightly worried expression and a mild but persistent tremor of the hands. When lifted and moved the baby's muscle tone is not relaxed. If the arms are quickly extended and then released they flex with a tremor and cause the baby to cry. The healthy well rested baby tends to lie with limbs extended and relaxed muscle tone.

V) DIAGNOSES OTHER THAN OVER-TIREDNESS.

As will be obvious to all experienced mothers and fathers, the disorders of behaviour listed above can also occur in other settings. A baby may be irritable and tearful because of hunger. Feeding may be poor because of oral thrush or tonsillitis. Sleep may be disturbed because of reflux and ‘indigestion’. Colic may cause pain and present as an unsettled tearful baby who feeds poorly. It is the combination of examination coupled with the observations of the mother, that makes the final diagnosis.

An important, almost fundamental, part of establishing a diagnosis is firstly establishing that weight gain is satisfactory. The baby must be bare weighed and a weekly or daily weight gain calculated. If the baby is gaining more than 30 gm/day or 200 gm per week then underfeeding is probably not the cause of distress. Despite this reassurance, just occasionally a baby with normal or largish parents may be ‘needing, a weight gain of 45 gm/day even 60 gm/day to be satisfied. Generally though if the baby is gaining 30 gm/day the focus can move from consideration of a feeding problem to sleeping disturbance. Obviously if the weight gain is less than 20 gm/day then the focus moves to feeding. As always there is an exception. Occasionally a child of smallish parents may be comfortable and relaxed with a weight gain as low as 15 gm/day. When this occurs it will probably occur in that child’s brothers and sisters as well. The overall behaviour of the child must be considered.

If the general examination is normal and the baby's weight gain i s satisfactory; if the baby is not showing signs of constipation or reflux, then the most likely cause of distress is tiredness.

An appropriate plan of management from the mother will help the baby achieve the number of hours' sleep that the child needs for calm functioning. Treatment of the overtired baby is discussed in the next section.

VI) TREATMENT OF THE OVERTIRED BABY .

The overtired baby is very easy to treat. Unfortunately few treatments are so difficult to carry out. First time mothers are hesitant to carry it out.

The treatment is no treatment.

The treatment is do nothing.

The treatment is put your hands in your pockets and walk away.

But what does this mean?

We have outlined above that the problem is over -tiredness. The treatment is aimed at increasing the number of hours sleep that the baby receives in 24 hours.

The common approach of holding or rocking or walking fails in the long run. Although it succeeds in soothing the baby, it fails in the long run because it does not establish sleep. The baby may relax and doze in your arms or at the breast, often when they should be feeding, however, when put down to sleep they awaken almost at once. The baby does not need a snooze, it requires hours of deep, refreshing sleep.

While the healthy, well rested baby does go to sleep rapidly in almost any reasonable circumstances, some compromises must be made for the overtired baby.

Like all of us a tired baby will find it easiest to sleep in a quite, da rk, warm place. In addition the baby will be reassured by 'tight' supporting wrapping. The technique of wrapping can be a little difficult and you may need some teaching. Take care not to over-wrap in warm weather as overheating can be dangerous.

Once in this position the mother and father must leave. The baby will cry. Do nothing. Hold each other's hands, play cards, watch TV but do not pick up the baby.

The baby will cry. The crying will be loud and long. It can last for a very long time. The more overtired a baby the longer it can cry, until exhaustion takes over.

Most mothers find this instruction difficult to obey. On the surface it appears unkind to leave the baby crying. You will need to have faith in me for the moment. This does work and is not unloving. In fact the reverse is the case. Helping the child to 'learn' good sleep habits is one of the kindest most loving things you will ever do for your baby. But getting back to the crying baby. After a short time they 'give

comfort'. T his can be disastrous. Even if the baby stops crying in the mother's arms, at some time the baby has to be put down. Let's say the parents spend 15 minutes settling the baby. Eventually the baby goes back into the cot and starts to cry again. All that has been achieved is that the baby is now 15 minutes or more deprived of sleep.

There has to be an emotional outlet to this hard line attitude. It is cruel to ask a mother to sit for 'hours' listening to her distraught infant. The programme here is to allow contact at given time intervals. Time has to be measured on a watch not in the heart. It is amazing how long 60 seconds of loud crying seems to have gone on for.

To maintain her sanity and her belief in herself the mother must be allowed to have contact with her crying baby. But when? I recommend that the parents wait for at least 10 or 15 minutes. However the time needs to be chosen by the mother. If she finds it emotionally impossible to wait for 10 minutes, then try 5. At the end of the time that Mum or Dad feel is the maximum that they can wait then go to the baby. At this time spend a maximum of 1 or 2 minutes with the child. DO NOT SETTLE THE BABY IN YOUR ARMS. Use soothing touch or words. Reassure the babe that you are still around and then leave. The child may still be sobbing. Leave the room. The next non contact time is 20 minutes and then 25 minutes etc. The majority of babies achieve sleep in the 15 minute time frame. Please try to remember that the child will not be injured by crying. Nothing breaks and nothing falls off.

This programme works. It may take several nights and be emotionally very draining but it is worth the effort.

CRYING DOWN.

This is a term which I use to describe the pattern of crying when the overtired baby is going to sleep. By creating a mental picture of the noise which will be heard, the mother is assisted by knowing what to listen for.

Crying down is in essence the reverse of crying up. Crying up is the description of a child waking from a good sleep and starting to demand feeding. Crying up starts with silence. The child is asleep. They awaken. First sounds are soft, gentle, subtle. After some time, perhaps a minute or two of being ignored, the baby begins to cry. After a short time of crying the baby will be silent for some moments. If ignored the crying starts again but at a louder volume. Crying gradually increases in volume and with the gaps between cries becoming shorter until the baby is emitting a continuous loud bellow that few human beings conscious or unconscious can ignore. It's feed time.

Crying down is the reverse of that picture. This is the noise of the overtired baby going to sleep. The child is put down after the feed. The nappy is clean and dry. Mother knows that the baby needs sleep. Unfortunately the child's nervous system is irritable and despite its need for the rest it starts to emit a continuous loud bellow which is difficult to ignore.

If mother and father are attempting to sleep the cryin g of the tired baby makes it impossible. Unless both partners are aware of the problem at least one will be inclined to 'do something' about the baby. Herein lies the chief pitfall. Both partners need to do **nothing** and **support each other** in doing nothing. It is amazing how hard doing nothing can be. Watch the clock, after 10 minutes you are allowed to touch.

The loud, continuous bellow continues for a few minutes. At some stage the child will have a short break to catch breath. The silence is short lived and crying soon recommences. The volume may be a little less. After some time a longer break occurs. The next bout of crying may be a bit softer. The next break may be a little longer. Gradually the volume decreases and the breaks between bouts of crying become longer to the point that the baby achieves sleep. This process of crying down can take 10 minutes, 15 minutes or 30 minutes. The length of time reflects the degree of tiredness. The more overtired the baby the more difficult it is to get to sleep. The more overtired the baby the more important it is to let the baby cry itself off to sleep so that sleep is achieved. The sooner the baby catches up on the total number of hours sleep required then the more rapidly it will sleep easily. The above technique of observing the baby crying down to sleep I call controlled crying. There are few pieces of advice I give to the families for which I care that are more important. Few are as useful in improving family harmony and allowing members of th e family to get on with the task of enjoying each other. The overtired child finds it difficult to relate to the parents. Its behaviour is erratic and annoying. It is more tearful, more demanding and harder to placate. The overtired child is harder to love. The problem, if left untreated can lead to fundamental disruption in the building of a strong life -long bond of affection between parent and child.

Parenthood should be emotionally rewarding. It is the emotional reward that we are getting out of parenting. There are certainly no other rewards. In every other respect parenting is give, give, give. That's fine. The emotional reward far outweighs any cost of time, effort or money. Over -tiredness of child and then the parent, interferes with the development of the calm, happy, loving relationship which enriches our lives and makes all the effort worth while. Parenting is fun. Allow yourself that pleasure.

The self discipline of controlling over-tiredness in a young child is essential in allowing the positive aspects of parenting to flourish.

CHAPTER 5. THE ESSENTIAL ADVICE

This chapter has been written to present the ***most important*** elements of this book in a way that is logical and compact. The six points made in the following pages reflect the tutoring which I give in my surgery. While much of it has been said elsewhere in this book, presenting in this way appears to work well for many families.

(1) Blocks of sleep contain multiple sleep cycles.
Humans, like almost all other higher creatures, require sleep. We find that sleep is most effective when it is achieved in blocks lasting a number of hours. Most adults, for example, feel most refreshed by achieving between 8 to 10 hours sleep in a single block, overnight.

In recent years the development of technology has allowed us to study sleep in sleep laboratories. One of the interesting findings is that sleep occurs at different levels during a block of sleep. In particular, all peopl e - from birth and through their whole life - experience awakenings throughout a block of sleep. The purpose of these shallow awakenings is not known. A block of sleep is thus divided into **multiple sleep cycles.** A sleep cycle is one circuit starting with wakefulness followed by a period of sleep and **concluding in a waking episode.** The length of these sleep cycles varies with age. For a young baby they may be as short as 40 to 50 minutes. In adults sleep cycles are approximately 90 minutes long.

Most of us will therefore have between 5 and 6 awakenings in an eight hour sleep. Fortunately we have little or no recall of these awakenings the next day. Despite this 'forgetability' these awakenings contain an element of awareness. It is in these episodes that we would recognise that a pillow has fallen off the bed, for example.

The importance of these awakenings or arousals with regard to infant sleep is that they conclude in a *return to sleep*. Thus a block of sleep contains not only multiple arousals but *multiple episodes of sleep achievement*. The length of a single block of sleep can vary from approximately three hours soon after birth to as long as 12 hours after some months. The individual sleep cycles within that block of sleep only change slowly over a period of years Sleep cycles in the first few months of life last about 40-60 minutes. These cycles conclude with a shallow awakening which should be silent and last 30 to 60 seconds. The awakening will then be followed by a return to sleep. Of course if the block of sleep is now complete the arousal will lead to full awakening. For the arousals within a block of sleep the person in question will return to sleep silently and rapidly.

Thus to summarise this section:

-A block of sleep contains multiple sleep cycles.
-Sleep cycles conclude in an awakening and then usually a silent return to sleep.
-A block of sleep contains multiple episodes of sleep achievement.

(2) Sleep achievement is in part, 'cue' dependent.

Having made the point that a block of sleep contains multiple episodes of achieving sleep, then what helps this to occur? Going to sleep is in fact a complex event which sleep researchers continue to study. For the purpose of understanding and controlling infant sleep I suggest two causes as causing the change from consciousness to unconsciousness which is represented by sleep achievement. I do not pretend that this explanation even attempts to reflect the complex biochemistry which is occurring at the time of sleep achievement. Despite this, my simple analysis is accurate enough that we can all relate to it and the advice which it leads to works for most families.

What makes us go to sleep?

In my consulting room there is normally a very tired pair of parents sitting with me. They rarely have any trouble volunteering that tiredness causes sleep to occur. For many of the parents whom I see the tiredness has changed to exhaustion.

On a personal note I well recall when my children were very young, my wife app eared to be deeply asleep about one second *before* her head hit the pillow. None of us have any trouble agreeing with the following statement. Tiredness leads to sleep. Unfortunately this simplicity is incomplete and as you will see in point **5** below, it is somewhat misleading when discussing infant sleep. However, for the moment, let us accept the statement because it is still largely true.

Despite the presence of tiredness other things are required to be present for sleep achievement to occur smoothly and efficiently.

As an example imagine the following scenario:

You are very tired, the children are asleep, the house is quiet, all the important work is complete, and you are ready for bed and sleep. However instead of lying down in your normal bed, in your own bedroom, for my own reasons I ask you to lie on a portable bed, in a sleeping bag, on your own in the car port. Your tiredness is still complete, you are just as badly in need of sleep, but because the setting for your sleep achievement is so different, the ability to achieve sleep is decreased. I call these environmental factors the **cues of sleep achievement**. For normal sleep the ability to go to sleep is dependent upon a combination of tiredness and appropriate cues of sleep. The common cues are being in the right bed with normal sounds, smells, warmth, blankets, pillow, the correct company, and at the appropriate time of the day. The more we disrupt the cues of sleep the more difficult it becomes to achieve sleep.

SLEEP ACHIEVEMENT = TI REDNESS + CUES.

(3) Cues of sleep are learned, and they can be changed and relearned.

I have made the point that a block of sleep contains multiple sleep cycles and therefore multiple sleep achievement episodes. The achievement of sleep is brought about by the sum of correct levels of tiredness and appropriate cues of sleep.

Cues of sleep achievement reflect your surroundings. Each of us has a subconscious list of cues which we recognise. These cues are learned and completely changeable. The example which I normally give to the families which I see relates to ourselves as adults. As single adults we have certain sleep skills. We achieve sleep and maintain sleep in, for example, our parents' home. We take these sleep skills for granted. At some stage we form a relationship and begin sleeping with a partner at a different site.

Overnight all the cues have changed. A new bed, a new bedroom, a different house or flat, and two bodies in the bed. Most of us accept that our sl eep skills are temporarily disrupted. It takes a little longer to achieve sleep, we are more conscious of arousals overnight, are aware of our partner turning over or snoring through the night. Thankfully the disruption to our sleep is short lived. Within a week or two the subconscious reprograms itself and our sleep skills return towards normal.

I talk about a 'computer programme' which we store in our brain which has a title 'This is how I go to sleep.'. When we need to achieve sleep, we pull this pr ogramme out from its file and then use it as a reference point to assist us. When the lines in this computer programme are changed, ie. when the cues of sleep are changed, our efficiency at achieving and maintaining sleep is decreased. Then over a period of days or a couple of weeks we rewrite the programme. Old cues are erased and new cues are written in. As this new programme takes shape our sleep skills come back towards normal. We do this so well that soon we *need* the new cues, For the majority of women that I see, their husbands or partners were disruptors to sleep at first, *but now* if he is away for the night they do not sleep as well. So in adult life we change cues of sleep, suffer some sleep disruption, and then relearn new cues which allows our sleep efficiency to return towards normal. Another example which most of us can relate to is the temporary sleep disruption of changing house or flat. In the new environment we rapidly rewrite our sleep programme and our sleep efficiency returns to normal.

In conclusion : Cues of sleep are learned, and can be changed and relearned.

(4) Sleep achievement is usefully regarded as a learned skill.

This point is one of the keys in my method of caring for infant sleep. This way of analysing sleep achievement suggests that it is in part cue dependent. Cues of sleep are learned. By combining these two points we arrive at the above statement. Now I can not prove one way or another if sleep achievement is a learned skill. What is important is that if we accept this analysis of sleep then the advice which it leads to works. The advice also reflects what we see with infant sleep and, to an extent, adult sleep.

So for the moment let's choose to look at sleep achievement as being one of our many learned skills.

(5) Fatigue interferes with sleep achievement.

It is difficult to overstate the importance of this point. This is a tripping up point for many young parents. It is a trap for the innocent or well intentioned. This is where the majority of infant sleep problems have their origins.

The first problem is that on first glance this proposal seems wrong. “Fatigue interferes with sleep achievement”? Haven’t we already agreed that sleep achievement is the result of a combination of tiredness plus cues? Now I am saying that tiredness interferes with sleep achievement? Have faith, it all comes together soon.

Let us return to point **4**. Sleep achievement is a learned skill. Now if this is correct then sleep achievement should behave like other learned skills. Our school tables, telephone numbers, our alphabet, appointments and what we have come to the supermarket to buy are all things we would more usually associate with memory and learned skills. So let’s think for a few moments about these learned skills and the effect of tiredness. It is really not in the least controversial to suggest that tiredness interferes with the performance of learned skills. Almost universally the parents I see and in particular the mothers of s leepless infants are suffering from sleep deprivation of varying degrees. Almost all of these women agree that their memory is atrocious. They are having trouble remembering telephone numbers, shopping has become a bit random where afterwards several things are forgotten and they are having to write notes to themselves to avoid forgetting important events.

Our life experience teaches us quite clearly that fatigue interferes with the performance of learned skill.

Now I have stated above that sleep achiev ement is a learned skill. Therefore, if this is true then fatigue should interfere with sleep achievement. Once again, this point is one we can recognise and accept from our life experience. As mentioned several times already, parents of young children are often very tired. The mothers in particular have gone past tired, have become overtired, and then exhausted. Body and soul are crying out for sleep. Now the following scene emerges. The children are asleep, at last, the house is quiet, you badly ne ed to sleep, you get to bed, lie down, close your eyes, and what do you find? The mind is spinning, your emotions are annoyed, on edge, and sleep fails to arrive. You have become so tired that it is hard to get to sleep. Sleep is eventually achieved but it is slower than normal to come. During this time the mind is not relaxed and peaceful. Becoming overtired can interfere with efficient sleep achievement. Returning to the example of the computer programme called “This is how I go to sleep.” , you can become so tired that it becomes difficult to retrieve that programme from its file. Just imagine your tired mind at 2am after a busy day asking itself “Now where did I put that note about sleep? Just can’t find the darn thing at the present.”.

The relevance of this to infant care is as follows. We as adults can become overtired to the point that sleep achievement is difficult. Infants have much less stamina than adults, and are more prone to overtiredness. They will achieve the overtired state

rapidly. For the newborn this can occur within one day or even less. The older infant and later the toddler are more resistant but will eventually achieve overtiredness if they miss enough sleep.

Most parents have little trouble recognising a scene where their children have missed a sleep, and are then late for bed. An afternoon birthday party is a great example. The children have been playing vigorously, much food has been eaten, they have begun to be silly and the tears begin to flow. You know that they a re tired, and then overtired, so you suggest bed. Do they go off to sleep easily? No! As their tiredness increases, their ability to go to sleep decreases. Mum and Dad then pay the price for their children's lack of sleep. Fatigue can interfere with sleep achievement.

Before concluding this section I will point out something more about sleep. In terms of sleep for infants I look at three areas.

a) Sleep achievement. The ability to change from the conscious to the sleep state.

b) Sleep maintenance. The ability to return to sleep from a normal arousal within a block of sleep.

c) Sleep depth. The ability to remain asleep despite background noise.

Being overtired will interfere with all three of these elements. Thus if your baby takes a long time to achieve sleep, is tearful every 45 to 60 minutes at the end of each sleep cycle or is easily woken by creaking doors or floorboards then overtiredness is often the cause.

(6) Parent independent cues of sleep are the most useful for family life.

This final point brings all the previous elements together into a logical whole.
Let's revisit the cues of sleep as mentioned above in point **2**. Children do respond to cues from an early age. By six weeks of age the hormonal cycles of the body are responding to day and night. The child has begun to return a smile and as parents we can feel the first flickering of a personality emerging.

For my purpose I divide cues of sleep for infants into only two broad groups.

a) Parent dependent.
b) Parent independent.

Parent dependent cues contain an element of protracted parental care. Common examples include patting, rocking, holding till asleep, breast feeding till asleep, pushing the pram around the house, or driving the baby around in the car. From all the child's perspective these are powerful and effective cues. Children are deeply connected to their parents by emotions. Mum and Dad's attention and love are the most significant reward structures for a young child. Parental contact is more important than food a nd certainly more important than sleep.

These parent dependent cues are thus written into the sleep programme rapidly. The process of sleep achievement is thus in part triggered by parental activity. Parental attention works.

We have a problem.

A block of sleep contains multiple sleep cycles. Sleep cycles conclude in an episode of waking. The return to sleep is driven by a combination of tiredness and cues. As the block of sleep continues during the night tiredness decreases as the 'batteries recharge'. As the tiredness decreases the return to sleep from a normal, healthy arousal is *increasingly* cue dependent.

If a child is recognising parent dependent cues then as the block of sleep proceeds it becomes *increasingly* likely that the parents will be politely requested to return to provide the care which triggers sleep.

This sequence works. How many of you find that you have only to get out of bed each hour or two to pop in the dummy or pat for a few minutes to get the infant back to sleep.

Unfortunately this then fragments a block of sleep for several members of the family. It does not need me to point out that one eight hour sleep has a different effect on your sense of well being than eight one hour sleeps.

Parent dependent cues of sleep thus disrupt blocks of sleep.

Parent independent cues of sleep also exist. I generally talk about these cues being a full stomach, a clean dry nappy, the child's pyjamas, their blankets, their basinet or cot, and their room. Say goodnight.

The child will incorporate these cues into a sleep programme to develop what I call independent sleep skills.

Thus during a block of sleep the child can have hourly arousals, do a cue check, find that all is normal, and then return to sleep. This process will occur silently or nearly silently. Mum and dad can then continue with their important task of being asleep and recharging their own batteries. Given a full nights sleep the parents feel refreshed and have more energy and affection to give. The children are thus abl e to receive more affection and time from a happier, stronger parent.

Parent independent cues are thus more useful for family life.

So to complete this chapter I will simply list the six points which work together to suggest a philosophy of care which seems to work to the advantage of many families.

1. **Blocks of sleep contain multiple sleep cycles.**

2. **Sleep achievement is in part, cue dependent.**

3. **Cues of sleep are learned, can be changed and relearned.**

4. **Sleep achievement is usefully regarded as a learned skill.**

5. **Fatigue interferes with sleep achievement.**

6. **Parent independent cues of sleep are the most useful for family life.**

CHAPTER 6. DAY SLEEP

Achieving good sleep during the day can be just as difficult as the night for parents with a tired infant. The advice about daytime sleep is similar to that for the night but with a couple of minor variations.

While the vast majority of parents come to see me about nightime sleep problems, quite often day time sleep problems are harder to sol ve. This is not such a great problem for the parents in that once the child's night sleep has improved and they the parents are sleeping well overnight it is possible to be far more patient and forgiving during the day. When night sleep is terrible it is very hard to cope with some of the normal frustrations of the day.

I divide sleep periods into three groups.

1. **Night.**
2. **Morning.**
3. **Afternoon.**

Interestingly while the night is usually the biggest problem for families it is the one area which improves most rap idly. The morning is next to improve. The most difficult time of day to achieve good control of an infants' sleep performance is the afternoon. Remember that while this is generally true, some babies will be different. They may not have all read this book.

DAY TIME ADVICE

The key to day time success is a concept which I call the **Happy Wake Time (HWT)** It will be worth reading this section a couple of times as the HWT is a very powerful and useful tool in your understanding and m anagement of daytime sleep disorders.

Imagine your child having slept well overnight. He or she wakes in a good mood. (It will happen I promise.) They are usually hungry and then once fed are happy. They are in a happy wake time. The key to a happy wake time is that it has a beginning, a middle and an end. **The end of the happy wake time** is announced by changes in the child's behaviour. They begin to rub at their eyes, to whimper, to seek out your company for support or to become grizzly in the numbe r of little ways which you will come to recognise rapidly and quite accurately.

This is the time to put them down. This is the time when they are best able to achieve sleep. With every half hour which passes beyond that point the child is going deeper into **overtired time.** The more overtired the child becomes the more difficult to get to sleep. Remember that sleep achievement is a learned skill. Learned skills are more difficult to perform as we become more tired. The more overtired the infant the mor e trouble it will have in achieving sleep efficiently.

Many parents who I see are missing the end of the happy wake time and allowing the child to become overtired. The child then has trouble achieving sleep and cries vigorously. The parents then loose confidence in their decision that the child was tired and needed to go down. The baby is then lifted up, settled in the mother's arms but becomes increasingly tired and grizzly and less able to achieve sleep efficiently. A common time for this can be the afternoons. One of my patients described 5 pm as suicide hour.

The key advice here is as follows. When you know that the baby is well, has had enough to eat and has reached the end of its happy wake time, then put him or her down and allow them the chance to achieve sleep alone. If you pick the time accurately then sleep will be achieved efficiently. The more tired the child becomes, the more they need sleep, the more tearful they may become while sleep is being achieved. A common mistake is to miss th e beginning of the end of the happy wake time and to allow overtiredness to occur. **Remember it is only appropriate to ignore the crying baby when it is well, gaining weight correctly and no other cause for distress exists.**

How long are happy wake times?

This question is often asked and unfortunately it has multiple answers. Generally they are shorter than most people expect. For example a baby of 12 weeks who is sleeping well overnight may be tired and ready for another sleep of two or three hours after only two hours of being awake. The shortest happy wake times tend to be early in the day. This appears a little illogical as they have just had their longest sleep. Despite the lack of logic that is how they work. The babies own behaviour is the best indicator of the length of the HWT. A baby who is sleeping well and receiving adequate food is generally in a good mood. As they become tired their mood deteriorates. They become more tearful, seek out parental care more, are less emotionally independent, play for shorter times with one object and are more likely to be destructive in their play. Use your child's behaviour as the guide to the length of waking time which is appropriate.

BLENDED BEHAVIOUR

This is a concept which I find helpful for parents whose children have got them confused. If you are feeling that this is "**all the time**" then relax help is on the way**.**

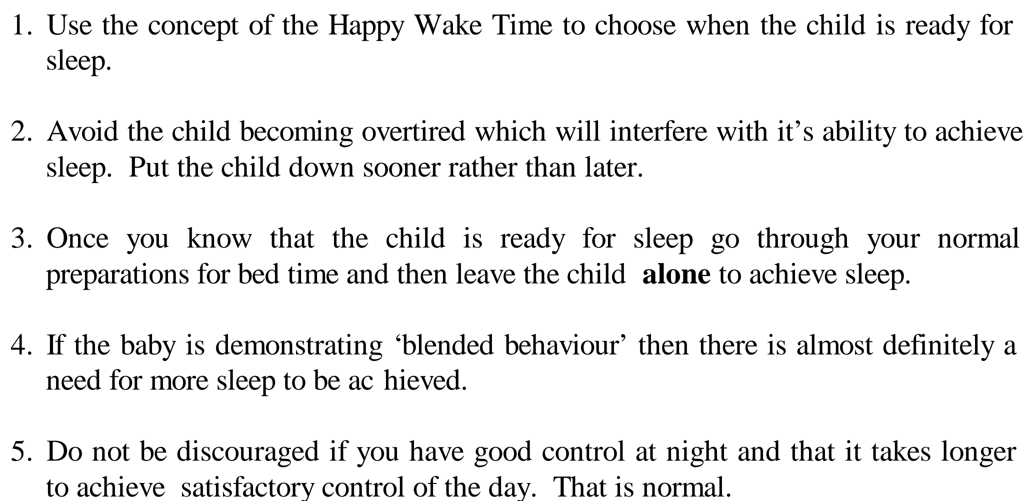
Imagine that a child's behaviour is divided into two styles only. I know that is simplistic but trust me it works. The two styles of functioning are:

1. Happy and well.
2. Tired and 'scratchy.'

As the child becomes more overtired these two patterns of behaviour blend together. They become harder to 'read.' You think that they are tired and then they give you a big smile. At another time you believe that they are well and happy but their smile will suddenly change to loud inconsolable crying for no obvious reason. This is 'blended behaviour.' It is a catch for the unwary. It can leave you confused and

desperate in trying to understand your baby. Once recognised for what it is then you are a long way towards getting control of the situation. Blended behaviour is most commonly a result of fatigue. The child wants to be cheerful and loving but is just too tired to put it together consistently. The solution is obvious. More sleep.

CONCLUSION



Daytime sleep requires just as much attention as night sleep. It can be a little confusing when the child is overtired. The pearls of wisdom can be distilled down to the following few points.

1. Use the concept of the Happy Wake Time to choose when the child is ready for sleep.

2. Avoid the child becoming overtired which will interfere with it's ability to achieve sleep. Put the child down sooner rather than later.

3. Once you know that the child is ready for sleep go through your normal preparations for bed time and then leave the child **alone** to achieve sleep.

4. If the baby is demonstrating 'blended behaviour' then there is almost definitely a need for more sleep to be ac hieved.

5. Do not be discouraged if you have good control at night and that it takes longer to achieve satisfactory control of the day. That is normal.

CHAPTER 7. LOVE, DISCIPLINE AND TOUCHING

LOVE

Why are we parents?

There is no single answer to the question. The answer varies from person to person and from one extreme to another. At one extreme there will be the married women who feels strongly the need to give of herself by having and cari ng for a child. Success as a parent can be fundamental to her perception of success in being female. At the other extreme is the young, single girl who has conceived as a result of casual contact with an unknown person. This girl will have no concept of the consequences and responsibilities of parenting and has come to this point almost by accident. Whatever the reason for conception successful parenting is about love. By giving in large volumes and then alternately receiving. This exchange of love, wh en successful, forms a basis for life and becomes ultimately life's great achievement. For the majority of people when they are counting the worth of their life it is the success or otherwise within the family that counts. Family in this context means those with whom we share the emotions of love. Those to whom we give it and those from whom it is received. For some this is a small circle, for others a large one.

In the final counting financial or political success may be of worth. For most of us, however, it is love which predominates in making our lives worthwhile.

Love is life's basic currency.

The presence of love in a transaction overwhelms other considerations. Time, effort, cost, difficulty all are unimportant if the person who is receiving this effort gives or receives love.

The moral of the story?

It will be the bonds that form with our family and children which ultimately give value to life for most of us. Therefore it is an investment which shows the highest return over the longest time.

DISCIPLINE.

Some of you may feel surprised to see this heading in a chapter on love. Discipline and love are interconnected. As mentioned elsewhere success in handling life's problems often requires a balance between opposite choices. The successful allocation of appropriate amounts of love and discipline are important ingredients in creating a harmonious child. Too much or too little of either can lead to an unbalanced individual unable to blend in with and contribute to society. The question of discipline as punishment really has little place in the first 12 weeks of life. The child's mind has not developed to a point where discipline in the form of punishment has a place.

Discipline can come in forms other than punishment. There is the self discipline of parenting. In giving up things which were previously important, for the benefit of your child. In denying your child handling time when he or she really needs sleep. In keeping loving relatives at arm's length when your chil d is sleeping. The discipline of establishing routine.

Parents, as has been mentioned elsewhere, will have much varying advice presented to them. It can be difficult to work out priorities. Elsewhere I have outlined achievements to be reached in weight gain and sleep. Often it will require significant self discipline to achieve these aims. The early effort is well worth it. The child who by 12 weeks of age is feeding 4 or 5 times per day, sleeping 12 hours at night and growing well, has a set pattern of behaviour which may last for the next five years at least. The whole family benefits from a successful routine. Our society is time orientated. For each individual to function efficiently in a social context requires the recognition of others' routines and fitting in with them. Do not feel guilty at guiding your child to sleep and eat at particular times. By doing so the child is moving towards integration in a family unit. It is the success of the integration of individuals into a family unit which leads to the next step of moving successfully into society as a whole. Our babies are precious individuals. Despite this they must fit into the routines of society at large and their families in particular to lead worthwhile lives.

MIRROR, MIRROR ON THE WALL.

Love is but one emotion which exists between mother and child. Mother will be a complex collection of emotions depending upon other circumstances. This is normal. Mother and newborn child share a very significant degree of emotional interconnection. The newborn child is an emotional mirror for the mother's feelings. If mother is tense the baby will reflect it. If mother is calm baby is more likely to be calm. If mother is confident then the baby is more likely to be comfortable. This emotional interaction is unavoidable. In a way baby is an emotional extension of the parent. Recognition of this mirroring of your emotions may help explain certain difficult situations. If you are tense it may be difficult to settle your child. By recognising the interconnection you may on occasion avoid the trap of looking for a problem in the baby when he or she is simply being an emotional mirror of your own distress. Rather than seeing this as a problem, the reflection of your own emotions is a meaningful expression of the depth of the bond between yourself and the baby. Marriage may or may not succeed in binding two together as one, motherhood certainly does.

TOUCHING

Much is made of the importance of contact between mother and child. Very few people involved in family care would debate the value of affectionate touching as an invaluable part of communication. The ability to give and receive affection through appropriate touching is a measure, I believe, of the success of our own emotional development. Again what we aim for is a balance between the overly effusive person who physically drapes themselves over others and the 'stiff upper lip' person whose physical contact never goes beyond a limp handshake. Learning to feel comfortable

with touch begins early in life. Similarly giving and receiving affection are learned skills. In some societies mother and child are in almost constant contact. I suspect that this develops a deep and meaningful relationship. For better or worse our culture does not allow mothers the time or energy to have such prolonged contact with her baby. This is our reality. Contact time still needs to be emphasised and enjoyed when it is appropriate. Contact time is part of the development of communication. I refer back now to the emphasis I placed upon sleep. Many hours of good quality sleep are fundamentally important to the baby's well being. In some settings and at some times I see sleep and contact as being alternatives to each other. When the baby needs sleep then allow it. Encourage the sleep to be deep, uninterrupted and of the appropriate length. Just as importantly the baby should almost always be sleeping alone. When the baby is rested, fed and looking for communication, then give as much as possible. This is the time for touching and holding. Enjoy these times. The pleasure of holding and talking to a thriving baby who is enjoying its parents company is immense.

In the first six weeks of life, if all is going well, the baby largely sleeps and eats. At between 5 and 6 weeks most babies will begin to recognise and respond to a human face. In fact any human face. This is a great time. Relatives far and wide can stand before the infant, provide the smiling face and become the beneficiaries of a wonderfully cheering unhesitating smile. Everyone gives and receives undiscriminating cheer. The party stops, however, later in life when the child begins to recognise individuals. Thus when you are recognised as being a non -regular smiler the child will not automatically return you affection. In fact it can be quite dispiriting to hear the plaintive wails of the distressed infant despite one's best efforts at providing a friendly smile. It is important though for the child to recognise who is family and who isn't. Life could become quite complex if we remained forever undiscriminating about whom we should share our affections with.

Once the smile reflex commences at about 5 -6 weeks meaningful eye contact develops. These are times when the baby is starting to communicate. These are pleasant contact times which are initially quite short. To a certain extent the baby will 'announce' the times when they are ready to interact. These times vary somewhat. It really can be quite frustrating at 2 am when baby is well rested, had a good feed and decides that it's party time. Usually, however, the **happy and awake** times come in the afternoon. Initially they last for a few minutes only and then gradually increase in length. As our focus is the first twelve weeks, they are usually a few minutes extending up to about 30 minutes or sometimes even more by the time baby is 12 weeks old. By this age there may be two or three times per day when baby is happy to play and communicate.

As important as recognising these times is the need to recognise when they finish. The very young infant will tire quite rapidly. The mood can change within a couple of minutes from happy play to tearfulness. It is important to watch for this change in attitude. The baby's contact time has expired as the 'batteries' have run down. It is now time for sleep. So as rapidly as practical, change the nappy and place the child into bed. The danger in delaying the sleep is the problem of over -tiredness. If the cue for bed is missed or you are simply too busy to put baby to bed they may become overtired rapidly. Once this has occurred the child may be more difficult to get to

sleep. The irony of this situation is that the child who is not overtired but who is ready for sleep and has had a good feed settles well. The overtired child may become irritable, can cry quite vigorously and may be difficult to get into a deep restful sleep.

Feeding times are the other time of contact. Breast feeding is a very pleasant time when all is going well. Conversely if things are not going well it can be a time of frustration, pain and tears. Thankfully for the vast majority of women, most feeds are successful. This is a time of intense closeness. The physical handling of the baby is an important step in developing bonds between mother and child. It is part of the child's learning about physical contact. Whenever possible enjoy these times to the full.

While emphasising the need for contact and its contribution to the child's and parents' well-being it is equally important to highlight non-contact time.

If the child is due for a sleep or is asleep everyone should be kept at arms length. Let the sleeping baby sleep. Repeated interruption of sleep is a potent cause of over - tiredness. Playful brothers and sisters, doting husbands and attentive grandparents need to be kept away. This can be difficult in the first few weeks when the baby is so new and special. It is very important for mother to protect the child from overhandling. This is particularly so as she, the mother, has to cope with the consequences if the baby becomes overtired.

Contact time for relatives occurs at feeding times. When baby is awake and resting between sides or after finishing the feed while mother is organising the cot or the baby is simply, happily awake. As the baby grows and becomes more resilient so there will be more time for play and other physical contact. Take the long term view. Baby will be part of the family for years. Being patient and self discipline d in the first few weeks can pay great dividends in establishing a workable family routine.

CHAPTER 8. THE MOST COMMON QUESTION FROM PARENTS

The question which is asked more commonly than all others is in the area of emotional damage.
"If I let my baby cry itself to sleep will I damage him or her emotionally? - It certainly breaks my heart."

This question only occurs at the first consult and is irrelevant by the second. Bear with me while I explain the sequence of events.

At the first visit I usually have two tired or exhausted parents and a tired sleepless, irritable infant. The family unit is under stress. As parents we never stop loving our children but when overtired it can be difficult to like them as much.

I return to a concept raised earlier that tiredness interferes with normal brain functions. It is so obvious that we all know when overtired, we do not function to our full potential. The memory is weak, emotions are more fragile, frustration tolerance is lower, tears are closer to the surface, and we do not feel as affectionate to anyone. Men turn to the chapter on sex at this point. Conversely as we get better sleep, all of the above problems reverse towards normal.

A child that is overtired has the same problems but because of it's immaturity is even more prone to the effects of overtiredness.

If several members of a family are overtired then the chance of them interacting harmoniously is reduced. The joy of parenting is to share love with a child who accepts us unquestioningly. If we are too tired to function well then those relationships do not thrive.

Therefore if I modify a child's behaviour such that he or she sleeps more effectively then this allows the parents to sleep well. If child and parents wake refreshed then their functioning is improved. This includes the ability to give and receive affection. A family which is sleeping well is far more likely to enjoy each others company.

Yes, hearing a baby cry itself to sleep can be painful. However it often only takes 3 to 5 nights and then sleep is improved for everyone. Once the children are getting the sleep they need, they are *so* much happier that the parents know without any doubt that they have done the right thing by their baby as well as themselves.

Once you are through the storm and out the other side, you will be totally sure that you and your children are emotionally strengthened, not weakened.

One note of warning. If you are starting with an older child, say 12 months, there may be several days where you are not so sure. The child has eventually cried itself to sleep and sleep reasonably. However, during the day the child wants you around more than normal, wants to touch and be held more. What follows is the interpretation which works in this setting.

For the child the relationship with it's parents is the most important thing in it's life. This child had been receiving a lot of parental contact overnight. That was the problem for the family. Now quite suddenly that contact has been withdrawn overnight. The child's emotional world is challenged. During the day they therefore want to 'touch base' with mum more often to check out that relationship. This behaviour which we will interpret as insecurity lasts a few days and then settles for two reasons. Firstly the child feels better emotionally because of better sleep. Secondly, mothers affection is not only still present but increased because of better sleep.

I promise you that if you and your child get improved sleep you will enjoy living with each other more.

CHAPTER 9. SEX AND PARENTHOOD

Life is full of contradictions. For example there is no parenthood without sex. Once achieved, however, parenthood does not mean an uninterrupted sexual co -existence. Sexuality is one of the casualties of parenthood. Having achieved its desired aim or perhaps, more accurately, one of its aims, sexuality becomes a victim of its own success.

To those young parents who have an uninterrupted sexual relationship after the bi rth of their children, congratulations, read no further. For those who have experienced the occasional problem. Read on. You are not alone.

If you find that parenthood has led to a significant decrease in the frequency and enthusiasm for making love then there are explanations. There is also some good news, it will return. **Eventually**.

Men are interesting creatures. They are fairly predictable. The majority have a continuing interest in making love despite the ups and downs of life. Very few say no, once it is offered. Most are perplexed when it is not offered 'like before'. In fact the sometimes dramatic change in sexual activity after the birth of a child can be quite threatening to a man's perception of himself. Making love is an important expression of mutual affection and attraction. In our society most men place great emphasis upon making love successfully and frequently. When, after the birth of a child, the partner is suddenly very much less interested it is easy to see this as a loss of interest or affection. In fact the causes are much more complex. Sexuality is hormone dependant to a very significant extent. Ask any neutered Tom cat about his interest and the answer is nil. A man who loses his testes and thus his testosterone has no sexual drive. Most men however retain their testes and produce testosterone in adequate and fairly constant volumes. Their interest in sexuality is fairly constant.

A woman is also strongly influenced by the hormones in circulation in her body. It comes as no surprise to most women to state that there are days of the month when their partners are attractive and when love making is pleasant. Conversely there are days of the month when their partners are attractive but love making is not 'on the agenda'. The exact time of the month varies, but most women are most 'receptive' around ovulation. The reproductive sense of this is obvious.

Once a child is born two important things happen. Firstly a woman's hormones undergo a major change and she may cease to ovulate while breast feeding. Secondly she is doing a huge amount of work. The baby who is breast fed and getting pleasantly round is getting all of that energy for growth from mum. The mother is putting out that energy from her body. In addition to that there is the physical work of caring for house, children, clothing, husband, shopping etc. If your partner says she is 'too tired tonight' what she probably means is 'I'm exhausted". 'It is difficult to do another solitary thing without some sleep '.

The altered hormone status is another powerful inhibitor of sexual interest. While breast feeding there is usually an inhibition of ovulation and the hormonal variations which go with it. As woman's interest may peak around ovulation, if she is not ovulating, there may be little interest.

Is there any good news here?

Well an end is in sight. Breast feeding will finish eventually. As the months go by the baby will hopefully come into a routine which allows mother more rest and this frees up energy for other things.

A most important point here is about a man's masculinity and attractiveness. In the woman's eyes he is just as manly and attractive. It is just that 'circumstances beyond her control' do not allow her to express it as frequently or with the same enthusiasm as before the pregnancy and birth of the child.

It is tragic to see a young couple being torn apart through a lack of understanding of these issues. The man must be allowed to realise that the absence of sexual activity is not a comment upon his masculinity. The woman deserves understanding and support at a time when her body is working extremely hard.

A major reward for the husband who is understanding and supportive is that, as time goes by, his actions strengthen the relationship with his spouse. When his companion's energy returns she will have more regard and love for him. The sexuality of this maturing relationship may be more meaningful and satisfying in the long term.

CHAPTER 10. NAPPY RASH

You may wander why this topic exists in a booklet about sleep. There are two reasons. Firstly one of my patients who used the original version of the booklet asked me to write about the topic, as she had problems. Secondly like so many things which can go wrong with a young child, nappy rash can be severe enough to make a young mother worry as to whether it is causing sleeplessness. So this is my short effort at giving advice on nappy area care.

I do not propose to enter the debate as to whether disposable nappies are good or bad from society's view point. The reality is that large numbers of babies are wearing large numbers of disposable nappies. My comments below really relate to cloth nappies. Disposable nappies are in fact more efficient at removing moisture from contact with the skin. The figures given below relate then to material or cloth nappies. If using disposables then you can approximately halve the recommended rate of usage. Thus while I generally recommend 1 2 cloth nappies per day then 6 disposables is probably adequate on an average day when the baby's skin is healthy.

Nappy rash is one of the most common problems seen by the General Practitioner. Sometimes the nappy area is infected with thrush or affected by dermatitis. In the majority of cases, the skin in the nappy area is suffering from moisture damage.

A baby passes small volumes of urine quite frequently. Perhaps as often as every fifteen minutes. What this means is, if the nappy is changed hourl y ie: 24 times per day then the nappy area would be wet for 18 hours a day. If any adult left their hands in moisture for 18 hours a day the skin would become red and cracked. It is little wonder that babies get nappy rash. Perhaps the question should be, why don't all babies get it more severely than they do?

Some hints on nappy area care. Please note that these comments relate to cloth nappies. Disposable nappies are technically different and need less changing as they are able to keep the moisture of the urine away from the baby's skin.

Change as often as possible. Before and after feeds, if you use cloth nappies. Between feeds if the baby has been disturbed for some reason. Perhaps change as you are going to bed. Aim to use a minimum of 12 nappies per day.

Despite the most intense care, some babies will still get a degree of nappy rash.

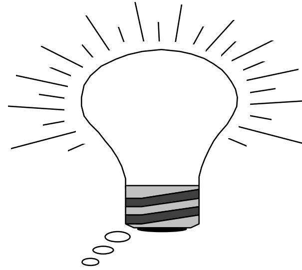
Nappy rash is the response of the skin to moisture and the chemicals in that moisture. That is, urine and the waste products in that urine. If the skin can be protected from the moisture then it is less prone to break down. A water repellent layer of vaseline, lanoline, zinc cream or one of many other products may be helpful.

Obviously, the more often these protective layers are applied the better. Washing the nappy in a soap powder ie; lux, velvet soap and not a detergent washing powder will

also be of benefit. In addition make certain that they are rinsed properly preferably in rain water.

If despite your best efforts the child still develops nappy ra sh. So be it. See the Doctor.

CHAPTER 11. INSTANT DIAGNOSIS



This chapter is an attempt at giving mothers and fathers a diagnostic tool to sort out some of the commonly observed behavioural variations. By its very nature it is simplistic and should be used as a guide only. If in doubt ring your medical adviser for assistance.

1. BABY CRYING.

A) Takes a feed well and then settles — HUNGRY

B) Takes a feed poorly
- Settles well in your arms
- Unsettled in cot — OVERTIRED

C) Takes a feed poorly
- Unsettled in cot
- Unsettled in your arms

COLIC OR OTHER ILLNESS OR VERY OVERTIRED

D) Taking feeds well or poorly
- Bowels not open well
- Hard pebbly bowel motions — CONSTIPATION

2. FEEDING PROBLEMS.

A) Feeds poorly at breast
- Fails to sleep well
- Settles in arms
- Tearful — OVERTIRED

B) Feeding hungrily at breast
- Becomes frustrated and angry
- Rejects breast
- Fails to settle — POOR MILK SUPPLY

C) Feeds well at breast
Spills frequently
Vomits after feed
Fails to settle — REFLUX

D) Feeds poorly at breast
Very Sleepy
Poor weight gain
Few bowel actions — POOR MILK SUPPLY (NEEDS HELP FROM YOUR MEDICAL ADVISER QUICKLY)

3. SLEEP DISTURBANCES.

A) Difficult to get to sleep
Woken by minor noises
Irritable — OVERTIRED

B) Constantly sleepy
Poor weight gain
Small hard irregular bowel action — UNDERNOURISHED (NEEDS HELP)

C) Tearful in late day or after travelling — COLIC OR TIRED

CHAPTER 12. COLIC

Colic is mentioned several times in this booklet. It is a diagnosis which is made very commonly in circles discussing child care. Colic exists. It can be very troublesome and cause significant anxiety and sleeplessness. Unfortunately I think that it is a diagnosis which is overused and often applied incorrectly.

In my own practice I regard colic as a diagnosis of exclusion or to put it another way it is my last choice as a diagnosis. For many mothers "colic" simply means that the baby is crying. The most common causes of the baby's crying are as mentioned elsewhere hunger and over-tiredness. These need to be excluded first. The hungry baby will respond to being fed; end of problem. The problem of the overtired baby I have discussed extensively elsewhere in this document. This needs to be excluded as well before retreating to the diagnosis of colic.

The cause of colic is not known as far as I am aware. The children suffering from it are otherwise well and for most of the day behave well. Typically the child is well fed, lying in a clean dry nappy and should be going to sleep. Unfortunately they are tearful and difficult to settle. If examined by a doctor generally nothing untoward is found. The time tends to be late in the day although this is not universal. Fortunately the majority of babies grow out of colic by 12 weeks of age. What however do we do in the time while waiting for the problem to go away?

Treatment tends to have limited success. Be sure in your own mind that the baby has had sufficient to drink, check that the nappy is clean and dry, make sure that the wraps are firm while at the same time the baby is not overwrapped and hot. Some paracetamol may be helpful; if nothing else it helps the parents to know that they have done something. Once these steps have been taken it may be necessary to stand back and wait for the baby to settle. This can be hard.

The baby with colic looks and sounds very unhappy. They cry very loudly. Tears may run down their cheeks. They may pull up their legs as if in pain. Generally they are difficult to console and do not want to feed. Fortunately once you have waited the 15 or 30 or 60 minutes that the baby takes to settle they do sleep successfully and then awaken quite cheerfully as if there had never been a problem. Your thoughts may be a little ungenerous next morning when the beaming child has had you up several times overnight.

Finally a short comment on what can cause colic. Again there are no hard and fast rules and different babies behave differently, however, riding in the pusher on a windy day and driving in the car can increase episodes which we may call colic. Driving the car is interesting. Most parents find that children travel well in the car. Perhaps the noise and movement is reassuring. The problem arises **after** the journey. That night may be more difficult with the child being tearful and unsettled. The treatment is the same as for over-tired babies. Once the child is well fed, clean and appropriately wrapped put them down and leave them alone to achieve sleep. Again I repeat that this can be difficult and stressful for the parents particularly when it is your first child. But forewarned is forearmed.

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