

Baby Steps



CARING FOR BABIES WITH PRENATAL SUBSTANCE EXPOSURE

Ministry of Children and Family Development
Vancouver Coastal Region

In partnership with

Vancouver Coastal
Health Authority

North Shore/Coast Garibaldi, Vancouver & Richmond

ACKNOWLEDGEMENTS

2nd Edition updated December 2003,

Ministry of Children and Family Development (MCFD), British Columbia
Radhika Bhagat, MN, RN, & Pam Munro, MSN, RN

Review and Contributions:

- Child Development Centre, Prince George: Linda Martindale, Physiotherapist, Carol Oosthizen, Speech & Language Pathologist
- Foster Parents: Colleen Anderson, Lorraine Jamieson, Laura Lang,
- Forest Cottage Coaching: Tanya Helton-Roberts, www.ForestCottageCoaching.com
- Infant Development Program: Bonnie Barnes, IDP Consultant, Vancouver; Dana Brynerson, Provincial Advisor, Annie Wolverton, Regional Advisor, Lower Mainland.
- Ministry for Children and Family Development, /Vancouver Coastal Region: Sandi Karmel, Resources Social Worker, Lyna Kiviste, Resources Supervisor
- Sunny Hill Health Centre for Children: Janice Duivesteyn, Lois Woo, & Nicole Raftis, Occupational Therapists; Janet Schlenker, Clinical Paediatric Dietitian
- Vancouver Coastal Health Authority: Leslie Cochrane & Laraine Michalson, Community Health Nurses, Sheway Program; Corinne Eisler, Anne Swann, Nutritionists; Sue Wastie, Speech & Language Pathologist; Tana Wyman, Dental Program Coordinator
- University of BC: Paul Thiessen, M.C., F.R.C.P.(C), Clinical Professor, Pediatrics

Pictures: Lenora Marcellus, MSN, RN, Mitch Stringer, & MCFD

Illustrations: Infant Development Program & Doug Quiring

The 1st Edition of this guidebook was produced as: *Safe Babies: A caregivers guide to daily care for infants exposed prenatally to alcohol and drugs* (2000). Lenora Marcellus (Ed.), BC MCFD. Copyright status: reproduction of this material is permitted for teaching purposes. Citation of the source is appreciated.

USING THIS MANUAL

This caregiver guide is intended to be a hands-on resource for parents and caregivers of babies who have been prenatally exposed to alcohol and other drugs. Information for the handbook was gathered from various sources, including parents, caregivers, professionals and published books and articles.

The information in this guide focuses on the daily care of babies aged birth to 6 months of age who have been exposed to substances in the womb. It is beyond the scope of this caregiver guide to cover detailed information on topics such as fetal alcohol syndrome, the long-term effects of substance exposure on the growing child, or the care of babies with special medical needs such as oxygen therapy and tube feedings.

DISCLAIMER

The information in this handbook should not replace the advice given to you by medical professionals (such as the baby's doctor).

PREFACE

Caring for babies who have been prenatally exposed to substances requires knowing more than just “baby care”. Caregivers need to create an intimate connection, search for understanding, and respond to the unique needs of these babies.

Caring for babies who have been prenatally exposed to substances requires:

- A balanced understanding of the effects of substances on the developing baby
- An understanding of the importance of preserving the mother-baby relationship, the baby's cultural heritage, and family and community connections
- An understanding of the importance of infant attachment
- An ability to make that intimate connection to the baby
- An understanding about how to listen to babies and respond to their needs
- A “toolbox” that is filled with caregiving strategies and “tools” for challenging times
- An ability to recognize problems with growth and development early on so that help can be received as soon as possible
- Knowledge about how to access community resources that assist and support caregivers and babies.



The authors of *Baby Steps* wish to express their heartfelt thanks to Jamie, birth mother, and to Tina, foster parent, for sharing their experiences with us.

Jamie's Story

When I was asked to write something that was to be included in this Guide, I wasn't sure I had anything to offer. After all, I am not a professional and most of the time I feel like I don't have a clue what I am doing!

Being a parent is the hardest job anyone will ever have and in my case perhaps even harder because my child was born addicted. The guilt I live with is at times completely overwhelming, but for my son's sake I must find a way to make the best of things. I do that every day by staying clean and sober.

As I thought about what to write I realized that I do have a message to convey. The message is simple: having my baby was the best thing that ever happened to me. It didn't seem that way at first, but I have come to believe that he was sent to me for a reason - to save my life. When he was born I was given a reason to live. It was the most difficult thing I have ever done to stop using drugs, and lots of times I wanted to give up. I had a lot of help along my journey to recovering and all I had to do was ask.

My son is five years old and he is so beautiful that at times I look at him and I just start to cry. I thank God everyday for the life I have and I know it's because of my son.

If you are about to begin this journey I urge you to ask for help and say a prayer. If you are willing, this could be the best thing that ever happened to you and you are in for the ride of your life. God Bless You.

Tina's Story

I am a foster parent. I have the ability to love and nurture other women's babies.

These are not ordinary babies with ordinary problems. I must always remember that every child is first a child; everything else is secondary. I must also love and nurture the child within the body. I will persist and insist that we connect at a deeper level than the physical. I know that with time and patience the sound of my voice, the touch of my hand, and the beating of my heart will become their soothing balm. They will respond to me, each in their own unique way. Only when we have connected can we move forward together on our journey to explore the world.

Over the years these babies have enriched my life and given me many opportunities to learn. I have learned to recognize the miracle of their birth. I have learned to celebrate our differences. I have learned to have a deep respect and appreciation for the power of the life force surging through their little bodies. I have learned to see perfection in imperfection. I have learned to see them as survivors rather than victims.

I have also learned to let go and trust that each little person must find his or her own way through the life experience. I have learned to allow myself to grieve deeply and fully for each little child that leaves my care. I have learned that I too am a survivor. I am a foster parent.

TABLE OF CONTENTS	
ACKNOWLEDGEMENTS	I
USING THIS MANUAL	II
PREFACE	III
TABLE OF CONTENTS	VI
CHAPTER ONE: SUBSTANCE USE IN PREGNANCY	1
EFFECTS OF SUBSTANCE USE ON THE BABY	2
Premature Birth	2
Short-term Effects	3
Long-term Effects	4
COMMON SUBSTANCES OF CONCERN	6
Tobacco	6
Alcohol	7
Opioids	7
Cocaine and Crack	8
Marijuana (Cannabis)	8
Amphetamines	8
Inhalant and Solvents	9
CHAPTER TWO: INFANT COMMUNICATION	10
HOW BABIES COMMUNICATE	10
INFANT ATTACHMENT	10
Helping Babies Form a Secure Attachment	10
CHAPTER THREE: INFANT SLEEP	13
INFANT STATES	13
INFANT SLEEP & WAKE PATTERNS	14
Helping Babies Sleep	14
SLEEP POSITION: REDUCING THE RISK OF SIDS	16
What Can You Do To Prevent SIDS	17
CHAPTER FOUR: INFANT CRYING	18
NORMAL CRYING BEHAVIOUR	18
HOW BABIES CALM THEMSELVES	18
Helping Babies Learn To Calm Themselves	18
WHEN BABIES CRY TOO MUCH	19
Helping Babies Who Cry Too Much	19

SHAKEN BABY SYNDROME	22
What to Do When You Have Reached Your Limit	23
CHAPTER FIVE: INFANT FEEDING	24
NORMAL FEEDING PATTERNS	24
BREASTFEEDING	24
FORMULA FEEDING	25
WHEN BABIES DON'T FEED WELL	26
Weak or Poor Suck	26
Spitting up (Regurgitation)	29
Gassiness or Infant Colic	31
Formula Intolerance and Food Allergies	32
INTRODUCTION OF SOLID FOODS	33
CHAPTER SIX: INFANT DEVELOPMENT	34
GROWTH & DEVELOPMENT	34
VISION	34
HEARING	35
SPEECH AND LANGUAGE	35
How You Can Support Speech Development	36
REFLEXES AND MUSCLE TONE	36
How You Can Support Infant Development	38
CHAPTER SEVEN: INFANT HEALTH & ILLNESS CARE	40
REDUCING THE RISK OF INFECTION	40
IMMUNIZATIONS	41
INFECTIOUS DISEASES	42
DENTAL CARE	43
CARING FOR THE BABY WHO IS ILL	44
Fever	45
Breathing Difficulties	46
Diarrhea	46
Vomiting	47
Dehydration	47
Constipation	49
Skin Breakdown	50
Candida (Yeast) Infections	51

Table of Contents

Eczema	53
Seizures	53
Giving Medication for Infant Illness	55
CHAPTER EIGHT: BRINGING BABY HOME	56
TAKING CARE OF YOURSELF	56
GETTING YOUR HOME PREPARED	57
Baby Equipment and Supplies	57
Setting Up the Baby's Primary Sleeping Area	57
BRINGING THE BABY HOME	58
THE BABY'S FIRST FEW WEEKS AT HOME	59
COMMUNITY FOLLOW-UP	60
RESOURCES	61
WEBSITES	61
COMMUNITY AGENCIES	63
REFERENCES	65

CHAPTER ONE: SUBSTANCE USE IN PREGNANCY

Although alcohol, tobacco, and many other drugs have been in common use for centuries, people throughout the world continue to debate about the safety of these substances during pregnancy. Many years ago, it was believed that the placenta protected the baby from harmful substances. We now know, however, that the placenta is not a perfect barrier. Alcohol and many other drugs pass easily through the placenta to the baby. In the 1970's and 1980's the prenatal effects of substances such as heroin, cocaine, and alcohol received considerable attention from the medical community, the media, and the general public. Although we are learning more about the impact of substance use in pregnancy there is still a lot of misinformation about this serious health issue.

Today we know that:

- Alcohol and substance misuse is a complex issue. Women who misuse substances often struggle with poverty, homelessness, mental illness, violence, trauma, and ill health.
- Although some babies prenatally exposed to alcohol and substances will show effects of this exposure, many are born healthy.
- Newborn behaviours that cause concern for caregivers may or may not be related to substance exposure.
- All babies are different and each will respond in a unique way to caregiving techniques.
- Research shows that both *nature* (the baby's genetic or biological make-up) and *nurture* (the environment in which a baby lives and grows) are important influences on child development.
- Effective care for babies who have been exposed to substances in the womb requires teamwork between parents/caregivers, families, and professionals.

EFFECTS OF SUBSTANCE USE ON THE BABY

Prenatal substance use may cause premature birth as well as short-term and long-term effects on the baby. The effect of substance exposure depends on:

- The mother's general health and biological makeup
- The mother's life circumstances including her level of stress, safety, nutrition, and access to medical care
- The amount of drug that was used by the mother
- Which other drugs, if any, were used
- When in the pregnancy these drugs were used
- The health and biological makeup of the fetus.

PREMATURE BIRTH

You may hear many medical terms that describe the baby at birth. This description can be according to how long the baby lived in the mother's womb (gestational age) and/or according to the baby's size or weight. A full-term baby is said to have a gestational age of 40 weeks. Terms used to describe the differences in a baby's weight and size at birth include:

- Low birth weight (LBW) - Meaning the baby is under 2500 grams or 5 $\frac{1}{2}$ pounds
- Small for gestational age (SGA) - Meaning the baby at birth is not as big as would be expected for his age
- Intrauterine growth restriction (IUGR) - Meaning the fetus is growing very slowly in the womb for some known or unknown reason.

The premature (pre-term) baby is born before the 37th week of pregnancy. Usually, premature babies weigh less than 2500 grams. Babies born prematurely may have organ systems that are not quite ready for the outside world. Their brain and muscles (neuromuscular system), their lungs (respiratory system), their stomach and gut (gastrointestinal system), their immune system, and their overall

weight and body fat may not be developed adequately. After birth these babies may experience:

- Breathing difficulties
- Feeding difficulties such as uncoordinated sucking and swallowing, and digestive problems
- Slow growth
- Tiring easily which can affect feeding and breathing
- Difficulty in keeping warm (maintaining body temperature)
- Increased pressure and/or bleeding in the brain
- Side effects from medical treatments.

In addition, many of these babies spend several days or weeks in a busy and often over stimulating special care nursery.

SHORT-TERM EFFECTS

Withdrawal

Withdrawal symptoms (formerly called Neonatal Abstinence Syndrome or NAS) that may be seen in the newborn are caused by the mother's use of opioids such as heroin, methadone, morphine and codeine. Not all babies exposed to opioids experience withdrawal.

If withdrawal occurs, the symptoms will be seen in the immediate newborn period. Exactly when the symptoms begin depends on how well the baby's liver works, how long it takes for the particular opioid to leave the body, how much of the opioid was used, and when it was last used. This information will help the health-care team determine how long these babies should be monitored in a hospital setting. In general heroin withdrawal will be seen within 1 to 3 days, whereas methadone withdrawal can begin 3-4 days after birth. If the baby is experiencing intense withdrawal symptoms, he may be given a medication such as morphine for a short period of time. The doctor may perform other tests on the baby to be sure there is no other reason for these symptoms.

Common Withdrawal Symptoms

W	Wakefulness, problems with waking/sleeping
I	Irritability, difficulty self-calming, high pitched cry
T	Tremors, twitching (seizures are a rare occurrence)
H	Hypertonia (stiff muscles), hyperactive reflexes (exaggerated startle reflex)
D	Diarrhea (explosive stools), Diaphoresis (sweating)
R	Regurgitation (spitting up) and /or poor suck (weak/frantic)
A	Apnea (breathing problems)
W	Weight loss, failure to gain weight

Other Short-term Symptoms

After the newborn period (0-6 weeks) some babies may show symptoms such as tremors, poor feeding and problems with digestion (the "gassy baby"), poor sleep, high or low muscle tone (stiff or floppy muscles), irritability, and high-pitched cry. This is not withdrawal as described above and is not treated with morphine. Some experts say these symptoms are due to the direct effect of some substances on the growing brain. It is a good idea to let the doctor know about these symptoms, as she may want to do some additional medical testing. These symptoms usually improve as the baby gets older and the brain matures. Most caregivers notice that babies usually outgrow these symptoms from 4 to 12 months of age.

LONG-TERM EFFECTS

Birth Defects ("Teratogenesis")

A "*teratogen*" is a substance that interferes with the normal growth of the fetus causing one or more abnormalities such as damage to brain, heart, kidney, and face (as seen with cleft lip and palate). Alcohol is a known teratogen.

Fetal Alcohol Spectrum Disorder (FASD)

FASD is a broad term used to describe a variety of effects resulting from exposure to alcohol in the womb. The following terms are included under the term FASD:

Fetal Alcohol Syndrome (FAS)

FAS is a medical diagnosis. A diagnosis of FAS is made based on a history of the mother drinking alcohol during pregnancy, and the following three criteria:

- A pattern of facial abnormalities, including small eye openings, flat midface, flattened groove between nose and upper lip, and a thin upper lip
- Growth restriction, including a low birth weight and a slow growth rate throughout childhood
- Damage to the brain, including small head size, structural abnormalities, neurological problems, and behavioural and learning problems.

Partial FAS (pFAS) & Alcohol Related Neurodevelopmental Disorder (ARND)

Formerly known as FAE these terms describe a cluster of problems facing those who have evidence of some but not all of the above three criteria. pFAS and ARND are estimated to occur 5 - 10 times more frequently than FAS. pFAS and ARND are not necessarily milder forms of FAS because the signs, though fewer in number, may be just as severe as in FAS.

Growth & Developmental Delay

Some babies who have been exposed to substances in the prenatal period experience long-term effects on their overall growth and development. Long-term effects include intellectual and learning disabilities that impact speaking and understanding, learning and remembering, paying attention for periods of time, and playing with or relating to others.

Other Health Risks

Other health risks include one or more of the following:

- Sudden Infant Death Syndrome (SIDS or crib death)
- Failure-to-thrive
- Infectious diseases, including Hepatitis C, HIV, and Hepatitis B, if mother tested positive for these diseases while pregnant
- Vision and hearing difficulties
- Breathing problems
- Shaken Baby Syndrome.

COMMON SUBSTANCES OF CONCERN

It is difficult to pinpoint the effects of individual substances on the developing baby for the following reasons:

- Women who use alcohol and other substances frequently use more than one substance ("polydrug use").
- Poverty, poor diet, and stress experienced by the pregnant mother may also affect the growing fetus.
- Pregnant women who smoke cigarettes and/or misuse alcohol and other substances often feel guilty and ashamed and may not want to talk about their substance use.
- Each person absorbs and metabolizes substances differently.
- Research evidence on the short and long-term effects of various substances used during pregnancy remains incomplete. There is much that we still need to learn.

TOBACCO

Tobacco use in pregnancy does not cause birth defects but can damage blood vessels in the placenta leading to miscarriage and premature birth. Babies may be born smaller and are at increased risk of SIDS, ear infections, bronchitis, and pneumonia. Some experts believe that there are no long-term effects while others believe that children may experience problems with learning and attention.

ALCOHOL

Alcohol can cause birth defects and other long lasting developmental problems (see *Long-Term Effects*, p. 4-5). In the early hours after birth some babies may experience acute toxicity from the alcohol exposure. Babies may be jittery, experience feeding and sleeping problems, show low muscle tone ("floppy"), or be sensitive to noise or touch.

It is important to remember that alcohol causes more harm to the baby than probably all other drugs combined. Alcohol is a legal and accessible drug and its use is accepted by society.

OPIOIDS

Opioids (made from the poppy) include heroin, methadone, codeine, morphine, talwin, and Demerol. Withdrawal is the main medical concern for babies exposed to opioids. Babies may be born small but to date there is no evidence that these substances cause birth defects. Although few studies have followed the development of children exposed to opioids, some researchers suggest that children may experience behaviour and learning difficulties. These children tend to do well if they have not been exposed to other substances and if they are raised in a stable and loving home.

Pregnant women who use opioids are at increased risk for miscarriage, premature delivery, and high blood pressure. It is not recommended for pregnant women to stop their opioid use suddenly ("cold turkey"). Women can be supported to stop the use of heroin (and other "street" opioids) through medically prescribed methadone. Methadone is a synthetic ("man made") form of opioid that can cause withdrawal in the baby. A great advantage to an opiate replacement therapy like this is that it provides women with an opportunity to receive regular prenatal care and counselling.

COCAINE AND CRACK

Most experts now agree that cocaine and crack do not cause early withdrawal symptoms in the baby as seen after opioid exposure. While some experts say that tremors, poor feeding, poor sleep, stiff muscles, irritability, and high-pitched cry are the result of the direct effect of cocaine on the developing brain, others say that research has not proven this effect.

Cocaine restricts or squeezes off blood flow in the blood vessels (*vasoconstriction*) and therefore mothers may be at risk for miscarriage and premature delivery. Babies may be at risk for being born small (with small head size) and have problems related to the restricted blood flow to their growing bodies. Some researchers say that this restricted blood flow can damage the heart and kidneys and cause small strokes in the brain. Experts do not agree on whether or not cocaine causes birth defects or other long-term effects such as problems with learning and paying attention.

MARIJUANA (CANNABIS)

Information about the effects on the baby from prenatal use of marijuana remains contradictory. Effects may be similar to those seen with tobacco use where babies are often born prematurely and small for gestational age. Some experts believe that there are no long-term effects while others believe that children may have problems with learning and attention.

AMPHETAMINES

Amphetamines (speed, crystal-meth, ice) can also restrict blood flow to the placenta and lead to miscarriage and premature delivery. Not much is known about the effects of amphetamines on the baby in the womb. Some studies have found that babies may be born small and experience feeding problems, sleeping problems, stiff muscles, and irritability. Long-term effects have not been well studied, but some studies have found children exposed to amphetamines may have problems with learning and attention.

INHALANT AND SOLVENTS

Inhalants are teratogens and can cause birth defects. Substances that are used for inhaling or sniffing include: glue, gasoline, paint thinner, cleaning fluids, hairsprays, and spray paint. Pregnant women who use inhalants can have kidney damage, high blood pressure, irregular heartbeat, nausea and loss of appetite, and increased risk of miscarriage and premature delivery. Infants can be born small in size, have small heads, and have kidney problems. Newborns may be seen with symptoms such as tremors, floppy muscle tone, feeding and sleeping problems, irritability, and high-pitched cry. Older children may experience delays in development, slow physical growth, and behavioural difficulties.

The Benefits of a Stable and Loving Home

Research is showing that the following factors are necessary for the healthy growth and development of all babies:

- Stable, loving homes
- Protection from over stimulation
- Physical stimulation through sound, touch, sight
- Social stimulation through play and interaction
- Healthy balanced nutrition
- Good health practices (e.g. immunizations)
- Recognizing problems with growth and development early on
- Getting help for these problems as soon as possible.

For babies needing foster care, the goal is to have as few placements as possible with a strong effort for them to join their birth or adoptive family.

CHAPTER TWO: INFANT COMMUNICATION

HOW BABIES COMMUNICATE

Babies communicate (talk to you) through signs or “cues”. Babies give engagement cues when they want to be with you. Easy to see cues include: “stilling” (or the baby stops moving), looking at your face, smooth movements of arms and legs, reaching out to you, turning eyes towards you, smiling, making feeding sounds, cooing, babbling, “talking” and opening eyes wide and bright. Babies give disengagement cues when they need a break. Easy to see cues include turning head away, crying, fussing, coughing, arching the back, shaking (tremoring), sleeping for long periods, squirming, pulling away, having pale or red skin, and spitting up or vomiting. Understanding the baby's engagement and disengagement cues and meeting her needs accordingly helps to develop a secure attachment or bonding between the caregiver and the baby (NCAST, 1990).

INFANT ATTACHMENT

Attachment is the emotional bond or connection formed between babies and the parents and/or caregivers who provide their daily care. It is especially important that babies, in the first year of life, develop a secure attachment to parents or caregivers. A secure attachment is important because it helps babies to feel safe and to develop trust in the world around them. Securely attached babies feed well, settle well, and grow well. Lack of a secure attachment can result in social and emotional difficulties and learning disabilities.

HELPING BABIES FORM A SECURE ATTACHMENT

You can do many things to help babies form a secure attachment. Please think about the following:

Be emotionally available and warmly accepting of the infant

Do not stop yourself from “attaching” to the baby, even if she is with you for a short time. Give yourself permission to parent and care for the baby.

Freely give comfort when needed

Always respond quickly when the baby is crying or ill, upset, or hurt. This does not 'spoil' a baby - it ENSURES secure attachment.

Be sensitive to the baby's cues and signals

Every baby is different so it takes some time to learn what each baby is trying to tell you. For example, some babies will use cues like turning their head away, closing their eyes, or arching their body to say, "I need a break". Other babies are not used to being held and need ongoing consistent times of cuddling to learn to accept this as a healthy part of life. You may need to work harder at understanding, interpreting, and meeting the needs of some babies who have been prenatally exposed to substances, particularly those who cry a lot, are overly sensitive to touch, or need lots of breaks from your care.

Be aware of the baby's history and experiences of the world and respond accordingly

Where babies have experienced traumatic, neglectful, or multiple placements, they may display signs of stress and may over-respond to things around them. Be aware of triggers for the baby, such as certain sounds, smells, tastes, sensations, and environments. Help them to slowly learn to be able to tolerate these events without stress.

Use eye contact and gentle touch whenever possible

Some babies who have been prenatally exposed to substances may not want too much eye contact or may be sensitive to holding and snuggling. Again, listen to the baby about how much and when to use eye contact and gentle touch.

Help the baby to trust and feel comfortable in her environment

The baby needs to learn about the world around her and know that it is safe and fun to explore. Predictable daily routines (for instance routines for sleeping, feeding, playing, and bathing) help babies gain trust in their world and the people in it.

Limit the number of caregivers for the baby

Frequent changes in caregivers cause stress for babies. Try your best to use the same qualified childcare and respite providers.

Look into programs offered by the Infant Development Program (IDP) or your Health Unit that will help you talk to and understand the baby. The *Parent-Child Mother Goose* Program is one such resource. This program may be held at various locations in your community, such as the IDP, Health Unit, library, family resource centre or family place, community centre, and neighbourhood house.

CHAPTER THREE: INFANT SLEEP

INFANT STATES

Babies have different levels of sleeping and waking called "states". Healthy babies behave in certain ways during each state. Six infant states have been identified.

1. **Quiet Sleep:** In the quiet sleep state babies sleep deeply with little movement of arms, legs, and face.
2. **Active Sleep:** In the active sleep state babies may have some face and body movements and tend to wake up more easily.
3. **Drowsy:** In the drowsy state babies are almost awake, they open and close their eyes, and begin to move their bodies.
4. **Quiet alert:** In the quiet alert state babies have a bright open face and may or may not move their bodies. Babies will focus well on faces, voices, or moving objects. In this state, babies are ready to interact. *This is a good time for play activities.*
5. **Active Alert:** In the active alert state babies are starting to get a little restless and fussy. Babies' eyes will be open and they will be more sensitive to noise and hunger. Babies probably need a change of pace at this time. For example, you may need to slow down activities in preparation for feeding.
6. **Crying:** In the crying state babies will show a lot of body movement and grimacing, and have crying spells. Crying babies may be telling you that they have had enough and need a break or that their particular need is not being met.

Most babies move gently between states. Babies who have been prenatally exposed to alcohol and other substances may have difficulty going gently from one state to the next. For example, you may notice the baby going from active sleep state (#2 above) to the crying state (#6 above) and back to the active sleep state again.

Helping Babies Transition Between States

- Match activities with the baby's state. For example - Play with babies when they are in the quiet alert state - slow down and change activities for babies in the active alert state.
- Assist babies to move from one state to another by using gentle touch and a soft voice. Waking babies gently will help them transition from sleep to wake states.

INFANT SLEEP & WAKE PATTERNS

Newborns do not have a predictable pattern of sleep but generally wake to feed every 2-3 hours. At 6 months of age children sleep approximately 11-12 hours at night and have two daytime naps. By 1 year of age children may sleep a total of 14 hours a day including one or two naps. Some babies, including some who have been prenatally exposed to substances, may show greater difficulty with sleeping throughout the first year of life. Babies who sleep for very short periods may become chronically tired and difficult to soothe. Babies, who are more restless, wake more often, cry more, and are disturbed more during sleep may need more caregiver and environmental support. Some babies who have been exposed to substances in the womb will use "deep sleep" as a way of shutting out or "disengaging" from their environment.

HELPING BABIES SLEEP

You can do many things to help babies sleep. Try the following:

Choose a quiet part of the house for the baby's sleeping area so that he is not disturbed by the everyday activities of the home. Some

newborns sleep better in small bassinets as this gives them a cushioned or protected feeling.

Establish routines. It is important for babies to have a regular bedtime. Bedtime rituals such as a bath and a lullaby provide structure and can help even young babies learn to tell night from day.

Reduce activity levels before bedtime. Try to reduce the level of activity at night so babies learn that this is not a time to be up. Lower the lights, turn off the TV, keep noise to a minimum, and do not play with the baby at this time.

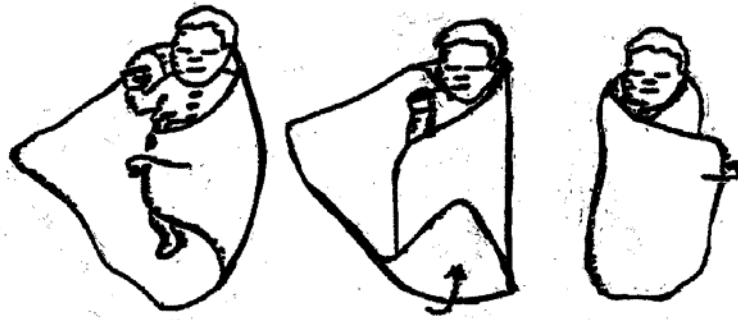
Try relaxing activities. Bathing a baby before bedtime is good activity if the baby finds this relaxing. This would be a better daytime activity for babies who are energized after a bath. Try using "white noise" such as a fan or a ticking clock, to help the baby get to sleep. Be aware that some babies may find these sounds annoying or over stimulating. Over time, you will discover the baby's particular likes and dislikes.

Control the light in the baby's sleeping area. For example, keep a low nightlight in the baby's room for nighttime feedings and have window blinds that can control the amount of light for daytime naps.

Bundle or swaddle the baby. Bundling or swaddling gives babies a sense of close security and control and prevents uncontrolled movements of arms and legs. Most newborns, especially those who have been prenatally exposed to substances, enjoy being wrapped snugly in a soft blanket.

To swaddle a baby, follow these steps:

1. Use a sheet or blanket that is large enough to tuck snugly around the baby. If the baby overheats easily or sweats a lot, use a lighter blanket or flannel receiving-sheet.
2. Place the blanket down in a diamond shape and fold the top corner down.
3. Place the baby squarely on the blanket with the turned down corner at the level of the baby's ears.
4. Gently bend the baby's arms close to her body so that her hands are near her mouth. Tuck one side of the blanket snugly around the baby, turn up the bottom corner, and then tuck the last side around her.



SLEEP POSITION: REDUCING THE RISK OF SIDS

When a healthy baby less than 1 year old dies suddenly, and no reason for the death can be found, we say that the baby died of Sudden Infant Death Syndrome, also known as SIDS or crib death. It is more likely to happen to babies around 2 to 4 months old. Other babies at a higher risk for SIDS include: babies born prematurely and those with a low birth weight, babies who had a brother or sister die of SIDS, babies whose mothers smoked during pregnancy, as well as babies exposed to second hand smoke.

WHAT CAN YOU DO TO PREVENT SIDS

Place babies on their backs for sleeping. Once babies are old enough to turn from back to tummy, and tummy to back (usually about 4 to 7 months), you don't need to worry about their sleeping position. If the baby cannot sleep on her back due to medical reasons consult with your physician about alternate sleeping positions.

Some babies can have a temporary flat spot on the back of their heads from sleeping on their backs. To avoid this, change the baby's head position from day to day so that the baby spends some time facing both to the left and to the right. Putting the baby on his tummy while awake and under your supervision will also help avoid these temporary flat spots.

Don't smoke around the baby. Keep your house and car "smoke free". Older style woodstoves can also contribute to indoor smoke levels.

Keep babies at a comfortable temperature - not too hot, not too cold. One guideline is to dress the baby in one more layer of clothing than you are wearing.

Use a firm surface for sleeping. Babies should not sleep on waterbeds. Do not use sheepskins, quilts, pillows, or bumper pads in the baby's crib. Check with your public health nurse about cribs that are safe for babies.

CHAPTER FOUR: INFANT CRYING

NORMAL CRYING BEHAVIOUR

Babies cry to tell us what they need. Crying can mean that a baby is tired, hungry, cold, hot, sick, bored, scared, wants a break from an activity, or just wants to be with you. Infant crying seems to be more common in the late afternoon and evening hours. Infant crying tends to peak at about 2 months of age.

HOW BABIES CALM THEMSELVES

Self-calming is a set of skills developed by babies to settle themselves. Some of these skills include sucking, moving arms and legs, and changing body positions. Caregiving skills that can help babies learn how to self-calm include:

- Knowing how to comfort the baby
- Understanding how to support the baby's attempts to self-calm
- Knowing when to do something to calm the baby and when to let the baby calm himself. This is often the most difficult skill to learn, especially when babies cry to the point of inconsolability.

HELPING BABIES LEARN TO CALM THEMSELVES

- Encourage and teach babies to calm themselves. This is best done when the baby is fairly settled or slightly upset, not already frantic.
- Some babies like to suck on a soother. Others like to suck on their hands, fists or fingers to calm themselves.
- Learn to read the baby's signs or cues that say "I cannot do this on my own and I need your help".
- Bedtime or naptime can be used as an opportunity to help the baby learn to self-calm. You can try the following:
 - ✓ Put the baby to bed when he is awake.
 - ✓ Position the baby so that he is able to bring his hands to his mouth. You can also use a soother.
 - ✓ Try some music or "white noise" (a fan or ticking clock).

- ✓ Swaddle the baby (see *To swaddle a baby*, p. 16).
- ✓ For an older baby who doesn't need to be kept on his back, try putting him in his favorite position.
- ✓ If the baby starts to get frantic and is not able to settle on his own, pick him up and try other soothing techniques.

WHEN BABIES CRY TOO MUCH

Some babies experience intense crying, commonly known as “colic”. Babies with excessive crying are fussy, irritable, have difficulty with self-calming, and are less able to handle change. Some babies who have been prenatally exposed to substances have difficulty sorting out, organizing, and coordinating information they receive from their environment. This is often referred to as a “disorganized nervous system”. Babies who cry too much may be showing you that they are overwhelmed by everyday activities such as feeding or playing. Some babies will cry to the point of being inconsolable.

HELPING BABIES WHO CRY TOO MUCH

Caring for a baby who is inconsolable can be very difficult. Sometimes just holding the baby and walking the floor can get the baby - and - you, through this difficult time. On other occasions, however, all your attempts to soothe the baby do not work. In these cases it is a good idea to step back and reconsider your options. When soothing techniques such as snuggling, rocking, singing, and letting the baby self-calm do not work try the following:

1. Ask yourself the following questions:

- Are there physical causes for the crying?
- Are there other strategies that might help?
- Could someone else help me solve this problem?
- Should I call someone else in to help?

2. Respond Quickly

Be aware of early signs of stress in the baby, such as looking away, stiff muscles or increased tone, tremors, or spitting up. Identify and respond quickly to the baby's signs of stress and

irritability. If babies are allowed to reach a frantic state, it is much more difficult to settle them. Babies who do not have self-calming skills should not be left to "cry it out".

Try to anticipate the baby's needs. Be ready to feed the baby or change his diaper so that a "hunger cry" or a "discomfort cry" doesn't become frantic and out of control.

Try one comfort strategy at a time. When you change strategies, wait a little while to see if it works. Changing strategies too quickly or too often may further upset the baby.

Allow the baby to look away. Don't try to get his attention. Some babies may prefer to be held facing away from you, looking at a blank wall or uncluttered space (see pictures below). In this position they feel secure but they do not have the extra stimulation of your face. The baby will return to looking at you when he or she can tolerate it.



Use smooth and gentle motions when handling the baby, and give him time to adjust to changes. Sudden movements can startle a baby. For a baby who startles easily or is sensitive to touch, a large sheet or receiving blanket can be placed under him to use for lifting. This

avoids startling the baby and allows him to stay in a curled (flexed) position when being lifted.

Walk back and forth holding the baby close to your body. A snugglie may be helpful.

Try a warm bath. Warm baths settle some babies while others may find baths too stressful.

Allow the baby to self-soothe by positioning the baby's hands near his mouth so he can suck on his fingers or fist. Remember to keep the baby's fingernails trimmed. The baby may prefer a soother. You may have to try a few to find one that suits him. When you find one that the baby likes, buy a few extras to keep handy.

Swaddle the baby (See *Infant Sleep and Wake Patterns*, p. 14-17).

Rock the Baby. Most babies prefer cuddling activities where they are held close and rocked side to side. Some babies may prefer a technique called vertical rocking in which they are rocked in an up-and-down movement. Vertical rocking can be done with the baby in several positions: over your shoulder, facing away from you, over your arm and against your hip or abdomen, on your knee, or in a snugglie. Be sure to support the baby's head when rocking. Rock gently and slowly. A swinging motion comforts some babies. There are some swings on the market that have an up-an-down swinging option. You can also buy a rocking cuddle seat that rocks and vibrates (like going for a car ride).

Use gentle massage (if tolerated). The benefits of massage for babies who have been prenatally exposed to substances include increased weight gain, improved sleep patterns, decreased irritability, and more relaxed muscles for babies with high muscle tone (stiff muscles). Regular gentle touch can contribute to bonding and the development of a trusting relationship. If you are interested in learning more about baby massage, check out your community to see if anyone offers training or resources. Most public libraries and public health units now have books and often a video available.

3. Modify the environment

Keep the surroundings as settled as possible. This includes turning off the television and turning down the lights if necessary. Play soft music or talk to the baby in a quiet voice. Use mobiles and music boxes only if the baby can tolerate it.

Decorate the room so it is soothing. Use paint colors and wallpapers that are light and calming. Use pictures and wall decoration that can be easily removed. You can add or remove these decorations according to how much stimulation the baby can handle.

4. Take Care of Yourself

- Keep yourself calm. Babies easily pick up on stress in their caregivers. Use strategies such as taking deep breaths or purposely relaxing your muscles.
- Call your partner, friend, or support person if you need a break.
- Don't personalize the baby's behaviour. It is not a reflection of your caregiving.
- Birth parents can connect with lay home visiting program for support, e.g. Building Blocks. Foster parents can use their Resource Social Workers for support.

*****If the crying is louder than usual or the baby has a fever or is vomiting, call your doctor.***

SHAKEN BABY SYNDROME

Shaken Baby Syndrome is the name given to injuries that result from shaking a baby or young child. Because babies heads are large compared to the rest of their bodies and their neck muscles are not strong, any shaking or quick motion that makes a baby's head roll or snap back and forth may cause serious injuries including: blindness, deafness, paralysis, permanent brain damage, or death. Many shaking injuries happen when parents or other caregivers are frustrated with a baby's crying.

Remember

- Always support the baby's head.
- Don't toss a baby or young child into the air.
- Learn how to cope with the baby's crying.

WHAT TO DO WHEN YOU HAVE REACHED YOUR LIMIT

- Be honest with yourself in admitting when the baby's crying is interfering with your ability to care for her. Remember - it is a strength to be able to recognize when you have reached your limit.
- Position the baby safely in the crib and leave the room. Letting the baby cry will not hurt her. It is important to get away from the baby if you think you may lose control.
- It is exhausting looking after a constantly crying baby. Have your partner care for the baby. If your partner is not available find someone who can help you through this, such as a relative, neighbour, or support person. If you have exhausted all options in attempting to soothe the baby, call your family doctor or go to your local hospital for further help.

Talk to your baby-sitters and alternate caregivers about Shaken Baby Syndrome and about what to do when they have reached their limit. Everyone who cares for the baby must know this rule:

NEVER, NEVER, NEVER SHAKE A BABY!!!

CHAPTER FIVE: INFANT FEEDING

NORMAL FEEDING PATTERNS

Infant feeding, at the breast or by bottle, requires babies to coordinate sucking, swallowing, and breathing. A baby may let you know she is hungry by showing “rooting behaviour” such as opening her mouth and turning to you when you touch her mouth, chin, or cheek. A baby may also fuss, make faces, cry, or suck on her hands if she is hungry.

Babies also know how to let caregivers know when they are full. For instance, a baby might slow down her sucking, turn away from the bottle, seal her lips or just get more interested in other things. For most healthy babies, it is not a good idea to force them to feed more than they want (See *When Babies Don't Feed Well*, p. 26).

BREASTFEEDING

Researchers and experts agree that breast milk is the best food for babies. Two important benefits include: the strengthening of mother-baby bond and protection of the baby against infections (including ear infections). Traditionally, breastfeeding by women who use substances has been strongly discouraged. Experts now say that a woman should be encouraged to breastfeed under certain conditions. The mother and her doctor need to consider the following if she is thinking about breastfeeding her baby:

- Is the mother in an opiate replacement program under the supervision of a physician? Although it was previously believed that breastfeeding mothers should not be taking more than 20 mg of methadone/day, new information suggests that infants can be breastfed even when the mother is on higher doses of methadone.
- Does the mother have a communicable disease such as HIV or Hepatitis C? Until we know more, mothers with HIV are advised not to breastfeed. For hepatitis C, it is still not known for sure if

the babies can become infected through breastmilk. Until research tells us more, this decision needs to be made between the woman and her doctor.

- Is the mother using other substances? Women who are actively injecting drugs or using other substances known to be harmful to the baby are advised not to breastfeed.

A mother who chooses to breastfeed her baby (or provide expressed breastmilk to an alternate caregiver) and who is supported in this decision by her doctor needs to be given information about breastfeeding including how to collect, store, and transport her milk. Whenever possible, mothers should be encouraged to feed their own babies. Breastfeeding mothers can get lots of support and advice from the local public health nurse. It is advisable for nursing mothers to access this valuable resource.

FORMULA FEEDING

Commercial formulas come in powder, concentrate, and ready to serve forms. These formulas may or may not have iron added. If you are not sure about which formula to use, talk to the baby's doctor, the dietician or community nutritionist, or the public health nurse. Babies who are not ready for solid foods should never be given ordinary cow's milk, goat's milk, or soy drink.

How much formula does a baby need?

The amount of formula needed by babies depends on their age, how well they are growing, their activity level, and their general health. In most cases, particularly in the first few months of a baby's life, small frequent feedings are recommended. Some babies who were exposed to substances in the womb and/or were born prematurely may need extra energy to help boost weight gain. For these babies, the doctor may prescribe small frequent feedings and sometimes a high-energy formula (high-calorie). The doctor or local public health nurse can monitor the baby's weight, length, and head size on a regular basis. This will help determine how well the baby is growing.

How long do I have to keep boiling and sterilizing?

In most cases, you need to boil water for the formula and sterilize the bottles until the baby is 3 months of age. After 3 months, you can stop boiling and sterilizing unless you are using well water or you are unsure of the safety of your drinking water.

May I heat bottles of milk in my microwave?

Microwave heating is not recommended. Microwaves heat liquids unevenly producing hot spots in the milk that could burn a baby's mouth. Some plastic containers are unsafe for heating as the microwave can melt the plastic. It is best to warm a bottle of formula or breastmilk in a container of warm water - always test the temperature of the milk before feeding the baby.

How long do I need to continue using formula for the baby?

It is recommended that babies receive formula or breast milk until they are at least 9 to 12 months old and eating at least $\frac{3}{4}$ cup of a wide variety of solid foods (including iron rich foods) each day. After this time you can introduce whole milk into a baby's diet.

WHEN BABIES DON'T FEED WELL

WEAK OR POOR SUCK

Normal infant feeding is seen as a rhythm of "suck-swallow-breathe". This coordinated "suck-swallow-breathe" action may be difficult for babies who are born prematurely and have immature brain, nervous, and muscle systems and/or for babies who have been prenatally exposed to substances. Babies who have trouble coordinating this sucking action may not be getting the food they need. This may lead to a frustrated baby who sucks frantically. Feeding difficulties related to weak or poor suck may include:

- Sloppiness and constant dribbling due to an ineffective seal on the nipple and a weak suck
- Sucking too quickly and not being able to keep up with the milk flow
- Trouble getting the nipple positioned correctly in the mouth

- High sensitivity to touch in or around the mouth ("oral hypersensitivity").

Helping the Baby to Suck and Feed:

If the baby has mild difficulties with feeding, consider the following:

1. Read the Baby's Signs

- Feed the baby when he shows early signs of hunger. Try not to let him wait too long or he will be too frantic to feed well.
- During feedings, some babies are not able to tolerate extra stimulation (for example: rocking, touching, eye contact). If necessary, swaddle the baby on your lap, allowing the baby to look away into an uncluttered space. This position will reduce stimulation and allow the baby to focus on feeding.
- If the baby tends to fall asleep when being swaddled you may need to unwrap him for feedings. A baby who uses deep sleep as a way of "taking a break" may need to be woken up to feed.

2. Prepare the Environment

- Whenever possible, choose a calm, quiet environment that is free from distractions. Some babies can only handle one activity at a time.
- Use soft music with a slow beat. Sometimes classical music helps. Try to establish regular feeding routines.

For Babies who are being bottle-fed:

- Collect all the equipment you need (e.g. bottle, towel, pillow) before you start to feed the baby.
- Try using a variety of nipples and bottles until you find one that works for the baby. Keep in mind that if the hole in the nipple is too large, milk will flow too fast and the baby will not be able to keep up. If the hole in the nipple is too small, the baby may tire out before completing the feed or get frustrated that he isn't getting enough milk.

- If the baby is a slow feeder, keep the milk warm throughout the feed to make it acceptable. This is especially important with specialty formulas that may taste different.
- The present recommendation on infant feeding is to always hold a baby during feeds. NEVER PROP A BOTTLE. If the baby does not feed well when being cuddled it is acceptable to do the following: place the baby in a semi-upright position (such as in a cuddle seat), hold the bottle in his mouth, support his cheek and jaw if needed, and constantly observe the feeding. Take the opportunity to cuddle the baby when you are burping him after a feed. NEVER LEAVE THE BABY UNATTENDED DURING FEEDS.

3. Help the "Feeding Muscles"

- Sometimes massaging the cheeks before starting the feed helps a baby close her lips so that milk does not dribble from the sides of her mouth.
- Make sure her tongue is down under the nipple during feeds. Some babies continually try to keep their tongues up on the roofs of their mouths. Gentle support of the chin and cheeks may help.



Keep the baby's chin tucked in (neither too far down or too far back) throughout the feeding. This position makes sucking and swallowing easier.

For some babies, an angled bottle helps keep the chin tucked in. This feeding position provides the baby with head and neck support and gentle support of the chin

This is a poor feeding position. The baby is not being held in a flexed or "C" position and her head is left unsupported (chin not tucked in).



SPITTING UP (REGURGITATION)

Most babies spit up small amount of milk on occasion, particularly at the end of a feeding or when being burped. As long as babies are gaining weight well, spitting up is not usually a concern. Spitting up becomes a concern when it:

- Increases in volume and force
- Is seen with other symptoms such as increased discomfort, diarrhea that is red (blood) or green (bile) in colour, breathing problems (respiratory distress), and mucus production
- Becomes vomiting that is "projectile" or forceful (i.e. "shoots across the room"). Projectile vomiting can indicate allergies or a structural problem with the opening into the stomach. Call your doctor if this happens. Nutritionists can provide helpful guidance for allergies.

Helping the Baby Who Spits Up

To help the baby who spits up a lot, try the following:

- Maintain a quiet environment during feeding
- Give smaller feeds more frequently
- Use feeding techniques that help reduce the swallowing of air.

Try the following suggestions:

- ✓ Feed the baby before he gets frantic with crying

- ✓ Use a bottle system with disposable liners or an angular neck
- ✓ Make sure the formula is not flowing too fast - this may lead to gulping of both formula and air
- ✓ Make sure the hole in the nipple is not too large
- ✓ Burp frequently. Use a gentle circular motion on the back. Do not pat vigorously on the back.
- Use positions that will help keep the formula down
 - ✓ Keep the baby in a slightly elevated position (head up, semi-sitting) for 30 minutes after a feed. Cuddle seats work well for this. Avoid extra stimulation during this time. A baby may also need to be supported on either side of his body (e.g. by using towel rolls) so that he doesn't fall sideways putting extra pressure on his stomach.
 - ✓ You may need to elevate the head of the crib 4 to 6 inches. If the baby is less than 6 months of age and is not yet pulling to sit, try using blocks under the legs of the crib or folded blankets under the mattress. Check with your doctor about this recommendation.

Babies suck for two reasons:

- To eat
- To calm or settle themselves (non-nutritive sucking).

Some babies are satisfied with a little sucking to calm themselves while others need a lot. If sucking is always seen as a sign of hunger, the baby can end up being overfed. Overfeeding can lead to a cycle of eat-gas-regurgitate (spitting up). You can encourage non-nutritive sucking by allowing a baby to suck on her hand, fingers, or a soother. Refer the section on "Infant Crying" (p. 18) for strategies on calming babies.

Other things to consider:

- Keep the baby's skin clean and dry. Stomach acids that the baby spits up can be irritating to the skin. Change the baby's clothes as often as necessary.
- Have your doctor or public health nurse monitor the baby's growth.
- Always check with the doctor before changing the baby's formula. Your community nutritionist (at your local health unit) is also a great resource for discussing this.

GASSINESS OR INFANT COLIC

A baby with colic seems to get gassy, may cry, pull his knees to his chest, have a firm belly, and pass gas without relief. Sometimes there are known reasons for colic and gas such as frantic sucking or crying (swallowing air), fast feeding or overfeeding, formula intolerance (cannot digest it), and illness. Some experts say that colic is related to an immature brain system that is highly sensitive to external (e.g. touch) or internal (e.g. food in the gut) stimulation.

How to Help the Baby

- Attend to crying quickly. See if the baby does better in an environment with decreased stimulation (see *Infant Crying*, p. 18 for tips).
- Use a nipple that provides the best seal in the baby's mouth, so that the baby does not get too much formula at once.
- Burp frequently, if tolerated by the baby.
- Place the baby in a semi-upright position for 30 minutes after a feed.
- Change the baby's position. For example, use rocking movements to promote passing of gas, or position the baby so that his knees are brought up closer to his chest.
- Gently massage the baby's tummy, if tolerated.
- Ensure the baby is tolerating the formula. Consult your doctor if you think he is not able to digest the formula.

- Discuss the use of medication to relieve gas with your physician. Avoid using medications that contain alcohol. (Be sure to read the label and check expiry dates on all medicines).

FORMULA INTOLERANCE AND FOOD ALLERGIES

Some babies do not tolerate cow's milk based formulas. This may be due to "lactose (milk sugar) intolerance" or food allergy. True lactose intolerance and food allergies are rare. Frequent spitting up, gassiness, colic, and irritability related to feeding (that improves with time) might be seen in some babies where an exact cause is not known.

Signs of Possible Food Allergy

Gastrointestinal Tract	Respiratory Tract	Skin
Colic that doesn't go away	Wheezing, asthma, cough	Eczema, dry itchy skin
Frequent spitting up	Nose: itchy, stuffed up, runny or sneezing	Heavy cradle cap that will not go away with treatment
Vomiting	Eyes: itchy, running, red	Redness, rash, swelling, hives
Diarrhea	Frequent ear aches	Scratching and rubbing

Helping the baby with formula intolerance

- Monitor the baby for signs of formula intolerance.
- If you are concerned that the baby is experiencing a formula intolerance, talk to your doctor or public health nurse. Do not make any formula changes without discussing it with your doctor.
- If a new formula has been started remember that it may take at least 3 days before you notice any change in the baby.
- Use other available community resources for information and support such as nutritionists or community dietitians or an allergy/nutrition clinic.

Consult your doctor, public health nurse, or professional trained in feeding difficulties if the following red flags are noticed in the baby:

- Forgetting to breathe at times during feeding
- Frequent gagging, coughing, or choking when feeding
- Noisy or difficult breathing during feeding
- A history of respiratory illnesses (pneumonia, frequent chest colds, etc.)
- Lack of weight gain
- Frequent spitting up or vomiting
- Difficulty in starting the suck
- Frequent agitation and crying
- Poor sleeping
- Feedings that last a long time - some professionals suggest that infants should be able to finish a feeding within 30 minutes.

INTRODUCTION OF SOLID FOODS

Currently, the recommended age for starting solid foods is 4-6 months; however, a baby must be ready for this change. Generally babies are ready for solid food when they are able to sit up with some support, open their mouth when they see food coming, and move soft food from the front of the tongue to the back of the mouth to swallow. The introduction of solid foods should be delayed until about 6 months if the baby shows signs of allergy to formula (See table p. 3. Call your public health nurse, dietitian, or community nutritionist as a resource to get more information about starting solid foods for the baby. Seek help if the baby always refuses food, is fussy, gags, coughs after swallowing, chokes or vomits after eating.

CHAPTER SIX: INFANT DEVELOPMENT

Babies follow a pattern of development in how they move, think, communicate, and socialize. Babies who were born prematurely, had a low birth weight, or were exposed to substances in the womb are at risk for developmental delays. Talk to your public health nurse or infant development consultant about using a screening tool to see how the baby is developing.

GROWTH & DEVELOPMENT

<i>Birth - 3 months</i> • Lifts head and chest • Hold fingers, startles easily • Smiles when spoken to • Likes your singing, rocking, touching	3-6 Months • Rolls over, sits with support • Plays with hands • Begins to babble • "Talks" to you by smiling, cooing
6 - 9 Months • Sits without support • Passes toy hand to hand • Plays peek-a-boo • Notices strangers • Babbles in singing tones	9 - 12 Months • Walks by holding on • Picks up small things • Knows "up" and "bye-bye" • Loves water play • Says "mama", "dada"

VISION

Right from birth, babies are able to figure out shapes, patterns and variations of light and dark. In the quiet alert state babies can focus on objects 7 to 18 inches away from their face for brief periods of time but they prefer to look at familiar faces. By 2 $\frac{1}{2}$ to 4 $\frac{1}{2}$ months, babies can focus on objects and start reaching for them. Until about 6 months of age it is normal for baby's eyes to wander or "cross" at times. This is due to immature eye muscle control. See your doctor if this happens after 6 months or if you have any other vision concerns.

HEARING

Although babies can hear just like an adult, their ability to respond to sounds develops gradually. Babies respond to loud sounds by startling and will quickly learn to recognize voices. Good hearing is an important part of learning to talk. Risk factors for hearing loss include:

- A family member with permanent hearing loss that occurred in childhood
- Very low birth weight - less than 3 $\frac{1}{2}$ pounds
- Serious infections at birth such as herpes, toxoplasmosis, rubella, or cytomegalovirus (CMV)
- Unusual appearance of baby's head, face, or ears
- An exchange blood transfusion meaning a baby may have had very high levels of jaundice
- Serious infection early in life (such as meningitis or encephalitis)
- Serious injury to the head
- Disorders of the brain or nervous system
- Repeated ear infections
- Prenatal substance exposure
- Use of certain medications for the premature baby.

All babies with a history of prenatal substance exposure should have their hearing checked. Some professionals recommend a hearing screening for these babies by about 6 months and routinely thereafter throughout early childhood.

SPEECH AND LANGUAGE

Here are some basic patterns of speech development:

By age 1, children use single words and understand simple directions.

By age 2, children should be using 50 words, be combining words in phrases, and be understandable one-half the time to strangers.

By age 3, children should use short sentences and be understandable three-quarters of the time to strangers.

HOW YOU CAN SUPPORT SPEECH DEVELOPMENT

- Talk to the baby as much as possible (and as tolerated).
- Respond to the baby as he coos or babbles to you with eye contact and a smiling face.
- As the baby gets older, name items aloud on a regular basis and read books together.
- Learn about normal speech and language development. Information pamphlets are available from most health units.

Sometimes a growing child will have behavior and emotional challenges because of difficulties with speech, language, and hearing. A baby or toddler should be referred to a speech and language pathologist if he does not use single words at 1 year and is not combining words by 2 years. If you suspect a problem, **don't delay in getting help!** The baby's doctor or public health nurse will refer the baby for further testing.

REFLEXES AND MUSCLE TONE

A reflex is a baby's automatic response to an outside stimulus such as sound or touch. Reflexes that you might see in the baby include:

The Rooting Reflex: A baby will open his mouth to feed when stroked at the corner of the mouth.

The Moro Reflex: A baby will startle and bring arms to chest when a loud sound is made beside him. Sudden movements - for example - being picked up very quickly can trigger this reflex.

The Grasp Reflex: A baby will grab onto a finger placed in his palm.

Tonic Neck Reflex: or "fencing pose": When the baby is lying on his back, his head is turned toward the outstretched arm with the other arm bent close to the ear. When the baby's head crosses midline, the same reflex occurs on the other side.

Babies tend to have a flexed or curled up position. They move in an asymmetrical (uneven) manner, meaning that one side will move while the other is still. It is normal for babies to have slight jitters or

tremors (shaky arms and legs). By 4 to 6 months a baby's movements will become more even. You will notice that the baby will try to move both arms together as he reaches out for an object.

High and Low Muscle Tone

Some babies who are prenatally exposed to substances may show muscle stiffness ("high tone") or floppy muscles ("low tone"). Most babies outgrow this by about 9 months without ongoing problems. However, both high and low tone may interfere with a baby's development. For example, a 4-month-old baby may have arms so stiff that he cannot reach for toys or bring them to his mouth, or an older baby's floppiness may make it difficult for him to sit up.

Arching and Tremors

Arching is the backward extension of the spine. Arching may be seen in babies with high tone (tight or stiff muscles). Some babies will arch when they feel over stimulated and need a break. Babies who arch may have trouble getting into a "C" position when being cuddled.

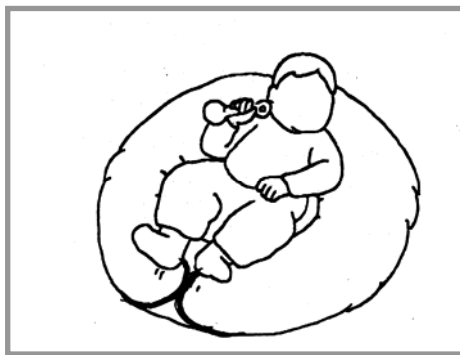
Tremors or tremulousness is when the baby jitters or shakes when not being handled. Increased reflexes and disorganized or jerky movements may mean the baby is having trouble blocking out extra stimulation. It may be the baby's way of telling you that he has had enough.



Arching Baby

HOW YOU CAN SUPPORT INFANT DEVELOPMENT

- A good time to try and establish eye contact is when the baby is in the quiet-alert state. Watch for clues that the baby is ready for interacting or "playing" with you.
- Try stimulating one sensory system at a time. For example, if you are working on visual skills, keep the room quiet.
- Many babies enjoy mobiles and room decorations. For some babies, an environment that is too stimulating may be stressful. Adapt the environment to meet the needs of the baby.
- Allow the baby to spend playtime in both back and tummy positions when he is awake. Both positions are necessary for good muscle development. The baby may only be able to tolerate a few minutes of tummy time to start with. Slowly increase the time the baby spends on his tummy, making sure he is comfortable with this. Floor playtime on a blanket is very beneficial for the baby's development. Make sure that you encourage the baby to use both sides of his body during this playtime.
- Midline motor activities such as bringing hands together and discovering toes are excellent for encouraging motor development. Use the flexion or curled position to help support the baby during these activities.



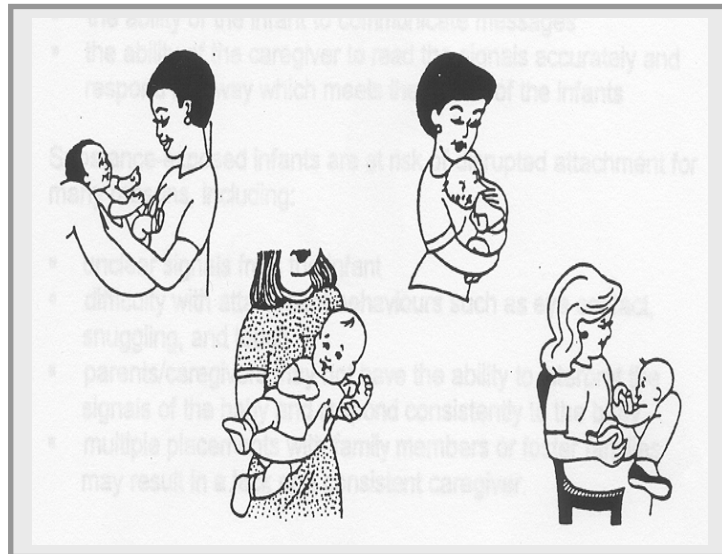
The *Boppy* encourages flexion and can be used for babies with high tone. The *Boppy* is great for "nesting" or cocooning babies that like that "enclosed feeling" and for babies who spit up a lot.

NOTE:

The *Boppy* is to be used under supervision only - it is NOT for nighttime use.

For babies with high tone, avoid activities that increase stiffness to the trunk (middle of body) and extremities (arms and legs). Walkers, jolly jumpers, exersaucers, and baby treadmills should not be used.

- Use positions that encourage flexion or bending (for example, a cuddle seat) for the high tone or arching baby. When carrying or positioning the baby keep his pelvic joints and muscles in proper alignment. For example, hold the baby in the crook of your elbow in a sitting position rather than over your shoulder. Special attention must be given to supporting the head, neck, and back of babies who tend to arch backwards suddenly.
- Don't be discouraged if it takes a while to discover the best way to hold or position the baby. Try different positions until the baby learns to relax when being held.
- If you notice either high or low muscle tone your Infant Development Program (IDP) Consultant and the physiotherapist consultant from IDP will be able to design an activity program for the baby.



Positions to encourage flexion

CHAPTER SEVEN: INFANT HEALTH & ILLNESS CARE

REDUCING THE RISK OF INFECTION

Protecting babies from illness and infections is an important role for all caregivers. The following are some strategies that you can use:

- Use standard precautions (see below) at all times, including hand washing before and after caring for the baby.
- Keep the baby's and your immunizations up to date.
- Keep the baby away from crowded areas, such as malls, especially during the winter cold and flu season.
- Restrict visits by people with known infections such as the flu.
- Maintain a smoke-free environment.
- Get yearly flu shots. Ask your public health nurse about this.

Hand washing is the single best way to prevent the spread of germs from one person to another and should be done before and after you care for the baby, especially with feeding and diaper change.

Standard Precautions ("Universal Precautions")

Standard precautions are steps we should take to protect ourselves when we come into contact with the blood or body fluids of other people. Under these circumstances you should:

- Wash your hands thoroughly with soap and water for at least 15 to 20 seconds.
- Disposable gloves (latex, vinyl, or rubber) should be used when handling body fluids that may contain blood.
- Clean spills of blood or body fluids by using disposable absorbent material such as paper towels. Wipe the area with a disinfectant (1 part household bleach mixed with 10 parts water to use as a good disinfectant). Reusable items used to clean up the spill can be sterilized by soaking them in disinfectant for 20 minutes.

- Teach others (especially children) about healthy behaviour such as hand washing and not sharing toothbrushes and other personal care articles.

IMMUNIZATIONS

The most important way to protect babies from disease is through immunization. BC children receive the following vaccines at no cost:

- DPTP-Hib: Diphtheria, Pertussis (whooping cough), Tetanus, Polio, Haemophilus Influenza Type B (protects against meningitis),
- MMR: Red Measles, Mumps and Rubella (German Measles)
- Hepatitis B (see page 42)
- Conjugate Pneumococcal - protects against meningitis, serious blood infections, and pneumonia.
- Conjugate Meningococcal Group C - protects against meningitis and serious blood infections.

Recommended Vaccine Schedule (2004)			
2 months	DPTP - Hib	Hepatitis B	Conjugate Pneumococcal
4 months	DPTP - Hib	Hepatitis B	Conjugate Pneumococcal
6 months	DPTP - Hib	Hepatitis B	Conjugate Pneumococcal
12 months	MMR	Varicella (Chickenpox) Not Free	Conjugate Meningococcal
18 months	DPTP- Hib	MMR	Conjugate Pneumococcal
4-6 years	DPTP		

Immunization is started when the baby is 2 months of age, unless specified otherwise by the doctor. There are other childhood vaccines available (for example against chickenpox) for a fee. Ask your public health nurse or doctor about these. All shots should be recorded in the baby's Health Passport (ask your public health nurse for one).

INFECTIOUS DISEASES

Babies are at increased risk for infectious disease if their mothers use intravenous drugs, are sex trade workers, or are positive for Hepatitis B, Hepatitis C, or HIV. Mothers who receive prenatal care are tested for Hepatitis B and C. Some mothers are also tested for HIV. Depending on the mother's infection status, the baby may or may not be followed up with future testing.

Hepatitis B

Hepatitis B is a virus that attacks the liver (See chart on page 41 for routine hepatitis B shots). Babies who are born to mothers who have not received prenatal care or who are hepatitis B positive receive Hepatitis B Immunoglobulin and Hepatitis B vaccine at birth. A second and third dose of Hepatitis B vaccine is given at 1 and 6 months. Since a vaccine is available to protect against Hepatitis B, caregivers should consider this immunization for themselves.

Hepatitis C

Hepatitis C is a virus that attacks the liver. At the present time there is no vaccine available for Hepatitis C. If a mother tests positive for Hepatitis C, her baby's blood will be tested after birth. Depending on the type of testing available in your area, you will not know the baby's Hepatitis C status until 3 months at the earliest. If the baby is found to be Hepatitis C positive a vaccine to prevent Hepatitis A is given at 12 months of age.

HIV

Since 1995 there have been no cases of HIV transmitted from mother to baby if the mother received prenatal care that included HIV testing and follow-up. If a pregnant woman is positive for HIV, she can be given special medications (antiretroviral) to reduce the chance of transmitting HIV to her baby. A baby born to a mother with HIV (HIV positive) is given special medications right after birth and is followed closely by the doctor or the HIV clinic. If a mother uses IV drugs or is a sex trade worker and has not been tested for HIV her baby will be started on HIV medications right after birth. The

medication is stopped if the mother or baby is found to be HIV negative.

Remember: Hepatitis B, Hepatitis C, and HIV are spread mainly by blood. Caregivers cannot be infected from a baby who is Hepatitis B or C positive or has HIV through day-to-day contact such as touching, bathing, hugging, and kissing. Standard precautions (see above) should be a routine practice.

DENTAL CARE

Early childhood tooth decay can destroy the teeth of a baby. It is important to begin "mouth care" soon after the baby is born. Formula, cow's milk, fruit juice, and soft drinks all contain sugars that can cause tooth decay. Allowing a baby to have a bottle or "sip cup" during the day for long periods, or a bottle during sleep times (naps and overnight) can cause early childhood tooth decay. This decay starts along the gum line behind the top front teeth and can spread to all the other teeth.

Preventing tooth decay:

- Wipe the baby's gums with a clean washcloth after feedings.
- Clean the baby's teeth twice daily with a smear of fluoride toothpaste.
- Once the teeth start to come in, use plain water in sleep-time bottles. Teach the baby to use hand, fists, fingers, or soothers for non-nutritive sucking.
- Introduce a cup as early as possible. Start the baby on a cup when he is able to sit up in a high chair and use both hands to hold the cup.
- Wean the baby from the bottle once the baby gets enough milk through a cup.
- Use plain water for thirst instead of sweet drinks or juices.
- Keep your own mouth clean with toothpaste and dental floss. Decay causing germs can be passed from one person to another. Babies are not born with the germs that cause cavities. These

germs are passed from the caretaker to baby when adults clean soothers by wetting them in their mouths or test the temperature of a baby's food using the baby's spoon.

- Take the baby for the first dental check-up within 6 months after the first tooth comes out (around 1 year of age). The dentist will advise you of regular follow-ups. If the baby's teeth are at high risk for decay, the dentist may recommend fluoride drops or tablets and/or apply a protective coating on the teeth called fluoride varnish

CARING FOR THE BABY WHO IS ILL

Recognizing when a baby is ill is a key caregiving role. Start by getting to know the baby's health and behaviour "norms". You can do this by noticing and writing down a baby's normal temperature, feeding patterns, skin colour (including any special birth marks), sleeping/waking patterns, and general "personality". Knowing these "norms" will allow you to quickly recognize signs and symptoms of illness. ***You know the baby best. If you just "don't feel right" about something, get it checked out by the baby's doctor.***

Signs of illness include:

- Fever
- Breathing problems
- Diarrhea
- Vomiting
- Thrush (yeast infection in the mouth)
- Feeding problems
- Rashes that will not go away or keep coming back
- Skin breakdown that does not heal with the usual "home" techniques
- Extreme drowsiness, floppiness, low energy, fussiness, and inconsolable crying that is not usual
- Seizures (see Seizures later in this section).

Caregivers should have basic first aid training and should update their infant CPR skills every year.

FEVER

Fever is an important part of the body's immune response to infection and is common in infancy and childhood. Low-grade fevers can occur when a baby is overdressed, is teething, or is being cared for in a room that is too hot. Some babies experience fever after an immunization.

To take a baby's temperature place a thermometer under the baby's armpit (axilla) for 5 minutes. Normal body temperatures (taken under the armpit) range from 36.4C (97.6F) to 37.2C (99F).

Warning signs for fevers that need medical attention include:

- A temperature more than 37.2C for babies under 3 months
- Temperatures more than 38.5C for longer than 24 hours for babies older than 3 months

And some or all of the following symptoms:

- A sudden increase in temperature
- Rapid breathing, or a baby who is working hard to breath
- A baby that is listless, not interested in feeding or interacting, or looks ill
- Difficulty swallowing or drooling a lot (not related to teething)
- The appearance of a new rash
- Wheezing or coughing
- Earache (older babies who have earache will rub or pull at their ear)
- Waking from a deep sleep with loud crying (older baby)
- Vomiting and/or diarrhea
- Sore, stiff neck, headache, or confusion (older baby)
- Seizures.

BREATHING DIFFICULTIES

Babies take about 30 to 60 breaths a minute. You may notice their abdomen (tummy) move up and down as they breathe. Irregular breathing (quick breaths mixed with longer slow breaths) can be normal.

How you can help babies with breathing difficulties

- Get to know the baby's usual breathing pattern.
- Minimize stress for the baby.
- For nasal congestion, try humidifying the baby's room. You could also try saline nose drops 4 - 8 times per day for a stuffy nose. Discuss the use of decongestants and nose drops with the baby's doctor.
- Make sure the baby's room has good ventilation.
- Avoid the use of baby powder. Babies can breathe in the small powder particles.

It is not normal for babies to work hard at breathing. Breathing patterns may change when a baby is ill. You need to seek immediate medical help if you notice the following:

- Baby is struggling to get enough air
- Indrawing or dipping seen under the ribcage (chest area) and/or under the Adam's Apple (neck area)
- Breathing that sounds wheezy, crackly, or grunty
- Baby's lips and nail beds changing to a bluish colour.

DIARRHEA

Babies are said to have diarrhea when there is a significant increase in the number of stools per day and the stools become watery or unformed. Although many different germs can cause diarrhea, the most common cause is a virus. Antibiotics are not usually helpful unless the diarrhea is caused by a bacterial infection.

Diarrhea can be dangerous if not treated properly. When the amount of fluid lost through the stool is greater than the amount of fluid the baby drinks, dehydration may occur.

Babies need special attention when they have diarrhea, as they can quickly become dehydrated

How you can help babies with diarrhea:

- Become familiar with the normal pattern and appearance of the baby's stools so that you will be able to notice if there is a change.
- Call your doctor for advice.
- Follow guidelines for dehydration as outlined on next page.
- Diaper rash is common after diarrhea. Use a diaper cream to protect the baby's skin.

VOMITING

Vomiting ("throwing up") refers to the forceful ejection of stomach contents through the baby's mouth. Vomiting may be a sign of a more serious underlying condition. It is important to consult with the doctor, especially if the baby is starting to look dehydrated, if there is blood or green bile in the stomach contents, or if the vomiting is so forceful that it "shoots across the room" ("projectile vomiting"). The main dangers associated with vomiting are breathing the vomit into the lungs and dehydration from fluid loss.

DEHYDRATION

Dehydration can occur if the amount of water lost through fever, diarrhea or vomiting is more than the formula or fluid the baby is able to take in. It can also occur when babies are not able to take enough fluids needed for their body to work. Dehydration occurs much more quickly in babies than in older children or adults.

Warning signs of dehydration in a baby include:

- Dry skin
- Sunken fontanel (soft spot on the top of the head)
- Dry mucus membranes, for example in the mouth
- Dry, cracked lips
- Not enough wet diapers, diapers not as wet as usual, and urine which is dark yellow
- Lethargy (baby becomes very sleepy)
- Weak cry
- Weight loss.

Preventing dehydration when the baby is ill

For babies less than 3 months old:

- Call your doctor right away.

For babies aged 3 months to 2 years:

- If the baby is breastfed, continue with the breast milk. Breast milk is easily digested and may even slow down the diarrhea.
- If the diarrhea gets worse (larger, more frequent stools), or if the child is vomiting, use children's oral rehydration drink (Pedialyte or store brand).
- Start by giving the oral rehydration drink and then slowly add the baby's usual feeds (formula or breastmilk) within 6 to 24 hours. Keep giving the oral rehydration drink until the diarrhea slows down and then offer the usual diet in small, frequent feedings. Return to the usual amount of feeds within another day.
- Give 120 to 240 ml (4 to 8 ounces) of fluid (rehydration drink or breast milk) for each large loose stool.
- Do not use sports drinks, fruit juice, or soda. These drinks contain too much sugar and not enough of the electrolytes that are being lost.
- Do not use rehydration drinks as the only source of fluid for more than 12 to 24 hours.

- After 24 to 48 hours most children can resume their normal diet. Allow the child to eat what he prefers; the particular food is not important.
- Avoid high fibre foods (such as beans) and foods with a lot of sugar, such as juice and ice cream.

If you think the baby is dehydrated or the diarrhea does not improve within 24 to 48 hours call your doctor.

CONSTIPATION

A baby is constipated when stools are hard, dry and difficult to pass. Infrequent, soft stools in older babies are not signs of constipation.

Constipation in babies 4-6 weeks of age

No bowel movement in 2 days and showing signs of discomfort, such as straining, trying hard to stool with no results, fussiness and gassiness.

Babies from 4-6 weeks until starting solid foods

No bowel movement in 3-5 days and showing signs of discomfort.

Babies who have had hard, dry, difficult to pass, pellet-like stools or rectal bleeding (sometimes seen as blood in diaper with dry, hard stool) on previous occasions are more likely to be constipated.

Some causes of constipation include:

- Baby's formula is not mixed with the right amount of water
- Introducing whole cow's milk before 9-12 months of age
- Baby is not getting enough fluids, especially in hot weather when fluid needs may increase
- Giving infant cereal (pablum) and or solid food before baby is ready (before 4-6 months) or eating too much infant cereal.

What you can do for babies who are constipated

For babies less than 4 months of age:

- Make sure you are following label instructions for mixing the formula.
- Use massage (of the tummy area) and exercise techniques. You can learn this from classes on baby massage.
- Place the baby in a warm bath and gently massage the outside anus area with a facecloth (as you would when cleaning the baby's bottom after a bowel movement) to help relax the muscles in the area.

For babies who have started solid food:

- Switch from rice cereal to barley or oat cereal.
- Limit infant cereal to 4 tablespoons a day.
- If baby has started eating fruits and vegetables (solids), offer pureed prunes. Start with 1 tablespoon a day. Increase to a maximum of 4 tablespoons a day.
- Offer water.

If the baby has hard, pellet-like stools or rectal bleeding talk to your doctor. Do not use medications or suppositories without the doctor's advice.

SKIN BREAKDOWN

"Newborn rash" that can be seen on the face or body is normal and usually goes away after the first month. A newborn's skin might also peel and look dry.

Skin breakdown is most commonly seen on the buttocks; however it may also occur on the knees, feet, elbows, hands, nose, chin, and mouth.

Babies are at risk for skin breakdown when they:

- Frequently rub their arms, legs, knees and elbows on sheets and blankets when irritable
- Are frequently sweaty
- Have loose, explosive stools or diarrhea
- Spit up a lot
- Have Candida (yeast) infections, other bacterial infections or tend to get re-infected with yeast and other bacterial infections (see below)
- Have eczema (see page 53)).

How You Can Help Babies to Maintain Healthy Skin

- A daily bath is helpful, especially for babies who sweat a lot.
- Dry all skin creases and folds well.
- Check diapers frequently and keep skin clean.
- Use unscented diapers, creams, oils, lotions, or powders.
- If using baby wipes, unscented ones are best.
- Switch to using plain water and cloth for cleaning diaper area if you think a rash is starting.
- Use mild laundry soap for clothes & cloth diapers. Rinse well.
- Keep babies' fingernails short.
- Dress baby in soft loose clothes. Some caregivers recommend using 100% cotton clothing for babies with sensitive skin.
- Consider using a zinc based barrier cream if rash is starting and seek medical advice if rash does not improve in 2 days.

CANDIDA (YEAST) INFECTIONS

Candida or yeast (a fungal infection) grows in warm, wet places such as the mouth or the diaper area. Thrush is a yeast infection of the mouth and appears as a whitish coating (patches) on the tongue, inside the cheek and mouth, and on the gums. In severe cases, babies may be too uncomfortable to feed properly.

What you can do for a baby with oral (mouth) thrush

- Thrush is very difficult to treat without medication. See your doctor to confirm the diagnosis and treatment.
- Thrush is usually treated with an antifungal medication (e.g. liquid Nystatin) that is applied directly inside the mouth to the gums, cheeks, and tongue following a feed or as advised by the doctor. Use a Q-tip to apply the liquid medication.
- Boil bottle nipples and soothers for 10 minutes every day.
- A breastfeeding mother needs to see her doctor for treatment as Candida can be passed between mother and baby during feedings.
- Candida may also appear as a bad diaper rash in the groin and/or buttock area, especially in the skin folds and creases. The rash is usually very red with a clearly defined border and small red spots close to the large patches. This rash may be distressing or painful for the baby. Rashes from urine or stool are not usually seen in the creases.

What you can do for the baby with Candida diaper rash

- See your doctor for diagnosis and treatment. An antifungal cream or ointment is used for this type of rash.
- Wash the diaper area with mild soap and water. Rinse and dry well. Do not use baby wipes. Apply antifungal ointment as prescribed.
- Wash hands carefully after every diaper change.
- Expose the baby's buttocks to air occasionally.
- Use a gentle blow dryer (cool setting only).
- Wash the baby's clothes in hot water if possible.
- Keep pressure off raw areas by changing the baby's position regularly.
- See your doctor if the skin is not healing.

ECZEMA

Eczema (atopic dermatitis) is a type of sensitive, dry skin that can also look rough, flaky, red, crusty and/or wet and weepy. The skin or area can get very itchy leading to skin breakdown, bleeding and infection. Eczema is most often seen in the creases of the elbows, wrists and knees. In babies 2 to 6 months old, you may notice eczema on the cheeks. Although the cause of eczema is not known, it is most often seen in babies and children who have a family history of allergic conditions such as asthma, hayfever, food allergies, or eczema. The condition can be triggered or can flare up when the baby is in contact with an allergen or irritant. Examples of allergens include: dust mites, animal dander, pollens, molds, and foods. Irritants include: smoke, soaps and detergents, solvents and cleaners, perfume, wool and synthetic clothing, weather changes, infections, dry skin, and stress. Flare-ups can be kept to a minimum by identifying and reducing triggers, keeping the skin clean and moist, keeping finger nails short to avoid skin damage from scratching, and using a prescribed medicated cream as soon as irritation is noticed.

Skin Care for Children with Eczema

- Daily bathing, for 10 minutes in warm water
- Avoid soaps and bubble baths. If soaps are used try special unscented gentle soaps made for sensitive skin.
- After bathing or washing the baby, gently pat extra water off the skin and apply moisturizer and/or special medicated cream. Moisturizers can be used when skin looks dry or itchy. You can keep applying the non-medicated moisturizers even if the skin looks clear.

SEIZURES

A seizure occurs when there is a temporary, unusually high level of electrical activity in the brain. Signs of a seizure may be subtle or dramatic and include:

- Abnormal eye movement, such as eye lids flickering
- Flickering of tongue or rhythmic mouthing

- "Cycling" of extremities (repeated circling movements)
- Changes in skin colour
- Rhythmic movements of fingers or feet
- No response to your stimulation (for example, seems like baby cannot hear or see you).

If you suspect that the baby is having a seizure:

- Remain calm.
- Protect the baby from injury by placing him on his side in the crib or on another flat surface.
- Stay with the baby to make sure he is safe.
- Observe the baby during the seizure.
- Don't put anything in the baby's mouth.
- Don't try to hold the baby down or stop his body movements.
- Once the seizure is over, document the length of the seizure, the symptoms you observed and the way in which the baby recovered. A doctor should see the baby as soon as possible. If the baby has had previous seizures and there is a care plan in place, follow the guidelines set down in the care plan. Some babies are very tired after a seizure and they may sleep for several hours.

Call 911 if...

- This is the baby's first seizure.
- The seizure lasts longer than five minutes.
- The baby has difficulty breathing or turns blue.
- The seizure reoccurs.

GIVING MEDICATION FOR INFANT ILLNESS

Babies may need to take medicine on an occasional or regular basis.

Here are some tips on giving medications:

- Never mix medicine into the baby's food or bottle.
- Keep medications safely out of reach of children.
- Always read the label on the bottle.
- If you find it difficult to get the baby to be still when you give the medicine, swaddle her or have another person hold her still for you.
- When using a dropper for eye, ear, or nose drops make sure the dropper does not touch the eyelid, ear, or nose. Wash the dropper after use if it touches these areas.
- Give all medications as prescribed (how, how much, when and for how long).
- Have a drink ready to take away the taste of the medicine.
- Record all medications that you give on a worksheet.
- Report any side effects to your doctor and followup with the doctor as instructed.

If you are not sure how to give drops and medications check with your local pharmacist.

CHAPTER EIGHT: BRINGING BABY HOME

Bringing the baby home requires careful preparation. The following information may be helpful.

TAKING CARE OF YOURSELF

Caring for babies can be very stressful and many caregivers forget to look after themselves. To do a better job in the long run, caregivers need to look after themselves both physically and emotionally and have a good support system in place.

To look after yourself, consider the following suggestions:

- Eat nutritious meals and snacks.
- Make time for regular exercise such as walking or gardening and learn relaxation techniques.
- Have a system of support (family, friends, babysitter and neighbours) in place.
- Get regular breaks, even if you feel fine.
- Spend time with your partner and close friends.
- Arrange one-to-one time with your other children.
- Take naps whenever you can.
- Hire a babysitter or relief person (who has had a criminal record check) who is experienced in infant care or is willing to get training from you.
- Keep family members, friends, and babysitters up to date on helpful baby care strategies so they can provide support and relief for you.
- Consider hiring someone or getting a family member to help with the household chores, especially during times when you will be very busy with the baby, e.g. when baby first comes home.
- Don't think that you need to do it all. Ask for help, learn to delegate, or let some things go.

GETTING YOUR HOME PREPARED

Before the baby is discharged from hospital it is important to get your home prepared.

BABY EQUIPMENT AND SUPPLIES

All baby equipment should meet current safety standards. If you are buying used items from second hand stores and/or garage sales keep the baby's safety in mind. Used items such as car seats, cribs, high chairs, and playpens may not be safe. You will need the following equipment and supplies:

- **A camera** – *for great memories!*
- **Crib/baby bassinet:** Some caregivers prefer to keep the baby close by in a bassinet for the first little while. Babies may feel more secure in a bassinet as opposed to a full size crib.
- **Car seat:** Babies are not discharged from hospital without an approved car seat. ICBC is an excellent resource for information on infant car seats. Your local health unit will have information as well.
- **Baby swing:** Some babies enjoy the motion of a baby swing. Look for a baby swing that runs on batteries. Wind up swings can be very noisy and often startle babies. Walkers, Jolly Jumpers, and Exersaucers are not recommended (review Chapter on *Infant Development*, p. 34).
- **Rocking chair:** A must!
- **Baby stroller:** A large hood on the stroller is preferable.
- **Baby monitor**
- **Snuggly:** is great for holding the baby close to your body
- **Boppy** (see Boppy use, p. 38)
- **Other Items:** Formula and bottle/nipple systems, diapers, mild unscented soap, barrier cream, sheets, receiving blankets, facecloths, blankets, and baby clothes.

SETTING UP THE BABY'S PRIMARY SLEEPING AREA

- If possible, the baby's room needs to be away from the busy areas of the house, e.g. the kitchen.

- The room should have curtains or blinds and a light dimmer or night-light to control the lighting.
- Use paints colours and wallpapers that are soothing.
- Decorate with removable pictures so you can adjust the environmental stimulation according to the baby's needs.
- Use mobiles and music boxes as tolerated by the baby.
- Keep cats and other pets away from the baby's sleep area.
- **KEEP YOUR HOME SMOKE FREE!**

BRINGING THE BABY HOME

Before the baby comes home:

- Begin visiting the baby in the hospital as soon as possible. Visiting often and for long periods of time will give you an opportunity to learn the baby's cues and give the baby a chance to get to know you. Ask the hospital staff if you can bring in other family members who will be involved in the care of the baby. By discharge, the baby will know your voice, your smell, and the special way you care for him.
- Determine how and what the baby will be fed at home. As an alternate caregiver or foster parent your help and support will be needed if a mother is breastfeeding her baby (either at mother's breast or through expressed breast milk by bottle).
- If the baby will be formula fed, find out which formula will be used and which bottle systems work best.
- Bring in items from home such as a swaddling blanket or music that the baby can get used to before going home.
- Work closely with the hospital staff to learn effective caregiving strategies that you can use at home. Be sure to get the baby's health and medical information on immunizations given, prescriptions needed and follow-up appointments with specialists.

THE BABY'S FIRST FEW WEEKS AT HOME

Leaving the hospital to come into a home environment can be a big change for babies who may need a longer time to adjust to new things. Babies placed with alternate caregivers or foster parents may be parting from a mother who has been caring for, and perhaps breastfeeding her baby. The baby may also have had frequent visits from other family members and friends.

When the baby comes home he will:

- Need to adjust to a new home and new caregivers
- Experience small changes such as different nipples or soothers, different clothing, different levels of noise and light, different caregiving routines, different smells and even the sounds of a different language.
- Experience a busy schedule including appointments with health care professionals

It may take the baby a week or two to adjust to his new environment. To create a supportive environment for the baby, try the following:

- Spend as much one-on-one time with the baby as possible.
- Get to know the baby's likes and dislikes.
- Delay the use of relief workers or babysitters (other than your partner) until the baby has settled in. Once the baby has had time to adjust to his new home, adjusting to other caregivers will be easier.
- Listen to the baby's cues on how much noise, light, stimulation, and activity he is able to handle.
- Use one or two consistent relief caregivers. It might be a good idea to have the relief caregiver come to your home instead of taking the baby to theirs.

COMMUNITY FOLLOW-UP

There are a variety of services in the community that can be very helpful. These support persons can provide health and developmental monitoring, information, support, and guidance as you care for the baby.

All babies who have been prenatally exposed to substances should receive health and developmental followup from their doctor, pediatrician, public health nurse, and IDP consultant. Other team members for the baby's care may include the social worker, the community nutritionist, the audiologist (hearing screening), the speech and language pathologist, the physiotherapist, and occupational therapist. Birth parents may be eligible for support through lay home visiting programs in their area.



If you are at all concerned about the baby's growth and development seek help as soon as possible. The early childhood years (birth -5 years) serve as the foundation for the child's future health and development.

RESOURCES

WEBSITES

www.aadac.com has a series of information sheets from the Alberta Alcohol and Drug Abuse Commission. Format includes "plain language" version as well as in-depth, detailed information on various substances.

www.adoptioninstitute.org Evan. B. Donaldson Adoption Institute. This site contains information related to adoption of children who have been prenatally exposed to substances.

www.calib.com/nccanch/database/ The Website for the National Center on Child Abuse and Neglect. Check under publications for the user manual series called "Protecting Children in Substance Abusing Families".

www.camh.net Centre for Addiction and Mental Health. Affiliated with the University of Toronto.

www.caringforkids.cps.ca website with infant/child health and care information

www.ccsa.ca is the Canadian Center for Substance Abuse. This site has information related to FAS/pFAS.

www.gov.bc.ca/mcf/ This website is for the BC Ministry of Children and Family Development. The site has documents such as The FAS Community Action Guide and FAS: A Guide to Daily Living (under their publication section).

www.hanen.org The Hanen Center has resources and programs around language development for parents and professionals

www.health.org The National clearinghouse for Alcohol and Drug Information. From this site you can access CANBASE, a Canadian bibliographic database of substance abuse-related materials, and Directory, which lists addictions organizations in Canada.

www.hlth.gov.bc.ca The BC Ministry of Health Services with information called "Health Files" on several communicable disease and many other health issues.

www.icbc.com for information on car seat safety

www.idpofbc.ca is the site for the Infant Development Program of BC.

NFHS-pg.org is a site for the Northern Family Health Society (Prince George) with resources and links related to FASD.

www.medlineplus.gov good for getting updated medical information

www.motherisk.org produced by the Motherisk Program at the Hospital for Sick Children, Toronto. This website has research reviews related to alcohol and substance use during pregnancy. Phone #: 1-877-FAS-INFO

www.nida.nih.gov/ National Institute on Drug Abuse (USA) that has information sheets on substances and extensive list of resources related to prevention and treatment.

www.peele.net Addiction Research Foundation. This site has an extensive collection of literature.

www.safekidscanada.ca This is a great site for all infant/child safety related information.

www.samhsa.gov/ Substance Abuse and Mental Health Service Administration. This site has many links, including to "prevline", which has information and guidelines specifically about perinatal substance misuse.

<http://www.zerotothree.org/brainwonders> is an American based website from the "Zero to Three" Journal that has interesting information on brain development.

COMMUNITY AGENCIES

The Asante Centre for Fetal Alcohol Syndrome
22326 (A) McIntosh Avenue, Maple Ridge, BC, V2X 3C1
Phone: 604 467 7101 Fax: 604 467 7102
<http://www.asantecentre.org/>

Autism Society of BC
301-3701 East Hastings, Burnaby, BC, V5C 2H6
Phone: (604) 434-0880
<http://www.autismbc.ca/>

BC FAS Resource Society
P.O. Box 525, Maple Ridge, BC, V2X 3P2
Phone: 604 467-5591

BC Aboriginal Network on Disability Society
1179 Kosapsum Crescent, Victoria, BC V9A 7K7
Phone: (250) 381-7303 Toll-free: 1-888-813-5512
<http://www.bcands.bc.ca/>

BC Health Guide 24 hour Nurseline
Greater Vancouver: (604) 215-4700
Toll Free: 1-866-215-4700
Deaf/hearing impaired: 1-866-TTY-4700
www.bchealthguide.org

Children's & Women's Health Centre of B.C.
4500 Oak Street, Vancouver, B.C. V6H 3N1
Phone: (604) 875-2000
<http://www.cw.bc.ca/>

Dial-a-Dietitian: 1-800-667-3438 or (604) 732-9191 (Greater Vancouver) Monday through Friday, 8:00 am to 5:00 pm (funded by the B.C. Ministry of Health)
<http://www.dialadietitian.org/>

FAS/E Support Network of B.C.
108 17767 64th Ave.
Surrey BC V3S 1Z2
Phone: 604 576 9911 Fax 604 576 9112
www.fetalalcohol.com

Health Units (for contacting a Public Health Nurse)
Look under Health Authority in the blue pages of the phone book

Infant Development Program
Look under Infant Development Programmes of BC in the white pages of the phone book or the website <http://www.idpofbc.ca/>

Society of Special Needs Adoptive Parents (SNAP)
101 2780 East Broadway
Vancouver, BC V5M 1Y8
Phone: (604) 687-3114 Fax (604) 687-3364
Toll-free: 1-800-663-7627
<http://www.snap.bc.ca/>

Sunny Hill Health Centre for Children
3644 Slocan Street, Vancouver, B.C., V5M 3E8
Phone: (604) 453-8300
<http://www.sunny-hill.bc.ca/>

REFERENCES

Barth, R.P., Pietrzak, J., & Ramler, M. (1993). Families living with drugs and HIV: Intervention and treatment strategies. New York, NY: Guilford Press.

BC Children's Commission (2001). Fetal Alcohol Syndrome: A call for action in B.C.

BC Ministry for Children and Families (1998). Baby's best chance (5th edition). Toronto: Macmillan Canada

BC Ministry of Health Planning (2002). Toddler's first steps: A best chance guide to parenting your six month to three year old. Toronto: Macmillan Canada.

BC Ministry of Health Planning. (2000). Health files information on HIV Testing in Pregnancy, Standard Precaution, Shaken Baby Injuries, Recognizing early signs of hearing loss in infants and toddlers, Sudden Infant Death Syndrome.

BC Reproductive Care Program (BCRCP) (1999). Guidelines for perinatal care of substance using women and their infants. Vancouver.

Canadian Paediatric Society (1996). Well beings: A guide to promote the physical health, safety and emotional well-being of children in child care centres and family day care homes (2nd.ed.). Ottawa, ON.

Capital Health Region, Prevention Services, Child, Youth and Family Health, Asthma, Allergy and Eczema Program (1999). Eczema - Treatments.

Clark, B., Shepperson, D., & Erazo, M. (1996). Caring for drug-exposed babies and toddlers: A handbook for foster parents. Yonkers, NY: Leake & Watts Services.

College of the Rockies, Learning Resource Centre. Babies and Beyond: developmental profile. Cranbrook, B.C.

D'Apollito, K. (1996). Symptoms of withdrawal in drug-exposed babies. Mother Baby Journal, 1(2), 7-14.

Fernandez-Villarreal, McKinney, L.E. & Quackenbush, M. (1992). Handle with care - Helping kids prenatally exposed to drugs and alcohol. Santa Cruz, CA: ETR Associates.

Frank, D.A., Augustyn, M., Grant Knight, W., Pell, T. Zuckerman, B. (2001). Growth, development, and behavior in early childhood following prenatal cocaine exposure. JAMA, 285(12), 1613-1627.

Fraser Askin, D, Diehl-Jones, B. (2001). Cocaine: Effects of in utero exposure on the fetus and neonate. Journal of Perinatal and Neonatal Nursing. 14(4), 83-102.

Fraser Health Authority (2001). How to prevent and manage constipation in infants and children - Parent fact sheet.

George, A. (1993). Guide for parents, teachers, and others caring for children with FAS/FAE and NAS. Vancouver, BC: YWCA Crabtree Corner.

Health Canada (2001). Best Practices: Fetal alcohol syndrome/fetal alcohol effects and the effects of other substance use during pregnancy. Ottawa, Ontario.

Kandall, S.R. (1993). Improving treatment for drug-exposed babies: Treatment improvement protocol #5. U.S. Department of Health and Human Services: Rockville, MD.

Kemper, D.W. (1999), BC Health Guide: The Healthwise Handbook. Healthwise publications: Idaho.

Levy, T.M. & Orlans, M. (1998). Attachment, trauma and healing: Understanding and treating attachment disorder in children and families. Washington DC: CWLA Press.

Lewis, K.D. (1995). Babies and children with prenatal alcohol and drug exposure: A guide to identification and intervention. North Branch, MN: Sunrise River Press.

McCreight, B. (1997). Recognizing and managing children with Fetal alcohol syndrome/Fetal alcohol effects: A guidebook. Washington, DC: CWLA Press.

NICU Guidebook (1999). Johns Hopkins Children's Centre.
<http://www.med.jhu.edu/peds/neonatology/neo/ResidentGuidebook/nas.htm>

Nursing Child Assessment Satellite Training (NCAST). (1990). Keys to caregiving: A parent's guide to learning how babies behave. University of Washington, Seattle, WA

Puttkammer, C.H. (1994). Working with substance-exposed children: Strategies for professionals. Tucson, AR: Therapy Skill Builders.

Stump, J. (1992). Our best hope: Early intervention with prenatally drug-exposed babies and their families. Washington, DC: CWLA Press.

Vancouver/Coastal Health Authority (2000). Healthy beginnings telephone protocols on infant care.

Wong, D.L., Perry, S.E. (1998). Maternal child nursing care. St. Louis, Missouri: Mosby

References

Zuckerman, B., Frank, D.A., Mayes, L. (2002). Cocaine-exposed infants and developmental outcomes: "crack kids" revisited. JAMA, 287(15), pp. 1990-1991.