POST-NATAL HEALTH GUIDE

Nine Months
later...

Agence de la santé
et des services sociaux
de Montréal

RECUPERATING AFTER GIVING BIRTH

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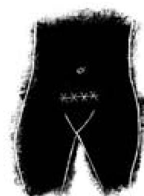

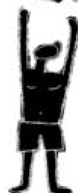

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GRAPHIC DESIGN MARIGRAF, MARIE CHICOINE **ILLUSTRATIONS** ALAIN RENO **TRANSLATION** CYNTHIA KELLY

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INFORMATION FOR MOTHERS

◪ Weight-loss programs are counter-indicated after giving birth. A balanced and varied diet based on *Canada's Food Guide to Healthy Eating* is the best way to stay healthy, recover, heal any damaged tissue and prevent problems associated with anaemia.

◪ Most women, regardless of whether or not they are breast-feeding, lose weight (between 5.5 kg and 7 kg) very quickly within the first month after giving birth. In the months that follow, a reasonable rate of weight loss is between 0.5 kg and 1 kg per week for non-breastfeeding mothers, and 1 kg to 2 kg per month for breastfeeding mothers.

◪ After giving birth, a mother no longer has to take iron supplements. A diet that includes iron-rich foods should be adequate to restore iron reserves. (See the *Main Nutrients table*, page 2.)

◪ In some cases, a doctor will prescribe iron supplements during the post-partum period, if, for example, a mother's haemoglobin count is below 100 g/L, or when her symptoms (i.e., weakness, dizziness, fatigue, paleness of the skin and mucous membranes, shortness of breath, very rapid heart beat upon exertion, headaches and difficulty concentrating) seem to indicate anaemia.

IRON SUPPLEMENTS

- ▷ **Foods such as coffee, tea, milk, bran, egg yolks and the oxalates found in spinach, reduce the absorption of iron. Avoid consuming these foods at the same time that iron supplements are taken.**
- ▷ **Iron supplements are best absorbed on an empty stomach. So taking supplements (1 hour) before a meal along with beverages other than milk, coffee or tea is ideal.**
- ▷ **Skipped doses should be taken as soon as possible but dosages should not be doubled.**
- ▷ **Iron supplements can make stools black and green.**
- ▷ **Since constipation frequently occurs in the presence of iron supplements, a diet including plenty of fibre and liquids is recommended.**
- ▷ **Eating vegetables rich in vitamin C promotes iron absorption. By making the gastric environment more acidic and by allowing the iron to remain soluble, vitamin C makes iron 2 to 3 times easier for the body to break down and absorb.**

◪ The golden rule for a breastfeeding mother is to follow *Canada's Food Guide to Healthy Eating* in meal choices both during and after pregnancy. No dietary changes should be made for 30 days after birth, as a mother's milk supply must be established.

◪ Energy needs for breastfeeding mothers are even greater after giving birth than they were during pregnancy. It is therefore recommended that breastfeeding mothers consume about 500 more kcal per day than women who are not pregnant.

◪ Breastfeeding mothers should go for no longer than 3 hours without eating, to ensure that they have enough energy and resistance. Eat at least 3 nutritious meals and 3 snacks per day.

◪ Make a point of eating foods that are rich in protein and fibre to avoid dips in energy. (See the *Main Nutrients table*, page 2.)

◪ Consume 3 to 4 portions of milk products per day to promote the absorption of calcium needed in early motherhood.

◪ If a mother who has just given birth does not consume milk or milk products it is important that she take a 1000-mg calcium supplement every day. A nutritionist should be consulted, if necessary.

◪ Increasing the amount of liquid (including milk) that a mother drinks has no effect on her milk production. However, it is important that she drink enough to avoid being thirsty.

◪ Concentrated (dark) urine and constipation are two signs (among others) that a mother is not drinking enough fluids after giving birth.

◪ A mother who is a strict vegan vegetarian (no animal-based food products whatsoever) must be sure to get enough vitamin B12 (1.5 mcg per day), calcium (1000 mg per day) and vitamin D (5 mcg or 200 UI per day), every day. Soya milk (1 L per day) enriched with calcium, vitamin D and vitamin B12 as well as dietary supplements may also be options. A consultation with a nutritionist is recommended. (See the *Main Nutrients table*, page 2.)

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◪ Breastfeeding mothers may drink coffee. In general, the quantity of caffeine contained in 750 mL (5 cups) or less of coffee does not cause any problems for mother or baby.

◪ All sources of caffeine in a mother's diet should be identified. Excessive caffeine intake can hamper the letdown (ejection) reflex in some women. Caffeine intake can also make breastfed babies irritable and keep them awake. (See the *Main Nutrients table*, below.)

◪ Mothers may, occasionally, consume alcohol when breast-feeding. Alcohol passes freely through breast milk and reaches its maximum level 30 to 60 minutes after is consumed, or between 60 to 90 minutes after is consumed if it is absorbed while eating. A woman who weighs 55 kg (about 120 lbs) needs 2 to 3 hours to eliminate the alcohol contained in a glass of wine or beer from her body. The greater the quantity of alcohol, the longer it will take to eliminate and the more intense the effect will be on the breastfed baby (e.g., drowsiness; deep, non-restorative sleep; weakness; stunted growth).

◪ Food restrictions often vary from one culture to the next. In general, a mother can eat all the foods she likes, in moderation.

From Tiny Tot to Toddler, 130–132, 295.

MAIN NUTRIENTS

NUTRIENTS	EFFECTS	CHARACTERISTICS	SOURCES
IRON	Helps carry oxygen through the blood. Helps form red blood cells	Cooking affects iron in food. Keep water used for cooking (if applicable).	Red meat, liver Oysters, clams Legumes Enriched breads and cereals Nuts Spinach
VITAMINE C	Facilitates iron absorption. Increases resistance to infection. Keeps teeth and gums healthy. Keeps blood vessel walls in good repair.	Cooking affects vitamin C content. Cook quickly in a little water.	Green or red pepper, tomatoes, tomato juice, watercress, turnip, cabbage family (cabbage, Brussel sprouts, cauliflower, broccoli) Citrus fruit (orange, grapefruit, lemon), cantaloupe, strawberries, enriched juices
PROTEIN	Builds and repairs body tissues. Forms antibodies (to fight infection). Provides energy.	Affected very little by cooking.	Meats, poultry Fish and crustaceans Nuts Grains and cereals Legumes Eggs, milk, milk products
FIBRE	Insoluble fibres increase intestinal transit speed. Soluble fibres stabilize blood sugar and lower blood cholesterol.		Legumes Nuts and grains Fresh fruit and vegetables, dried fruit Bran, whole wheat bread, bran cereal
CALCIUM	Helps form bones and teeth. Promotes coagulation and growth.		Milk products, milk Salmon with bones, sardines Almonds, sesame seeds
VITAMINE B12	Helps build red blood cells and nervous system tissue. Plays a role in intracellular reactions.	Not affected by cooking.	Beef, veal, lamb, offal (liver, beef heart, kidneys) Canned salmon, mackerel, oysters Eggs, milk products
CAFFEINE	Too much caffeine can make babies irritable and wakeful and reduce the letdown (ejection) reflex in breastfeeding mothers.	5 cups or 750 mL of coffee per day are generally well tolerated.	Coffee, tea, chocolate, cola soft drinks, commercial energy drinks Some medication. ●

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INFORMATION FOR PARENTS

REST AND GET PLENTY OF SLEEP

◪ It is perfectly natural to feel tired after giving birth. It will take a few weeks for regular energy levels to return.

◪ After giving birth, mothers should not expect to take care of all the household chores (cleaning, laundry, cooking) once they get back home. Their newborn has to be the top priority for the first few weeks. Regular activities should be resumed little by little.

◪ Sleep can be caught up every day by taking daily naps. When it comes to sleep, we say “Get it while you can!”

◪ Feedings should take place in a comfortable sitting or lying position.

◪ A relative, friend or a well-screened babysitter can be asked to take care of the baby in the daytime while mom recuperates.

◪ Other siblings can be enlisted to help out, keeping in mind that they should be given age- and development-appropriate tasks to perform.

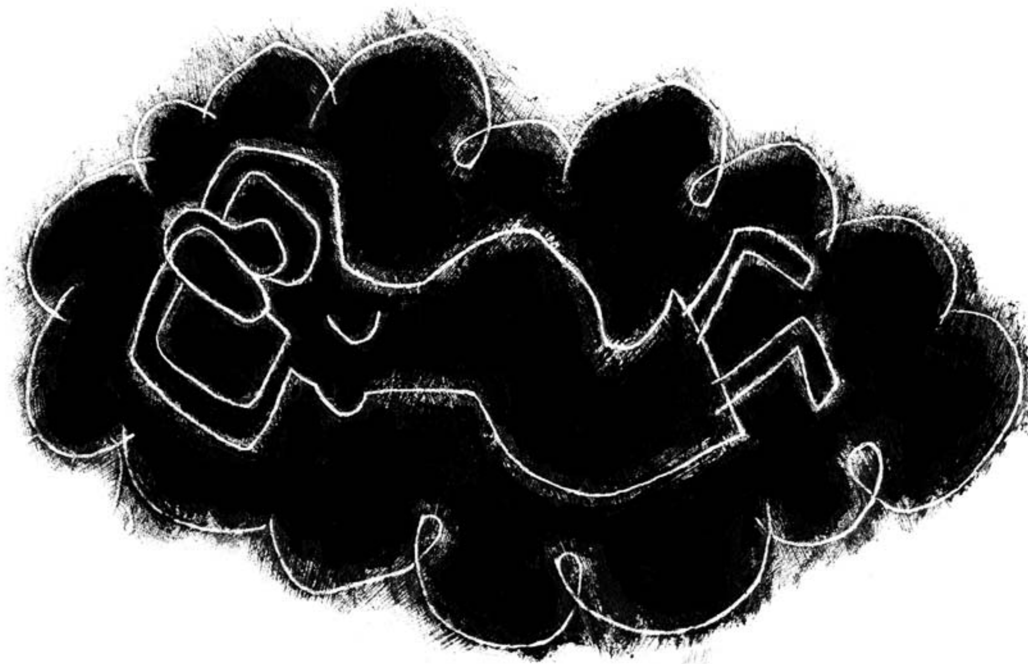
◪ People can give prepared meals to the parents of a newborn as gifts.

◪ Both parents need to make sure they take turns resting.

◪ Baby can be given a bath before the last feeding of the evening so that he or she will sleep longer for the first few evening hours.

◪ Limit the number and duration of visits from well-wishers. Dad can be the gatekeeper, taking on the task of making sure mom takes time to relax and sleep. •

From *Tiny Tot to Toddler,* 121–122.



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INFORMATION FOR MOTHERS

RELIEVING CRAMPS

◪ Urinating frequently and taking care to completely empty the bladder provides greater comfort and helps prevent uterine descendus (falling of the womb) and bladder infections.

◪ Lying stomach-down with a pillow under the lower stomach places pressure on the uterus, keeping it contracted.

◪ Relaxing, taking slow, deep breaths relieves tension.

◪ Applying ice bags wrapped in towels on the abdomen soothes pain.

◪ Prescribed analgesic medicine should be taken as needed.

Acetylsalicylic acid (ASA) must not be taken after giving birth since it can increase bleeding. •

INFORMATION FOR MOTHERS

◪ Lochia (vaginal bleeding or discharge) should have the same odour as regular menstrual flow. An unpleasant odour may indicate that there is an infection.

◪ Bleeding should diminish progressively in the days following childbirth, with vaginal discharge changing in colour from red (days 1 to 3), to pink (days 4 to 14), to white (days 15 to 28).

◪ Abdominal pain, fever and persistent bleeding are symptoms of an endometrial infection.

Seek medical attention if an infection is suspected.

◪ Showers can resume as soon as walking is possible.

◪ Baths can resume (in a clean bath tub) on the second day after giving birth or according to doctor's orders.

◪ Swimming in a pool or lake is allowed when bleeding ceases.

Tampons must not be used during lochia so as to avoid the risk of toxic shock syndrome.

FIRST MENSTRUATION AFTER BIRTH

◪ The first menstrual flow after giving birth may be unusually abundant. Flow should be back to normal after a few menstrual cycles.

◪ Menstruation usually resumes around the 6th week after giving birth or even later both for mothers who breastfeed for under a month and mothers who do not breastfeed.

◪ Menstruation patterns vary widely among long-term breast-feeding mothers, some of whom may not get a period for much longer. Sometimes menstrual periods begin again only after a child has been weaned. •

From Tiny Tot to Toddler, 122–123.

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INFORMATION FOR MOTHERS

PERINEAL CARE

◪ The perineum can be painful after giving birth due to episiotomies, tearing and haemorrhoids.

◪ Thorough hand washing is required before and after caring for this area.

◪ Ice should be applied for 20 minutes every 2 or 3 hours to decrease the oedema (swelling) and discomfort and to provide a numbing effect, especially during the first 24 hours.

◪ Once the oedema has gone down, applying heat activates circulation and promotes healing.

◪ A 20-minute warm or cold sitz bath can be taken, 3 to 4 times a day, as needed or desired.

◪ Lying on the back and lifting the pelvis higher than the heart will reduce pain and oedema. (See *3a* and *3b*, page 9.)

◪ Contracting the muscles of the pelvic floor (as if to retain urine or gas) can reduce oedema and pain, and speed up the healing process of the perineum. These contractions can be practised from a seated or lying position. There should be no concern about pulling out stitches since this type of exercise actually draws stitches together.

◪ For greater comfort while sitting: a pillow can be placed on an easy chair. Buttocks tensed, exhale while sitting down on the pillow. Once seated, completely relax the perineum.

◪ Avoid standing for long periods of time during the first weeks, as standing will strain the stitched area and put downward pressure on the bladder and uterus as the pelvic floor relaxes.

◪ Tightening the pelvic floor muscles (in a "perineal lock") before exertion (e.g., coughing, laughing, sneezing, or picking up baby) reduces the pain felt around the perineum.

◪ After passing a stool, wipe the pubic region from front to back with a gentle tapping motion.

◪ Wash the perineum with warm water and perfume-free soap or with a spray of water and dry thoroughly.

◪ Change menstrual pads after urination or bowel movements, at least every 4 hours.

◪ Avoid handling the pad where it will come into contact with the perineum.

◪ Do not use donut-shaped cushions to sit on as they will decrease blood flow to the perineum.

◪ Apply the recommended topical ointments after a sitz bath as part of perineal care.

WARNING

WATCH FOR SIGNS OF INFECTION

- **Redness**
- **Heat**
- **Purulent discharge (pus)**
- **Incision site splits open**
- **Pain is localized**

Seek medical attention if symptoms persist. •

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INFORMATION FOR MOTHERS

PREVENTING URINARY TRACT INFECTIONS

◪ Wash hands thoroughly before and after urinating.

◪ Pull used menstrual pad out of underwear from front to back.

◪ Change menstrual pads after urinating or having a bowel movement, at least every 4 hours.

◪ Wear cotton underwear and wash in mild soap without bleach or fabric softener.

◪ Keep hydrated by drinking 6 to 8 cups of water a day.

◪ Urinate before and after intercourse.

◪ Drink cranberry juice. The acidity of cranberry juice decreases the pH of the urine and helps prevent bacterial growth.

◪ Some foods (yogurt and acidophilus-based milk) prevent bladder and vaginal infections.

URINARY TRACT IRRITANTS

◪ Some drinks (alcohol, coffee and tea) can irritate the bladder.

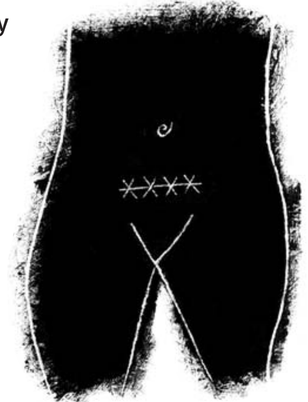
◪ Using bubble bath, deodorant, vaginal douches and perfumed soaps can irritate the urethra.

◪ Wearing tight-fitting clothing increases the temperature and humidity around the perineum and promotes bacterial growth. •

INFORMATION FOR MOTHERS

◪ Caring for the incision site:
- Wash with mild soap and water and thoroughly dry the incision site.
- Skin closure strips (Steri-strips™) can be removed 10 days after a caesarean section (C-section).
- Consult a health care professional regarding any sign of infection (i.e., redness, heat, discharge, fever or pain).

◪ Physical activities:



- Contract the perineum prior to any physical exertion (e.g., before picking up a baby). The “perineal lock” consists in contracting the muscles of the pelvic floor if the physical effort to be made is likely to place pressure on the pelvic floor. (See *Exercises*, page 11.)
- During the first month after a C-section, avoid activities that demand abdominal strength, such as domestic work (e.g., vacuuming or lifting bags of groceries).
- Progressively integrate exercises after giving birth.

◪ Managing pain:
- Taking regular, prescribed doses of analgesics keeps mothers within a “comfort zone” throughout the recovery period after giving birth.

◪ Sex:
- Sexual activities may resume when the bleeding has ceased and the incision site has thoroughly scarred over (around the 4th week after giving birth). Parents are the best judges of when to resume their sex life.

WARNING

WATCH FOR SIGNS OF INFECTION

▶ **Pain** ▶ **Redness** ▶ **Heat**
▶ **Purulent discharge (pus)**
▶ **Induration** ▶ **Fever**
▶ **Generalized discomfort**

Seek medical attention if symptoms persist. •

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INFORMATION FOR MOTHERS

◪ Drink 1.5 L to 2 L of liquid per day.

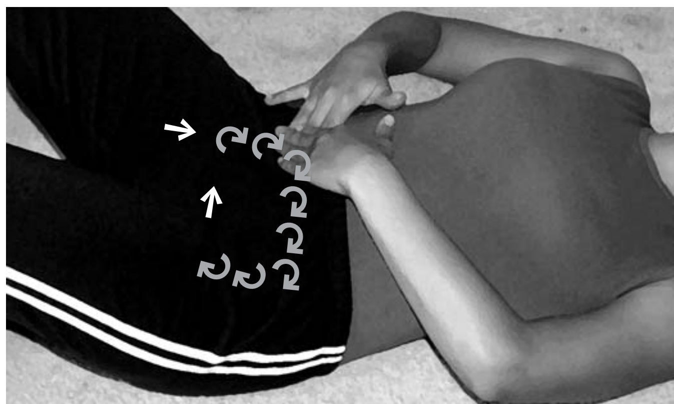
◪ Eat more fibre-rich foods. (See *Food for Mom* section, page 2.)

◪ Engage in light physical activity, such as walking.

◪ Massage the abdomen to stimulate intestinal transit: make circular movements on the abdomen, applying light pressure. Start massaging from the lower right area of the pelvic region towards the upper right area (the ascendant colon), moving across towards the left (across the traverse colon), and then downwards, from the upper left to the lower left pelvic region (the descendant colon). (See *illustration* below.)

◪ Use this position to facilitate the passing of stools:

- Sit with feet apart.
- If possible, prop feet up, 15 cm off the ground (e.g., on a telephone book).
- Bend forward with a straight back.
- Exhale slowly, blowing into a closed fist, held in front of the mouth, while drawing the stomach in.
- Avoid holding the breath so that pressure on the perineum does not become too great.
- Do not continue to push if stools will not pass. Wait until the need for a bowel movement is felt again.
- Support the perineum with a menstrual pad if there is any concern about pain during bowel movements •



INFORMATION FOR MOTHERS

◪ Haemorrhoids caused by the pressure of giving birth often heal by themselves, within 2 weeks.

◪ Haemorrhoids are aggravated by constipation, so any treatment for constipation is useful. (See *Constipation*, left.)

◪ Avoid excessive efforts during the passing of stools.

◪ Avoid standing up for prolonged periods of time.

◪ Exercising the muscles of the pelvic floor promotes circulation. (See *Exercises*, pages 9–10.)

RELIEVING HAEMORRHOIDS

◪ While applying haemorrhoid cream, slide haemorrhoids inwards, pushing gently towards the other side of the anus.

◪ Sitz baths may be taken as needed (3 or more times a day) for 10 to 20 minutes. Some women prefer hot water (38°C to 40°C); others, cold water. Heat stimulates the irrigation of tissues, whereas cold water has a numbing effect and reduces oedema (swelling) in the hours following childbirth.

◪ Apply an ice pack wrapped in a face cloth to the haemorrhoids.

◪ Apply an anti-inflammatory and topical anesthetising cream or ointment. •

From *Tiny Tot to Toddler*, 133.

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INFORMATION FOR MOTHERS

During the first weeks after giving birth, it is perfectly natural to tire more quickly and, at times, quite suddenly. Mothers must listen to their bodies after giving birth and pace themselves during physical activities (such as walks).

POST-NATAL EXERCISES

V Vaginal birth
C Caesarean section (C-section)

	DAY OF BIRTHING	FIRST DAY AFTER BIRTH	FISRT WEEK AFTER BIRTH	SECOND WEEK AFTER BIRTH
BREATHING EXERCISES	V C	V C		
CIRCULATION EXERCISES	V	V C		
PERINEAL CARE		V	V	V
PERINEUM EXERCISES				V C
ABDOMINAL STRENGTH EXERCISES		V C	V C	V C
DIASTASIS CORRECTION*				
BACK STRENGTH AND FLEXIBILITY EXERCISE		V C	V C	V C
POST-CAESAREAN EXERCISE	When the mother is ready, after giving birth.			

* This exercise should only be done starting in the 6th week following childbirth. A demonstration of this exercise may, however, be given by a nurse during a mother's hospital stay.

1. BREATHING EXERCISES

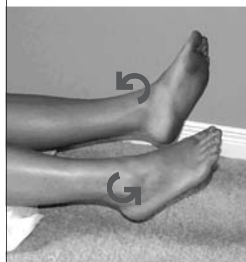
GOAL
• To promote oxygenation and relaxation.

WHEN?
• The day of birthing and thereafter, as required.

HOW?
• From a lying or sitting position.
• Exhale through the mouth by drawing the umbilical area inwards (without forcing the breath), so that the stomach muscles are felt to contract and the lungs push all air out.

TIPS
• Place the knees over the hips or even at the same level.
• A footstool can be useful.
• Ensure that the back is sufficiently supported.

HOW OFTEN?
• Repeat the exercise 10 times every 2 or 3 hours.

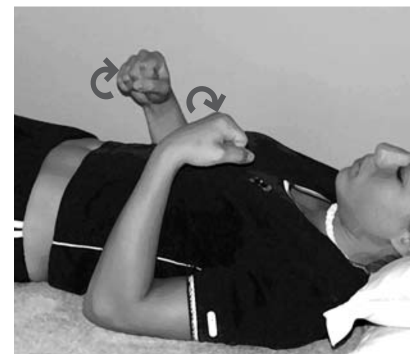


2. CIRCULATION EXERCISES

GOAL
• To activate blood circulation and promote oedema (swelling) resorption.

WHEN?
• The day of birthing and thereafter, as needed.

HOW?
• Raise the legs above the level of the heart (by lifting the foot of the bed or by adding pillows under the knees and calfs).
• Rotate the ankles while moving the toes.



NOTE
• The same exercise may be done with the wrists when there is wrist oedema (swelling).

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VARIATION ON THE EXERCISE
• Raise the wrists above heart level.
• Rotate the wrists, opening and closing the hands.

FREQUENCY
• For 2 minutes, every 2 to 3 hours. (See *illustration*, page 8.)

3a. PERINEAL CARE

APPLYING ICE AND ELEVATING THE PELVIS

GOAL
• To reduce pain and oedema (swelling).

WHEN?
• Day of birth and one day after birth.

HOW?
• Place ice cubes in a plastic bag and wrap in a damp face cloth.
• Apply to the affected perineal area (i.e., on the episiotomy, tear line or haemorrhoids).
• While the ice is being applied, raise the foot of the bed or use a pillow to raise the pelvis higher than the heart to allow for the oedema (swelling) to resorb more quickly.

HOW OFTEN?
• Ice the affected perineal area for 20 minutes every 2 to 3 hours.

3b. PERINEUM EXERCISES

THE PELVIC FLOOR
The pelvic floor consists in 3 layers of support muscles underneath the pelvis, stretching from the pubis to the coccyx.

"WAVE" EXERCISE (Contracting the pelvic floor muscles)

GOAL
• To strengthen the pelvic floor muscles for greater control of urination, gas, bowel movements and support of pelvic organs (bladder, uterus).
• To promote greater sexual satisfaction between a woman and her partner after giving birth.

WHEN?
• Two weeks after giving birth or when the perineum is at its most painful.

HOW?
• Start by lying on the back, knees bent.
• After a few weeks of practice, the exercise can be performed from a seated position.
• Exhaling through the mouth while drawing the navel inwards, contracting the muscles of the pelvic floor, from the anus to the vagina, for 5 to 10 seconds.
• Relax the entire perineum as well as the stomach.
• Double the relaxation time between each contraction.
• Do 3 sets of 10 repetitions.

TIPS
• Sometimes pelvic floor muscle exercises are performed incorrectly. Instead of contracting these muscles (drawing them in together), the pelvic floor is pushed down and out
• Ensure that the technique of the exercise has been mastered before repeating it several times, as pushing on the pelvic floor could actually weaken it.
• Insert a finger inside of the vagina to check whether the exercise is being done correctly.
• If the finger is squeezed by the pelvic floor muscles or aspirated inwards, then the floor contraction is effective.
• If the finger is pushed outward, then the pelvic floor is being pushed rather than contracted (pulled together).

HOW OFTEN?
Once or twice a day.

4. ABDOMINAL STRENGTH EXERCISES

THE TRAVERSE (Deep muscles)
Drawing the navel in, lying on the back.

GOAL
• To strengthen the spine and thereby reduce lower back pain.

WHEN?
• The first day after giving birth, for up to 4 weeks.

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HOW?
• Lie on the back, knees bent.
• Exhaling through the mouth, draw the navel inwards, towards the spine so that the stomach is contracted.
• Feel how hard muscles become by placing a hand on the lower stomach, near the hips.
• Do 3 sets of 10 movements, pushing the navel inwards, resting for one minute between each set.

• The same exercise may be repeated from an all-fours position, making sure that the back is straight (not curved or hollowed out) during the exercise.

TIPS
• The pelvic floor muscles must remain contracted during the abdominal muscle exercise in order to avoid increasing abdominal pressure on the viscera (internal organs of the body), as this pressure could actually weaken the pelvic floor.
• Abdominal muscles must be built up, starting with deep muscle tissue, working towards intermediary muscles and then finishing with the superficial muscles (the rectus abdominis muscle).

HOW OFTEN?
• Once a day, 5 times a week.

NOTE
• Since exercises for the intermediary and superficial abdominal muscles are respectively performed at 2 and 6 weeks after giving birth, they will not be discussed in this document.

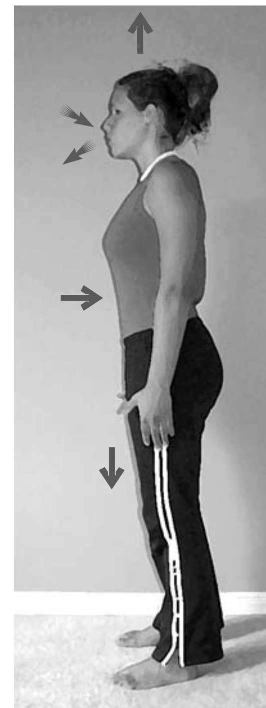
5. DEEP AND INTERMEDIARY MUSCLE STRENGTH

PELVIC TILT AND TRUNK STRETCH

GOAL
• To bring the rectus abdominis muscles together by contracting the deep and intermediate muscles.

WHEN?
• The first day or the first week after giving birth.

HOW?
• Lying on the back, knees bent, back flat.
• Contract the muscles of the pelvic floor.
• Stretch out the body, imagining that on top of the head there is a thread pulling upwards, while from the bottom of the buttocks, another is pulling the downward.



TIPS
• Increase the level of difficulty by doing the same exercise from a standing position.

HOW OFTEN?
• Once a day, 5 times a week.

6. ASSESSING DIASTASIS

Diastasis is an opening in the rectus abdominis muscle that frequently appears during pregnancy. Some 30% of pregnant women have this condition.

GOAL
• To adapt the progression of abdominal exercises to the muscular strength of the rectus abdominis muscle.

WHEN?
• This exercise must only be performed in the 6th week after giving birth.
• A demonstration of this exercise may, however, be given by a nurse during a mother's hospital stay.

HOW?
• Lie on the back, knees bent.
• Place fingers between the rectus abdominis muscles, just above the navel.

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• Contract the pelvic floor.
• Raise the head up until the shoulder blades are no longer touching the floor.

TIPS
• If more than 3 fingers can be placed perpendicular to the rectus abdominis muscle, continue to do toning exercises for the deep and intermediary muscles.
• Doing sit-ups too soon after giving birth can actually keep abdominal muscles weak.
• If there is no diastasis in the rectus abdominis muscles, strengthening exercises for this region (sit-ups) may be done, but only in the 6th week after giving birth.

7. BACK STRENGTH AND FLEXIBILITY EXERCISE

GOAL
• To regain muscle strength and flexibility in the back.

WHEN?
• The first day after giving birth and as required thereafter.

HOW?
• Lying on the back, knees bent and feet resting on the ground.
• Bring one knee towards the abdomen with both hands.
• Return to initial position.
• Repeat the same movement with the other leg.
• If these movements can be done comfortably, continue by bringing both knees to the stomach.

TIPS
• Keep back perfectly flat during this exercise.

HOW OFTEN?
• Once to twice a day, as needed.

8. GETTING BACK INTO SPORTS

WALKING, SWIMMING AND JUMPING SPORTS

GOAL
• To tone the back, abdomen and leg muscles.
• Develop endurance and coordination.

WHEN?
• Walking: 2 to 3 weeks after giving birth.
• Swimming: 1 month after giving birth.
• Jumping sports: 3 to 4 months after giving birth.

HOW?
• Walking: Gradually increase distance and pace.
• Swimming: Crawl and side strokes are recommended. The butterfly and back strokes tend to contribute to curvature of the spine and can cause lumbar pain.

TIPS
• Strengthen the abdominal and pelvic floor muscles before any major physical exertion or sports activity. Progressively return to sports activities to avoid injury.

9. C-SECTION EXERCISE

ABDOMINAL BREATHING EXERCISE, BENDING AT THE WAIST

GOAL
• To stimulate intestinal movement.
• To prevent bloating and constipation.

WHEN?
• When a mother is able to get up and walk around the room after giving birth.

HOW?
• Bend over, with arms and head resting on a table or bench.
• Spread legs apart slightly.
• While exhaling through the mouth, draw the navel inwards.
• Release the muscles while inhaling.

HOW OFTEN?
• One set of 10, every 3 hours. •

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INFORMATION FOR PARENTS

SEXUAL ACTIVITIES

WHEN?

- Once bleeding has stopped entirely.
- After the episiotomy has healed (to avoid infection).
- Between the 2nd and 4th week after birth.
- Parents are the best judges of when to resume their sex life.

TIPS

- In some cases, the vagina may not lubricate adequately for the first 6 months. A lubrifying jelly can help.
- It may be that physiological reactions to sexual stimulation and the strength of orgasm are diminished in the first 3 months after giving birth. Longer foreplay may be helpful. Exercising the pelvic floor muscles will also increase sexual satisfaction. (See *Exercises*, on page 9.)
- After giving birth, a woman may experience greater sensitivity during penetration. Positions in which the woman has control over the depth of penetration should be considered (e.g., lying on the side, woman on top).
- The sound of a crying baby during sexual relations may be a source of distraction and frustration. Clear communication, mutual understanding and patience should help in coping with these kinds of situations.
- On average, a mother who is not breast-feeding ovulates around the 45th day after giving birth. However about 2% of non-breastfeeding women are fertile immediately after giving birth. An effective contraceptive method from the time of birth to the first checkup with the doctor at 6 weeks is recommended, given the risk of ovulating during this period.

NON-HORMONAL CONTRACEPTIVE METHODS

CONDOM

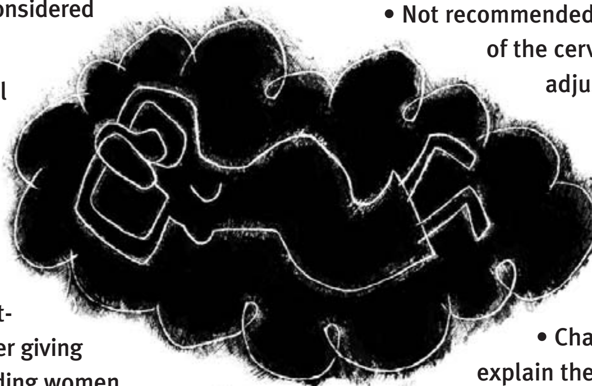
- 88% success rate.
- Spermicide (used at the same time as a condom) is recommended to increase contraceptive efficiency to 98%.
- Use water-based lubrifying jelly.
- Compatible with breastfeeding.

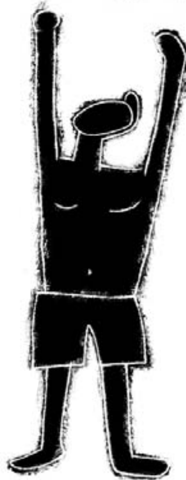
DIAPHRAGM (barrier)

- 92% to 96% success rate with satisfactory usage.
- Spermicide must be applied for each new sexual encounter.
- Wait 6 to 8 weeks after birth before using a diaphragm, given the changes in the vagina. Verify during the postnatal period and readjust as needed.
- Use water-based lubricant only.
- Compatible with breastfeeding.

CERVICAL CAP (barrier)

- 73% success rate among women who have given birth vs. 87% among women who have not given birth.
- Changes in the shape of the cervix may explain this drop in efficiency.
- Spermicide must be applied for each new sexual encounter.
- Wait 6 to 8 weeks after giving birth to use a cervical cap, given the changes to the cervix after birthing.
- Verify fit during the postnatal period and adjust as needed.
- Not recommended during breastfeeding as the texture of the cervix is like molasses, making proper adjustment difficult.





VAGINAL SPONGE (barrier and spermicide in one product)

- 74% success rate among women who have given birth vs. 79% among women who have not given birth.
- Changes in the shape of the vagina may explain the decrease in efficiency among women who have previously given birth.
- Using the sponge in conjunction with a condom increases the success rate to 98%.
- Use water-based lubricants only.
- Compatible with breastfeeding.

IUD (Intra-Uterine Device)

- 98% success rate.
- Higher risk of expulsion if inserted soon after birth.
- Wait until after the 4th week to insert.
- IUDs are compatible with breastfeeding.
- Risk of expulsion does not increase with breastfeeding.
- No effect on the quality of breast milk.

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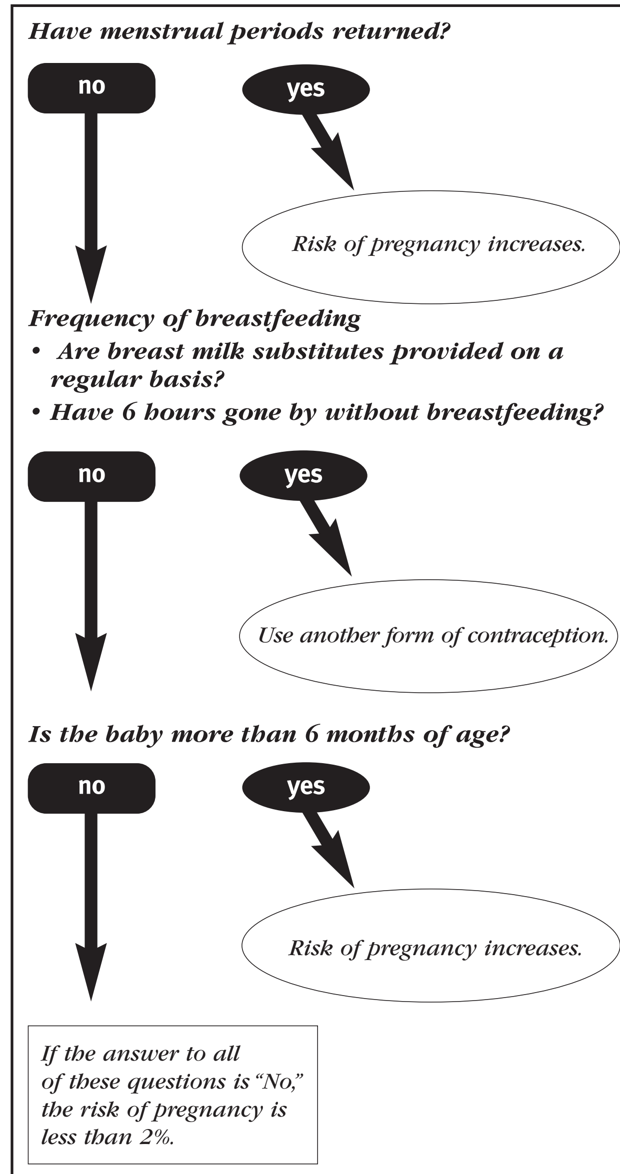
◪ LAM
(Lactational Amenorrhea Method)

Since breastfeeding generally delays ovulation, it can help protect against pregnancy. Success rates can be as high as 98% if specific LAM instructions are followed.

LAM is based on **3 fundamental conditions**:

- There is no menstruation or blood discharge after the 56th day following childbirth.
- Breastfeeding is exclusive: one child under 6 months of age, upon demand, day and night (the child consumes no other milk or food).
- The baby does not sleep more than 6 consecutive hours per night.

If one of these 3 conditions is not met, a more reliable contraceptive method must be used. (See *illustration*.)



HORMONAL CONTRACEPTIVES

◪ ORAL ESTROGEN AND PROGESTERONE-BASED CONTRACEPTIVES

- 97% success rate.
- Should only be started 3 weeks after childbirth since there is a risk of thromboembolism (blood clots) associated with estrogen.

Not recommended for breastfeeding women. Estrogen can reduce the volume of breast milk as well as the quantity of protein and lactose in breast milk.

◪ ORAL CONTRACEPTIVES BASED ON PROGESTERONE ONLY

- 90% to 99% success rate.
- When doses are taken at the same time of day, every day, contraceptive protection is comparable to estrogen-based contraceptives.
- The World Health Organization reports that progesterne-based oral contraceptives have no side effects on breast milk supply when they are started in the 6th week after childbirth.
- The quantity of hormones transferred to breastfed babies is minimal and has no known effect on babies.

◪ INJECTABLE PROGESTERONE-BASED CONTRACEPTIVE
(Depo-Provera)

- 97% success rate.
- The injection must be repeated 10 to 13 weeks later.
- Women who are not breastfeeding can receive this injection immediately after giving birth.
- Women who breast feed must wait at least 3 days after giving birth to receive an injection since the drop in progesterone after childbirth is key in initiating milk production.
- Progesterone-only pills have no effect on the quality or quantity of breast milk when breastfeeding commences 6 weeks after child birth.

Clinical reports suggest that for some women, using Depo-Provera before the 6th week can bring about a decrease in milk supply. See patient information on manufacturer's Web site for further restrictions and warnings.

◪ THE "MORNING AFTER" PILL (EMERGENCY CONTRACEPTIVE)

- 75% success rate, provided it is taken within 72 hours of sexual relations.

High-dose estroprogestative contraceptives can decrease milk supply in breastfeeding mothers.•

From *Tiny Tot to Toddler*, 126–129.

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INFORMATION FOR PARENTS

◪ It is perfectly natural for older brothers and sisters to change their behaviour (be it positive or regressive) after a new baby is born.

◪ Older siblings need to be reassured that their parents will continue to give them their unconditional love.

◪ Their adaptation to the arrival of the newborn baby will take time.

◪ Provided that siblings are not carrying any infectious illness, direct contact with a healthy newborn baby is perfectly fine. Washing hands before handling the baby is the most efficient way to protect against infection.

◪ Strategies to promote acceptance with siblings:

- Try to maintain stability in the lifestyles of the other children.
- Make sure that older siblings are among the first visitors to see a new baby.
- Take older siblings on a tour of the maternity ward or birthing centre to point out the similarities between their birth and that of their younger sibling.
- On first contact, do not force interaction between older siblings and a newborn. Older siblings are often more interested in seeing their mother and being reassured that she still loves them.
- Have little gifts to give the older siblings.
- Upon returning home, parents should hand over the newborn to a trustworthy person to make sure that their hands are free to hold and touch their other children.
- Compliment older siblings on mature behaviour so that they feel good about being older.
- While one parent is caring for the newborn, the other parent can devote some attention to older siblings. Children thrive on attention given by both parents.
- Give photos of the newborn to the older siblings of preschool age or school age so that they can show their friends their new sibling.
- Allow older siblings to participate in skill- and age-appropriate tasks in caring for the baby. •

From *Tiny Tot to Toddler*, 138.

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INFORMATION FOR PARENTS

STRATEGIES TO EASE THE BLUES

◪ Remember that the “baby blues” are perfectly natural.

◪ Sleep at every reasonable opportunity. Take advantage of times when the baby is sleeping to relax.

◪ Use relaxation techniques.

◪ Both partners must share their feelings and expectations.

◪ Take time to discover and adapt to the baby’s needs.

◪ Set aside some time for self care: Take a bath, read, or one partner can take a walk while the other partner or a well-screened, trustworthy sitter takes care of the baby.

◪ Use community resources.

◪ Feel free to share concerns or worries with a nurse or another trusted healthcare professional.

THE DIFFERENCE BETWEEN THE BLUES AND POST-PARTUM DEPRESSION

SYMPTOMS OF POST-PARTUM DEPRESSION

◪ Insomnia and inability to fall asleep after caring for the baby, despite extreme fatigue

◪ Change of appetite, eating disorders

◪ Increase in the intensity and duration of the blues

◪ Increase in the discomfort associated with being a mother

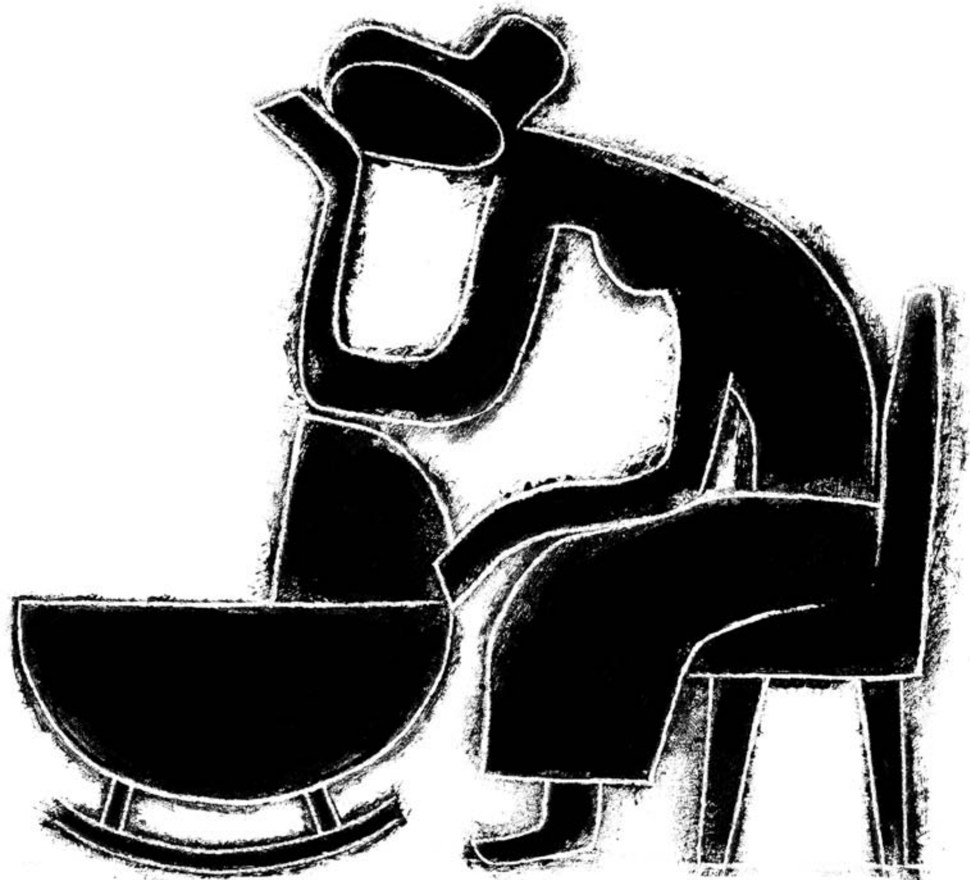
◪ Constant fear for child

◪ Suicidal thoughts

◪ Difficulty overcoming tiredness

◪ Social withdrawal and isolation

◪ Negative perceptions of the baby (seeing the baby as demanding or cumbersome). •



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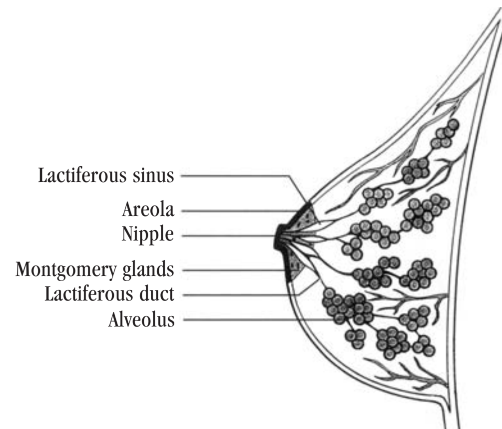
INFORMATION FOR PARENTS

Anatomy of the breast

PARTS OF THE BREAST	CHARACTERISTICS
GLANDULAR TISSUE	• Produces and carries milk.
CONNECTIVE TISSUE	• Supports the breast.
BLOOD	• The breast is intensively vascularized (has many blood vessels). • Provides nutrients to breast milk. • Nourishes breast tissues.
LYMPH	• Essential liquid in defending the body against illness. • Most lymphatic vessels are connected to the axillary lymph nodes (under the arms).
NERVES	• The innervation of the breast begins around the 4th, 5th and 6th intercostal nerves. • The areola is the most sensitive part of the breast in a breastfeeding woman.

PARTS OF THE MAMMARY GLAND

ALVEOLUS	• Basic component of the mammary gland, resembling clusters of grapes (alveoli). • Secretes milk. • Is surrounded by myoepithelial cells that help milk ejection, caused by the action of ocytocin.
DUCT	• Branch or small tube that allows for the collection of milk from the alveoli.
LACTIFEROUS DUCT	• A larger duct that allows milk to be carried to the lactiferous sinus.
LACTIFEROUS SINUS	• An enlarged area of the lactiferous duct (situated under the areola and the nipple) that allows the milk supply to pool. • When a baby successfully latches on to the areola with his or her tongue and lips and nurses, the lactiferous sinuses are compressed and the mother's milk is released.
LOBULES	• The actual source of breast milk. • A major branch of the alveoli. • Breasts generally have the same number of lobules, grouped into 15 to 25 lobes per breast.
NIPPLE	• The narrowing of the lactiferous sinuses forms an opening in the nipple — a nipple pore. • There are 15 to 20 nipple pores per nipple.



AREOLA	• The darkest part of the breast; pigmentation and diameter increase during pregnancy. • Can provide a target area for a baby to find the centre of the breast.
MONTGOMERY GLANDS	• Situated near the areola. • Swell during pregnancy. • Lubrify the areola. • Change the pH of the skin and prevent the proliferation of bacteria on the nipple and areola. • There are 4 to 28 Montgomery glands per breast.

VARIATIONS

BREAST ASYMMETRY	• Frequent • The left breast is often larger than the right.
COLOUR OF THE AREOLA AND NIPPLE	• Pink in blond women • Brown in brunette women • Black in dark-skinned women
SUPERNUMERARY NIPPLE	• May develop along the milk ridge. • The milk ridge runs in a curved line from the armpit through the normal breast to the lower abdomen. • Most often develops near the armpit and on the thorax. • Can grow and may become sensitive when lactation begins. • Resorb (go away) over time.
FLAT AND INVAGINATED NIPPLES	• The projection of the nipples improves during pregnancy and continues to improve with each subsequent pregnancy and breastfeeding period. • Since the baby learns to breastfeed on the areola, the shape of the nipple is secondary. In some circumstances, a mother with invaginated nipples may need specific support.

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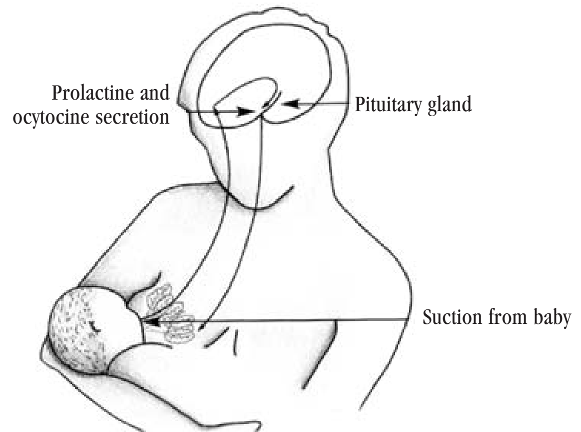
Physiology of the breast

HORMONES	CHARACTERISTICS
ESTROGEN	• Increases during pregnancy. • Fosters the growth of ducts.
PROGESTERONE	• Fosters the development of alveoli and lobes.
PROLACTIN	• Present in small quantities during pregnancy and increases the volume of the breast.
The role of prolactin	• Essential to the production of breast milk. • Induces a feeling of well-being and calm during breastfeeding. • Delays the return to regular ovulation.
Physiology	• High progesterone and estrogen levels during pregnancy inhibit the release of prolactin in large quantities. • With the separation of the placenta, there is a sudden fall in progesterone and estrogen levels, which leads to a substantial release of prolactin. • The baby's suction pressure stimulates the nerves under the areola; a signal is sent to the hypothalamus. • The hypothalamus stimulates the release of prolactin, which is produced by the anterior pituitary gland.
In a mother who does not breastfeed	• The level of prolactin decreases over time to the same level as before pregnancy.
OCYTOCIN	• Is released by the posterior pituitary gland in response to a baby's suction.
The role of ocytocin	• Essential to breast milk ejection. • Builds up in the blood after 1 minute of stimulation, remains elevated throughout stimulation, then returns to the baseline level about 6 minutes after the stimulation ceases. • The increase in the level of ocytocin induces the let-down (ejection) reflex. • The ejection reflex is a contraction of the muscular cells around the alveoli (the small mammary gland sacs that collect and secrete milk). This muscular contraction ejects milk out to the nipple openings. • Causes the uterus to contract, and, in turn, helps control haemorrhages and facilitates uterine involution. These contractions can last up to 20 minutes after a feeding.



LET-DOWN (EJECTION) REFLEX **Signs as perceived by mother**	• Breasts: Tingling, heat, flow of milk with or without ejection, swelling of the alveoli (small bumps that appear suddenly around the breast). Uterine cramps, intense thirst, and feeling relaxed.
Signs observed in a feeding baby	• Change in the pace of suction and swallowing. • Suction movements slow, the baby swallows regularly and breathes after one or two suction movements. • Some milk appears at the corner of the baby's mouth.
CHARACTERISTICS OF THE EJECTION REFLEX	• More than one ejection reflex can occur during the same breastfeeding. • Some women feel the ejection reflex while it is happening and some do not. • A breastfeeding woman cannot simply will the ejection reflex to occur. However, it may be associated with a mother's emotional state. Indeed, rest and relaxation are conducive to producing the ejection reflex. • The ejection reflex can happen as soon as the mother puts baby to breast or after one or several minutes of nursing. It can also happen when the mother is thinking about her baby.
FACTORS THAT INHIBIT THE EJECTION REFLEX	• Fatigue, stress, pain, lack of confidence in the ability to breastfeed, some medications (e.g., oral estrogen-based contraceptives), nicotine and alcohol use may inhibit the ejection reflex. •

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INFORMATION FOR PARENTS

CHANGES IN BREAST MILK	CHARACTERISTICS
COLOSTRUM	• First milk. • Is released in the first 3 days and decreases gradually thereafter, replaced by the transitional milk and mature milk. • Thick. • Yellowish in colour, due to the presence of beta-carotene. • Rich in minerals and proteins such as immunoglobins. • Fat and carbohydrate content lower than mature milk. • Average volume in 24 hours: about 30 mL. Depends on the number of feedings: may vary from 7 mL to 123 mL. • Volume per feeding varies from 7 mL to 14 mL. • Mothers who have previously given birth and breastfed have a greater starting volume of colostrum, and increase their supply more quickly.
Propreties	• Easy to digest. • Facilitates intestinal transit and the elimination of meconium, thus decreasing the risk of jaundice. • Fosters the growth of intestinal flora. • Protects baby against infections (with its high concentrations of immunoglobins).
TRANSITIONAL MILK	• Milk produced between the colostrum and mature milk. • Its content changes gradually over time. • Appears around the 3rd or 4th day. • The volume of the milk produced around the 5th day is about 500 mL in 24 hours.
MATURE MILK	• Appears in greatest abundance between the 8th and 15th day. • Bluish or whitish in colour. • Increased concentrations of lactose and lipids. • Decreased concentrations of protein. • Decreased concentrations of immunoglobins. However, the total quantity of immunoglobins remains relatively constant throughout lactation, since the volume of milk increases with the growth of the baby. • Contains about 10% solid matter to provide energy and maintain growth. The rest is water. This high proportion of water meets a baby's considerable need for hydration. Similar concentrations are found in almost all mammals, with the exception of some arctic species (seals and whales). • The composition of the milk changes during breastfeeding: foremilk (the milk released at the beginning of feeding) is relatively watery to quench a baby's thirst, while hindmilk (the milk released near the end of the feeding) has more calorie-rich fatty content to satisfy a baby's hunger.
Properties	• A complete food, ideally suited to the growth and development of a baby's brain. • Easy to digest. • Optimal absorption. • Unique immune qualities (decreases the risk of gastroenteritis, necrotizing enterocolitis, respiratory infections and ear infections). ●

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INFORMATION FOR PARENTS

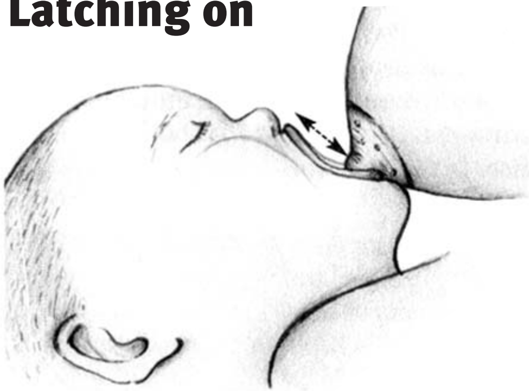
First breastfeeding

In the first hour after birth, a baby is often alert and capable of vigorous suction.

HOW TO ENCOURAGE A BABY TO BREASTFEED

After giving birth, mother and baby should be placed in skin-to-skin contact, allowing baby to explore and lick the breast. The rooting reflex (seeking out the breast for feeding) should be encouraged by grazing the baby's lips with the nipple. Express a few drops of colostrum to entice the baby to lick and suck. (See *Expressing milk by hand*, page 22.)

Latching on



Latching on is the expression used for a baby who successfully takes the nipple and areola into his or her mouth to begin to nurse.

HOW TO GET A BABY TO LATCH ON PROPERLY

Position: The baby is brought to the mother's stomach so that his or her ear, shoulder and hip are in a straight line.

◪ Wait until the baby's mouth is wide open.

◪ Bring baby to breast, chin first.

◪ Ensure that the baby does not latch on to the nipple alone, but takes in a large part of the areola. The lower lip must cover more of the areola than the upper lip.

◪ Check to see that the baby's lips are turned out, and that the chin is resting on the breast.

◪ Suction should be strong but not painful. The baby should nurse, take a short pause, begin again, and then swallow.

◪ Latch on again if the baby's pauses get to be too long (more than a few seconds), if the baby does not nurse, if the mother feels ongoing breast pain, or if the baby cries or releases the breast.

◪ A baby may not want to breastfeed immediately after being born. Skin-to-skin contact helps with latching on.

◪ There is little chance of succeeding in latching on if a baby is crying or yawning. For while the baby's mouth may be wide open, there is no suction reflex in either instance.

◪ Studies have shown that newborns who have skin-to-skin contact within 90 minutes of birth cry less than those who do not.

After giving birth

ROOMING IN

Parents who share their hospital/birthing centre room with a new baby can

- respond quickly to their baby's cues (e.g., regarding hunger) and meet his or her needs more quickly. (See *Hunger Cues,* below.)
- observe their newborn's behaviour and practise caring for him or her, thereby gaining confidence in their abilities before they go home.

BABY'S BEHAVIOUR BEFORE FEEDING

- After becoming fully conscious after they are born, most babies fall asleep and seem to recuperate. Some show little interest in breastfeeding, whereas others show signs of hunger after only a few hours of time spent recuperating.
- Observe the baby and offer a breast when signs of hunger are apparent.
- These signs can manifest themselves when the baby is sleeping lightly, acting drowsy or when he or she is awake.

HUNGER CUES

- Rapid eye movements under the eyelids
- Mouth movement
- Suction movement
- Making faces
- Moving hand toward mouth or face
- Arm and leg movement
- Rooting reflex (searching for breast)
- Crying.

Crying is the last-ditch cue for unsatisfied hunger. Irritability or impatience on the part of the baby can make breastfeeding difficult.

ANATOMICAL SCALE

• At birth, a baby's stomach is the size of a chick pea. It needs from 10 mL to 100 mL of milk per 24 hours within the first two days. Colostrum entirely satisfies the needs of the newborn, in both its content and its quality.

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FREQUENCY OF FEEDINGS

◪ A baby is expected to breastfeed 8 t 12 times in 24 hours, on demand.

◪ Periods of breastfeeding are interspersed with times when the baby sleeps and times when the baby is awake.

◪ Feedings for some babies are clustered for some parts of the day, and then spaced out for other parts. This is all perfectly normal. The important thing is that a baby feed regularly to ingest enough milk to be well nourished and to stimulate further milk production.

DURATION OF FEEDINGS

◪ There is no ideal duration for a session of breastfeeding. Generally speaking, feedings may last from 5 to 30 minutes per breast. Each baby has his or her own pace and personality. Babies should be allowed to feed until they stop of their own volition.

◪ As a baby gets older, feeding periods tend to shorten.

◪ A feeding should not last for more than one hour. A nurse or qualified breastfeeding coach can assess whether latching on or suction is satisfactory, if need be.

BEHAVIOUR DURING FEEDINGS

◪ At the beginning of a feeding, a baby sucks quickly, activating the ejection reflex.

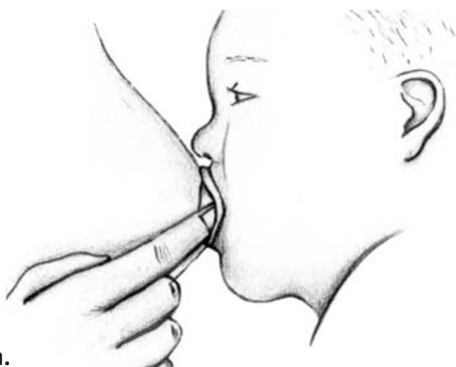
◪ When the let-down (ejection) reflex begins, the sucking slows down and becomes deeper.

◪ A baby may take breaks during a feeding session. The breaks will become increasingly longer as the baby satisfies his or her hunger.

◪ Some babies need to be stimulated to get back to nursing. This can be done by rubbing the sole of a foot, caressing a cheek, or massaging the baby's back.

INTERRUPTION OF THE SUCTION

◪ If the suction remains weak and brief, slip an index finger inside the corner of the baby's mouth, between the gums and break the suction.



◪ Burp the baby, change the diaper and offer the second breast. If the baby refuses, he or she is satisfied.

BURPING

◪ Gently rub the baby's back for 1 to 3 minutes and check to see if he or she is still hungry, since swallowed air can fill the stomach. Discontinue burping if the burp does not come.

◪ At the next feeding, offer first the breast at which the baby has fed very little or not at all.

HOW A SATISFIED BABY BEHAVES AFTER FEEDING

A satisfied baby will:

◪ Release the breast of his or her own accord.

◪ Be relaxed (arms and legs are completely relaxed and extended).

◪ Fall peacefully asleep.

OTHER SIGNS A BABY HAS FED ENOUGH

◪ For the first 5 days, a baby will wet the number of diapers that corresponds to the number of days in his or her life: day 1, 1 wet diaper; day 2, 2 wet diapers; day 4, 4 wet diapers.

◪ From the 6th day, the baby wets at least 6 diapers a day.

◪ From the 3rd day, the baby passes at least 3 brownish, yellowish and often liquid or semi-liquid stools per day.

◪ The baby is vigorous (cries loudly and moves around a great deal). Eyes are bright and alert.

◪ Breasts feel lighter after feeding.

◪ After some initial weight loss during the first 3 to 4 days, a baby grows and gains back his or her original birth weight between the 10th and 14th day.

REGURGITATION VS. VOMITING

REGURGITATION

- Regurgitation is the normal spitting up of a small quantity of milk (5 mL to 15 mL) during burping or after feeding.
- Regurgitation goes away after age 1.
- Not a concern in babies who show weight gain, who do no cough and whose general demeanour is good.

VOMITING

- Vomiting is the ejection of stomach contents.
- Occasional vomiting that occurs in babies who have eaten too much is not a concern.

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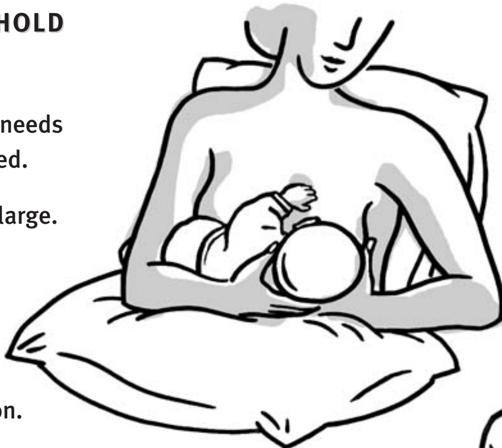
Breastfeeding holds

There are several ways to hold a baby while breastfeeding. A mother should choose to hold her baby in the position that works best for her. Often mothers opt for the classic "Cradle" hold. If this is a comfortable position, it can certainly be used. The holds proposed below allow mothers to guide the head of a baby during breastfeeding or to relax and be comfortable in a variety of contexts. Being able to guide a baby's head when learning to breastfeed allows a mother to quickly bring her baby closer, the moment the baby's mouth is wide open.

CROSS-CRADLE HOLD



WHEN?

- When the feeding needs to be better controlled.
- When breasts are large.
- When a baby has difficulty latching on.

HOW?

- In a seated position.
- Back and arms held up by pillows.
- Feet flat, propped up on a footstool so that the knees are level with the hips.
- The baby is placed at the same level as the breasts.
- The opposite arm from the side where the baby is feeding is held along the baby's back and neck for support.
- The baby is placed on his or her side, tummy-to-tummy with mother, mouth in front of the nipple.
- The baby's ear, shoulder and hip are aligned.
- The mother's hand on the side where the baby is feeding u-cups the breast and helps the baby take the areola in his or her mouth.

SIDE-LYING HOLD

WHEN?

- When mom needs a rest during breastfeeding.
- When the perineum hurts.
- After a C-section.

HOW?

- Lying down on the side, legs slightly bent.
- Mother and baby are lying on their sides, facing each other.
- The mouth of the baby is at the height of the breast.
- Pillows are placed under the mother's head, back and legs to provide comfort and support.
- A rolled up blanket supports the baby's back.
- The baby's buttocks are drawn towards the mother's stomach with her free upper arm to ensure that baby's nose is clear of the breast.

FOOTBALL HOLD

WHEN?

- After a C-section (to stay clear of the incision site).
- When there is a need to control the baby's head.
- When breasts are large.
- When nipples are flat.
- With twins.
- With premature babies.

HOW?

- The baby's body rests on the side of the feeding breast.
- One or two pillows are placed under the baby so that his or her mouth is at the same height as the breast.
- A pillow is placed behind the mother's back for her comfort and to provide more room for the baby's feet.
- The mother's hand on the side where the baby is feeding supports the baby's back and neck.
- The mother's other hand c-cups the breast to help the baby take the areola in his or her mouth.

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Breast care

◪ There is no point in washing the breasts before each feeding.

◪ Wash breasts with clear water once a day during a regular shower or bath.

◪ Avoid using creamy soaps or ointments that may dry or irritate the skin.

◪ Thorough hand washing before picking up a baby is the best way to protect against infections.

◪ A mother is free to wear a bra or not for her own comfort.

◪ Avoid bras with underwire since they increase the risks of compressing the breast, blocking its ducts and causing mastitis.

◪ Leave the breasts uncovered more often, lowering the sides of the bra.

◪ Avoid humidity. Choose cotton or paper breastfeeding compresses without any plastic lining. Change them regularly.

Expressing milk by hand

Available any time, anywhere, no batteries or electrical outlets required! Expressing milk can be useful in many circumstances:

◪ Express colostrum at the beginning of breastfeeding, to encourage a baby to feed.

◪ Relieve engorged breasts.

◪ Spread colostrum on the breast areola and nipple after breastfeeding to promote healing.

◪ Express milk for a feeding.

◪ Add to baby cereal when the time comes to start eating solid food (around 6 months).

With practice, the technique involved in manually expressing milk is easy to learn and can allow for several millilitres to be collected in short order.

STEP 1: PREPARATION

◪ Find a location where milk can be expressed comfortably and conveniently.

◪ Wash hands thoroughly.

◪ Get a clean container in which to collect the milk.

STEP 2: STIMULATING THE EJECTION REFLEX

For milk to flow out of the breast, the ejection reflex must be stimulated. What can be done to stimulate it?

◪ Heat (e.g., shower, compresses) can be conducive to milk flow.

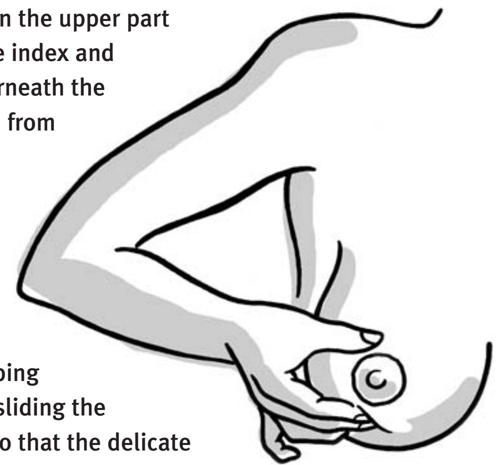
◪ Stimulate the nipples by rolling them between the thumb and index finger.

◪ Massage the breasts from the top to the areola and use the tips of the fingers to circle them.

◪ Caress the breasts (as if tickling) gently from the top to the areola, in every quadrant.

◪ Shake the breast while leaning forward so that gravity helps with milk ejection.

STEP 3: EXPRESSING THE MILK



◪ Place the thumb on the upper part of the breast and the index and middle fingers underneath the breast at about 3 cm from the nipple.

◪ Press the breast towards the ribcage.

◪ Roll the thumb and fingers towards the nipple in a clamping movement, without sliding the fingers on the skin so that the delicate breast tissue is not damaged. This movement will compress and drain the milk reservoirs.

◪ Repeat three movements in succession: place fingers, press, roll; place, press, roll; and so on.

◪ Continue by moving the remaining fingers around the breast so as to empty all quadrants. Use the other hand if it is more comfortable that way.

◪ To express the maximum quantity of milk, alternate expressing one breast, then the other. Massage the other breast briefly before expressing.

◪ At first, expressed milk comes out in drops.

◪ As the pace of movements and the expressing quickens, the ejection reflex is stimulated and several jets of milk appear. During the ejection reflex, it is easy to collect several millilitres in very little time.

◪ Continue to express milk until it no longer flows or until it tapers off. •

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INFORMATION FOR MOTHERS

Sore nipples, engorged breasts and the feeling that there is not enough milk are the main reasons that women stop breastfeeding early.

Sore breasts

CHARACTERISTICS

- Breastfeeding should be a pleasant experience and should not be painful.
- Having sensitive nipples, particularly at the beginning of a feeding session, is considered to be normal during the first week.
- Painful sites can become aggravated and can lead to chapped and cracked skin.
- These damaged areas are ideal host environments for bacteria (mastitis) and fungi (thrush).

CAUSES

The main cause of breast pain is poor positioning of the baby during breastfeeding.

STRATEGIES

- Check that the baby is properly positioned during breastfeeding. Ensure that the baby opens his or her mouth wide to latch on to the breast. (See *Latching on,* page 19.)
- Start feeding sessions with the least painful breast.
- Vary breastfeeding positions. (See *Latching on*, page 19.)
- Avoid pointing a baby's nose towards a painful site, as this is often the area where suction is at its strongest.
- Ensure that the suction is broken before taking the breast away from a baby's mouth.
- Place a few drops of colostrum or breast milk on the nipple at the end of the feeding to promote the healing of nipple tissue.
- Keep breasts dry. Change breastfeeding compresses on a regular basis. Expose breasts to the air.
- Apply a thin coat of lanolin twice a day after a feeding. Lanolin can be left on during the next feeding.
- Avoid washing breasts with soap, as this may make nipples more vulnerable to irritation.
- Take analgesics if necessary (e.g., acetaminophen).
- If necessary, consult a nurse, a breastfeeding support group or a qualified breastfeeding coach.

Engorgement

CHARACTERISTICS

- Physiological breast engorgement:
  - Often occurs between the 3rd and 6th day after giving birth.
  - The breasts heat up, get firm and can be painful after lactation begins.
  - The baby succeeds in latching on to the areola and the milk flows easily.
  - Resolves quickly with frequent and effective feedings.
- Pathological breast engorgement:
  - Stasis of the capillaries and lymphatic ducts, swelling of the breast tissue.
  - More difficult flow of breast milk.
  - The breast becomes hard, engorged with milk, painful.
  - Mastitis develops if proper measures are not taken.
  - Little or no fever.
  - Pathological engorgement can diminish milk production significantly.

CAUSES

- The first feeding was delayed.
- The number of feedings was restricted.
- Feedings were too few.
- Feedings were too brief.
- Complementary feeding sources were used.

PREVENTION

- Establish early and frequent skin-to-skin contact with the goal of promoting feeding.
- Sleep in the same room to be attentive to signs of hunger from the baby.
- Breastfeed exclusively (using no other feeding source).
- Avoid using soothers for the first 4 to 6 weeks, in order to encourage frequent feedings.

STRATEGIES

- To facilitate milk flow, mothers can apply heat to both breasts 1 or 2 minutes before feeding, take a shower or lie on their side in the bath, gently massaging the breasts.
- A little milk can be expressed to facilitate latching on to the areola.

◪ Massage the breast during feedings to promote flow.

◪ Point the baby's nose towards the most engorged part of the breast.

◪ Feed with both breasts as much as possible.

◪ If breasts are still painful after feeding, expressing a little milk can provide relief.

◪ To bring swelling down and relieve pain, apply cold compresses between feedings for around 20 minutes (refrigerated cabbage; or frozen vegetables/crushed ice, wrapped in a towel).

◪ Vary breastfeeding positions to promote the drainage of all ducts.

◪ If there is serious engorgement (the baby does not succeed in feeding, milk does not flow easily), avoid applying heat. Apply ice instead, to bring down swelling.

◪ Take an analgesic, if needed, to relieve the pain.

◪ Restricting the quantity of liquid consumed, binding breasts and wearing tight bras are not recommended practices and will increase a breastfeeding mother's discomfort.

Concerns about having enough milk

CHARACTERISTICS

The need to nurse baby frequently, expectations about the baby sleeping at night, baby's restlessness, lack of confidence in the ability to breastfeed and comments from friends or family are often sources of anxiety for parents, who both come to fear that the breastfeeding mother will not be able to produce enough milk for her baby.

◪ Insufficient physiological breast milk is very rare. It can occur when:

- The breasts have not increased in volume during the pregnancy or when lactation begins.
- Lactation never begins.
- Breast surgery has been performed.
- There is a hormonal problem (e.g., a hypothyroid condition).

◪ More often, women have the impression they cannot supply enough breast milk when:

- A baby is intensely hungry (before growth spurts) and he or she is demanding more frequent feedings.

Intense hunger only lasts a few days. After this period, the baby returns to his or her usual pace of feeding.

STRATEGIES

◪ Breastfeed the baby more often, every 1 or 2 hours, if necessary, for a period of 24 to 48 hours. This way, the baby will receive milk that is much richer in fat (hindmilk).

◪ Milk supply adjusts quickly to a baby's demands.

◪ Mothers need to relax, eat well and trust in their ability to feed their baby.

◪ If the baby urinates (6 to 8 times in 24 hours) and has bowel movements (4 to 6 in 24 hours, during the first 4 weeks), normally he or she is well nourished.

◪ Parents may be tempted to introduce solid foods when a baby appears to be ravenously hungry. But introducing solid foods to a baby under 4 to 6 months of age is not recommended as it will not meet the baby's needs and often leads to intolerances and digestive problems.

◪ If parents are still concerned, they should seek out the expertise of a qualified care provider (a CLSC nurse, a breastfeeding group or a lactation consultant).

Strong let-down (ejection) reflex

CHARACTERISTICS

◪ The forceful ejection of milk can make it difficult for a baby to swallow.

◪ Often occurs during the first weeks of breastfeeding.

◪ A baby may receive too much milk, too fast.

◪ If a baby gets irritable, a mother can get the impression that her baby cannot tolerate her milk or is colicky.

SIGNS IN BABY

- **Normal to rapid weight gain**
- **Urinates several times a day**
- **Normal bowel movements that can be greenish at times**
- **Normal development**
- **Strong suction during breastfeeding**
- **Difficulty swallowing large quantities of milk fast enough**
- **Coughing, choking**
- **Withdraws from breast, arcs back, cries during feedings**
- **The mother can hear the milk hitting the bottom of the stomach and the contractions of the baby's stomach**

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- **Plenty of colicky pain and gas**
- **The baby wakes up quickly after drinking and shows signs of intense hunger (pronounced rooting reflex, vigorous suction of fist, opening of the mouth).**

SIGNS IN THE MOTHER

- **More than one ejection reflex during the same breastfeeding session**
- **The first reflex to occur during breastfeeding is often the most powerful**
- **Possibly painful ejection reflex**
- **Powerful ejection of milk in the opposite breast during feeding.**

STRATEGIES

◪ Breastfeed often: the greater the delay between feedings, the greater the ejection reflex will be.

◪ Stimulate the ejection reflex manually or with a breast pump before the baby latches on: this way the baby will not get the full force of the first ejection of milk (often the most powerful).

◪ Feed while a baby is snoozing lightly: when baby is more relaxed suction is reduced and the ejection reflex is less pronounced. The baby swallows less air and is less irritable.

◪ Feed with only one breast per session (feed with the other breast at the next feeding session). The foremilk is richer in lactose. Too much lactose will increase intestinal movement and lead to liquid to semi-liquid, greenish and painful stools. The hindmilk is rich in fat and helps to balance lactose and fat.

◪ Burp frequently, as soon as the baby shows any sign of difficulty keeping up with the flow of milk.

◪ Withdraw the baby from the breast at the time the ejection reflex begins and bring baby back to the breast once it is over.

◪ Hold the baby so that his or her head is higher than the breast. This way, the force of gravity will slow the momentum of the ejecting milk. (In the Australian position, the mother is resting on her back and the baby is lying on her stomach.)

Drowsy baby

CHARACTERISTICS DURING THE FIRST WEEKS OF LIFE

◪ Sleeps between feedings.

◪ Shows little interest during breastfeeding.

◪ Drinks less than 8 times in 24 hours.

◪ Fails to gain enough weight.

◪ Does not wake up during the night.

POSSIBLE CAUSES

◪ Medication was administered during labour and birthing.

◪ Labour and birthing were difficult.

◪ The baby may have jaundice.

◪ The baby may have an infection.

◪ The environment is too stimulating for the baby.

STRATEGIES

◪ Skin-to-skin contact with mother and baby during breast-feeding.

◪ Stimulate the baby to breastfeed when he or she is drowsy, between sleep and wakefulness.

◪ Take away some of the stimuli that could encourage the baby to open his or her eyes: turn off the lights, make less noise.

◪ Massage the baby's back.

◪ Stimulate suction:
- Gently touch the contour of a baby's mouth to encourage nursing.
- Express a little breast milk so that the baby can lick it.

◪ While nursing, compress the breast to increase flow and encourage the baby to continue feeding.
- Mother's fingers should be well away from the areola.
- Maintain compression as long as the baby continues to swallow breast milk.
- As soon as the baby stops feeding, release pressure.
- Resume compression until he or she stops again, and so on.

WARNINGS

► **If medical causes are suspected, seek medical attention.**

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Positioning baby's tongue

CHARACTERISTICS

Signs that the tongue is positioned badly during a feeding:

- Broken suction
- Hollowed cheeks (little dimples in the cheeks)
- Slurping sounds
- Breast pain

STRATEGIES

◪ Breastfeed baby when he or she is not completely awake (that way the tongue will not be the first thing baby sucks on).

◪ Use a modified football hold (in which baby is seated).

◪ Graze a baby's lips with the nipple and his or her tongue will often pop out.

◪ Avoid using a nursing bottle.

◪ Do an exercise to train a baby to lower or stick out his or her tongue forward during feedings.

- Thoroughly wash hands and cut back the nail of the index finger.
- Tickle a baby's mouth to stimulate the cardinal points reflex. The baby will turn and open his or her mouth in the direction of the stimulation.
- Slowly insert the index finger well inside baby's mouth, taking care not insert it too far (so as to avoid provoking retching).
- Move finger slowly in and out of the mouth to stimulate suction.
- When the suction begins, the tongue should form itself around the finger and move forward to the lower gums.
- If the tongue remains retracted at the end of the finger, turn the index finger gently so that the flat of the finger depresses the tongue. Press gently on the tongue until it comes forward onto the lower gums.
- Repeat this exercise several times before feeding the baby. •

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INFORMATION FOR MOTHERS

Expressing milk with an electric breast pump

◪ In some circumstances (e.g., after a premature birth) a mother is separated from her baby and cannot breastfeed. For many mothers, expressing milk is the only way to get their milk to their newborns.

◪ Mothers of premature babies produce milk that is adapted to their baby's stage of development. The fat and protein content in their milk is higher than that of mothers of full-term babies. Therefore, their milk is ideal for meeting the accelerated growth needs of their premature babies.

How soon should a mother begin expressing milk with an electric breast pump after giving birth?

◪ The first consideration is the mother's condition.

◪ Remember that sooner is better, ideally within 6 hours of giving birth.

◪ In a situation where the baby cannot nurse to stimulate lactation (as is the case for premature babies), a high-power electric double breast pump is recommended.

◪ Read the manufacturer's instructions before using.

◪ Double expressing milk means expressing both breasts at once and is more efficient with regard to maximizing milk supplies.

◪ Breast pumps can be rented from pharmacies, breastfeeding groups and hospitals.

How much time should it take to express milk?

◪ If both breasts are expressed at the same time, it should take around 15 minutes. Continuing for up 2 minutes after milk has ceased to flow will result in extracting the maximum fat-rich hindmilk and will stimulate the production of prolactin.

◪ If expressing is done one breast at a time, express the milk from the first breast for 5 minutes, and alternate with the other breast for the same duration. Repeat this cycle 2 to 3 times according to milk flow so that each breast is stimulated, for a total of 10 to 15 minutes.

◪ If not a drop of milk appears, make sure that the breast pump is in good working order.

Breast pump checklist:

- The pump suction and speed are first adjusted at their lowest levels.
- Once expressing is underway, increase the speed and the suction.
- It is important to ensure that suction is optimal to provide adequate stimulation. However, expressing must be comfortable and entirely painless.
- The speed of the pump may be set high at the beginning to imitate the suction of a hungry baby who is beginning to nurse.
- When the let-down or milk ejection reflex (see *definition,* on page 28) begins, the pumping level can be lowered to an average standard speed.

◪ If, despite these precautions, the milk does not flow, continue to attempt the expressing for 15 minutes from each breast. Normally, only a few drops will come out in the first expressing sessions after giving birth. The milk supply will increase as stimulation increases.

◪ Any persistent doubts about milk production and supply should be addressed in consultation with a qualified breast-feeding consultant.

How often should milk be expressed?

◪ Especially during the first 7 to 10 days, the frequency of breast milk expressing should be similar to the frequency with which the baby is drawn to the breast, around every 3 hours.

◪ Frequent expressing is more efficient than long expressing sessions that are broken up by long intervals when milk is not expressed

◪ During the night, expressing must be adapted to the mother's need to rest.

◪ Some mothers express their milk once a night to maximize their supply or to relieve the discomfort of engorgement. Other mothers prefer to have an uninterrupted night of sleep so that they can cope better with the demands of everyday living and ensure that stress and fatigue do not lower their milk supply.

◪ Once the breast milk supply is well established (after 10 to 14 days), milk should be expressed at least 5 times a day, for a total of 100 minutes of expressing every day, to maintain optimal supply levels.

How much is enough when it comes to milk supply?

◪ If expressing is regular, which is to say, every 3 hours during the first 10 to 14 days, the volume of milk expressed every day should be from 750 mL to 1000 mL. A minimum of 350 mL is expected during this period

◪ The higher the supply, the better things will be in the weeks that follow. An abundant supply of milk can provide reserves when production decreases. Indeed, some mothers who

express their milk over a long period often find that their production decreases after around the 2nd month of expressing. If a mother's production drops by 50% and she initially produced 1000 mL per day, she still will probably produce enough to meet her baby's needs.

What is the let-down or milk ejection reflex?

◪ When the breast is stimulated (through suction from the baby or the breast pump), the posterior pituitary gland releases ocytocin and the let-down or milk ejection reflex is activated.

◪ The let-down (ejection) reflex is a contraction of the muscular cells around the alveoli (the small mammary gland sacs that collect and secrete milk). This muscular contraction ejects milk into the nipple openings.

◪ Ocytocin, which is essential to the ejection of breast milk, builds up in the blood after 1 minute of stimulation and levels remain high throughout stimulation. Baseline levels of ocytocin return around 6 minutes after stimulation is over.

SIGNS OF LET-DOWN (EJECTION) REFLEX

- Rising pressure and tingling in the breast
- Uterine contractions during the stimulation of the breast
- Drips coming from breast
- Sudden thirst during stimulation
- A feeling of relaxation
- Sudden increase in the volume of milk during expressing.
- During breastfeeding, a change in the pace of suction from the baby, which changes from rapid to regular and deep.

What conditions could inhibit the let-down (ejection) reflex?

◪ Stress

◪ Fatigue

◪ Pain

◪ Emotional upheaval

◪ A mother's lack of confidence in her ability to supply enough breast milk

◪ Use of nicotine and alcohol

◪ Certain medication (e.g., oral estrogen-based contraceptives).

What conditions help activate the ejection reflex?

◪ A calm environment

◪ Massage and the application of hot compresses on the breast

◪ Skin-to-skin contact with the baby

◪ Sitting beside the baby

◪ Having a picture of the baby in front of the mother

◪ Placing a baby blanket or piece of clothing around the mother's neck so that she can smell his or her scent

◪ Listening to the gurglings or the crying sounds of the baby.

Storing breast milk

Is it necessary to wash the breasts before expressing breast milk?

No. Daily hygiene that includes a shower or bath is enough to maintain breast hygiene. However, thorough hand washing with soap is important before expressing milk and handling breast pump equipment. Avoid touching the insides of containers, sneezing or coughing on equipment so as to avoid contamination.

How should breast pump equipment be washed?

Before cleaning and sterilizing breast pump equipment, check the manufacturer's instructions to determine whether all the parts can be washed with soap and hot water (e.g., some Medela breast pump filters cannot be washed with soap).

CLEANING PROCEDURE

◪ Disassemble all of the detachable parts of the breast pump.

◪ Carefully wash with soap and hot water after every milk expressing session.

◪ Rinse with cold, clear water.

◪ Allow to air dry.

HOME STERILIZATION PROCEDURE

In some circumstances (for example, when a baby is born prematurely), equipment that comes into contact with breast milk must be sterilized every day.

◪ Disassemble, wash and rinse all parts of the breast pump.

◪ Place all of the equipment in a 4 L cooking pot.

◪ Fill the cooking pot with cold water, 2.5 cm from the pot's rim.

◪ Place a lid on the pot and boil for 20 minutes.

◪ Drain the pot and allow the pump parts to cool in the uncovered pot.

◪ Take all of the equipment out of the pot and allow to air dry.

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What containers should breast milk be stored in?

◪ Glass, hard (polycarbonate) plastic, or specially designed thick plastic breast milk freezer bags.

◪ Some neonatal units have preferences when it comes to the type of containers that can be used. Mothers should check to see what their health care facility recommends.

◪ Use a different container every time milk is expressed.

How should containers be identified?

AT HOME

- Write the date on a well-sealed container.

MILK FOR THE HOSPITAL

- Write the name of the baby, mother's file number, time and date the breast milk was expressed, and any medication consumed by the mother in the preceding 24 hours.

Note: This information is subject to change, according to each mother's situation. If a baby is hospitalized, follow recommendations from hospital personnel.

How long can breast milk be stored?

(See table, *Breast milk storage times for full-term or premature babies*, below.)

◪ Breast milk is at its best fresh from the breast.

◪ It is easily refrigerated and frozen.

◪ It can be different colours (white, blue, or yellow).

◪ It separates (from its fat) after expressing. When it thaws, it should be shaken before use.

How should breast milk be frozen?

◪ To avoid waste, store quantities of milk that reflect the amount a baby gets in each feeding into a container specially designed for freezing breast milk.

◪ Leave space in the container as the milk will expand when frozen.

◪ First chill the collected breast milk in the refrigerator.

◪ When it is chilled, store milk in the freezer.

◪ Avoid adding freshly expressed milk to milk previously frozen so that the quality of the milk is not altered.

◪ Use the oldest milk first.
(See table, *Breast milk storage times for full-term or premature babies*, below.)

How should breast milk be warmed up?

Thawing breast milk in a microwave is not recommended as it can burn and destroy the bacteriostatic properties in breast milk that protect a baby from respiratory and digestive ailments.

◪ To warm up liquid breast milk from the refrigerator:

- Soak the container of milk in a container of hot water until it is warm.
- Stir the milk before serving it to ensure its homogeneity.
- Check the temperature on a wrist.
- Feed to baby.

◪ To warm up frozen breast milk from the freezer:

- Let cold water flow over the frozen container.
- Slowly add hot water until it is warm.
- Mix the milk before serving, to ensure its homogeneity.
- Check the temperature on a wrist.
- Feed to baby.

OR

◪ Place in the refrigerator for 10 to 12 hours for gradual thawing:

- Soak in a container of hot water until warm.
- Mix the milk before serving to ensure its homogeneity.
- Check the temperature on a wrist.
- Feed to baby.

Frozen breast milk loses some of its bacteriostatic properties, so it must be used as soon as possible after thawing to avoid the breeding of bacteria.

BREAST MILK STORAGE TIMES FOR FULL-TERM OR PREMATURE BABIES

	FRESHLY EXPRESSED MILK		FROZEN BREAST MILK	
	HEALTHY, FULL-TERM BABY	PREMATURE BABY	HEALTHY, FULL-TERM BABY	PREMATURE BABY
ROOM TEMPERATURE (°C)	4 hours at 25 °C 8 hours at 19 °C to 22 °C	2 hours	1 hour	1 hour
REFRIGERATOR	3 to 5 days	48 hours	24 hours	24 hours
FRIDGE FREEZER	2 weeks	2 weeks	Never freeze	Never freeze
UPRIGHT FREEZER (-5 °C to -15 °C)	3 to 4 months	3 months	Never freeze	Never freeze
CHEST DEEP FREEZER (-20 °C)	6 months	6 months	Never freeze	Never freeze

Note: This information is subject to change, according to each mother's situation. If a baby is hospitalized, follow recommendations from hospital personnel. ●

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INFORMATION FOR MOTHERS

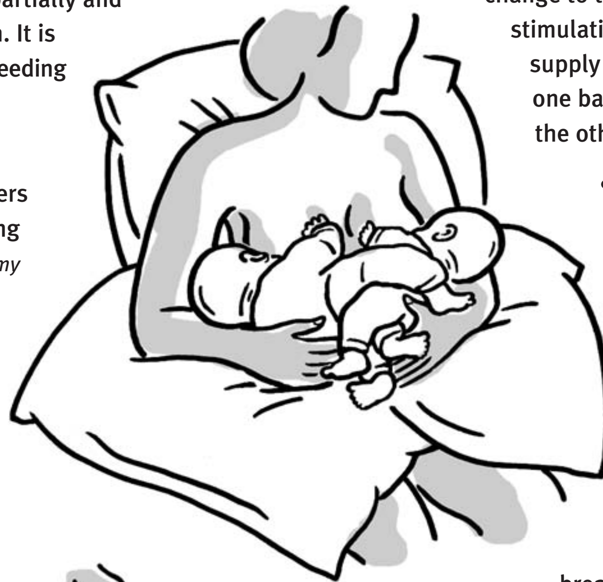
◪ Mothers who give birth to twins, triplets or quadruplets can breastfeed both partially and exclusively. It is not an all-or-nothing situation. It is up to the parents to decide what kind of breastfeeding experience they want.

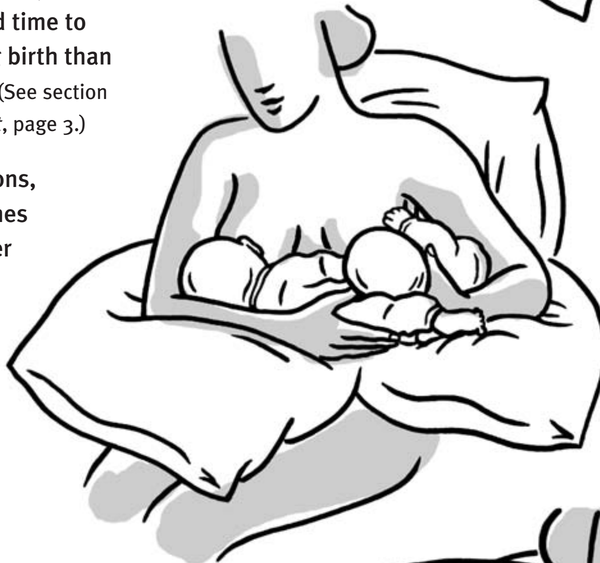
◪ The physiological principles of breast milk production for twins are the same as for mothers with only one baby: production varies according to stimulation, supply and demand. (See *Anatomy and Physiology of Lactation*, page 16.)

◪ However, more is required at every level, including energy levels, care time devoted to newborns and attention to financial considerations.

◪ Strategies must be established to maximize rest time for mom. A multiple-birth mother may more need time to recuperate after giving birth than a single-birth mother. (See section on *Mother: Sleep and Rest*, page 3.)

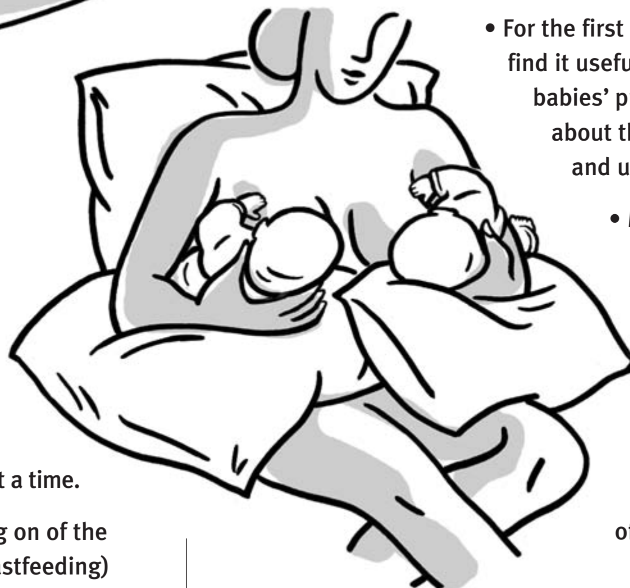
◪ For all kinds of reasons, a mother may sometimes feel closer to one of her babies. While this is perfectly normal, making an effort to equally appreciate the individual characteristics of each baby fosters healthy bonding with both.





STRATEGIES

- Early and frequent feedings are particularly important to establish a milk supply that meets the babies' needs.
- If the babies cannot feed at the breast after birth, breast milk expressing should begin as soon as possible (after giving birth). (See *Expressing breast milk*, page 3.)
- Some mothers choose to breastfeed one baby at a time, while others prefer to breastfeed two babies at a time.
- Once the mother is comfortable with the latching on of the babies, feeding two babies at a time (tandem breastfeeding) can save time.
- Some mothers prefer to assign one breast to each infant, while others feed alternately, from both breasts.
- Allowing babies to feed at one breast and change to the other varies their visual stimulation and can help balance milk supply in each breast, particularly if one baby's suction is stronger than the other's.
- Tandem breastfeeding can also help a baby who is having problems feeding. The baby that nurses most vigorously will stimulate the ejection reflex to a greater extent. This sizeable inflow of milk will encourage the other baby to nurse.
- Do not limit the duration of breastfeeding sessions, as babies should feed until the hindmilk (the breast milk that is richest in its fat content) is consumed.
- Breast milk can also be served from alternative media, such as from a cup, syringe, finger, or bottle. Latching on again can sometimes be more difficult after using these media, particularly during a baby's latching on period (at 4 to 6 weeks).
- Milk formula given as a supplement to breast milk can be provided, bearing in mind that milk supply may diminish if a baby's breastfeeding demand falls.
- For the first weeks, some mothers find it useful to document their babies' progress, including details about their bowel movements and urination.
- Many mothers appreciate the support they receive from other mothers who have also breastfed twins. A CLSC nurse or breastfeeding support group can provide these kind of referals. •



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INFORMATION FOR MOTHERS

◪ C-sections (caesareans) can delay breastfeeding.

◪ An unexpected C-section can cause disappointment in some mothers who perceive this operation as a failure and go on to fear they will not be able to breastfeed.

◪ After an epidural, a mother is often comfortable, alert, and therefore ready to start breastfeeding as soon as possible.

◪ After a general anaesthetic, a mother can breastfeed once she feels ready and is fully conscious.

◪ The football hold is effective for avoiding pressure on the incision site.

◪ A few days after a C-section, a mother can breastfeed using the side-lying hold with her baby, if this position works for her.

◪ It is important to maintain a "comfort zone" after a C-section. Some mothers are reticent about taking medication while breastfeeding. There are three facts to remember regarding medication during breastfeeding:

- Most medications get into breast milk.
- Most medications are detectable in small quantities in breast milk.
- Very few medications are counter-indicated for breastfeeding.

◪ The benefits of early breastfeeding after a C-section:

- Unrestricted breastfeeding offers health benefits for both mother (contraction of the uterus) and baby.
- Constant breastfeeding also provides protection against a number of common difficulties, such as a mother's engorgement and a baby's confusion between bottle nipples and the mother's nipples.
- Breastfeeding can bring mother and baby closer together, which is particularly important if they are separated at birth or if the birth was traumatizing.
- Breastfeeding can help the mother feel competent.
- Should the baby not want to breastfeed, the skin-to-skin contact between mother and baby is conducive to bonding. This contact can also take place between father and baby. •

From *Tiny Tot to Toddler*, 156–208.

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INFORMATION FOR PARENTS

CHOOSING BABY MILK FORMULA

◪ Commercial preparations for nursing babies which are made from cow's milk and fortified with iron constitute the most acceptable replacement for breast milk until around 9 or 12 months of age.

◪ Soya-based milks should only be used under doctor's orders for nursing infants who cannot consume milk products.

PREPARATION OF BABY MILK FORMULA

- There are three main kinds of baby milk formula: ready-to-serve, concentrated liquids and concentrated powders.
- All of these forms contain essentially the same ingredients.
- Carefully follow the directions when preparing baby milk formula. If the formula is too concentrated, it can cause health problems for the baby (kidney overload), but when formula is too diluted it may lead to malnourishment over the long-term.
- Wash hands thoroughly before beginning to prepare the formula.
- All recommended water (tap water, private well water, bulk or bottled water) must be boiled for one minute to prepare the milk, until the baby is 4 months old.
- Never use hot tap water as it may contain lead and germs.
- Place a bottle of milk in a container of hot water to warm the milk to body temperature.
- Gently shake the bottle.
- Check the temperature of the milk before serving by testing a few drops on the wrist. It should be 37°C, neither hot nor cold.

It is not advisable to use microwave ovens to warm milk as they heat food unevenly.

IF A PARENT ABSOLUTELY INSISTS ON USING A MICROWAVE OVEN

▷ **Only use the microwave to warm up liquid milk that comes from the refrigerator.**

▷ **Milk that is already at room temperature must only be warmed in a container of hot water.**

▷ **According to the manufacturers of baby bottles, no bottle, be it plastic, glass or the bag type, is designed for microwave cooking.**

▷ **Milk should be micro-waved in a glass cup. Keeping the cup open will allow some of the heat to dissipate.**

▷ **Transfer the milk to the bottle.**

▷ **Warm commercial formulas in a microwave for a maximum of 30 seconds (120 mL) and 45 seconds (240 mL).**

▷ **Never warm more than 120 mL at a time.**

▷ **Empty the contents into the bottle and check the temperature of the milk before serving by testing a few drops on the wrist. It should be at body temperature, neither hot nor cold (37°C).**

STORING BABY MILK FORMULA

▷ Once it is prepared, baby milk formula can be stored for 1 hour at room temperature and from 24 to 48 hours in the refrigerator.

Commercial formulas must not be frozen as they will curdle.

FEEDING

HOLDING BABY

- Holding a baby during feedings keeps contact warm and reduces the risk of the baby aspirating milk. Ear infections are more frequent among babies who drink their bottles from a lying position.
- Tip the bottle during feedings to keep the baby's throat full of milk and to prevent him or her from swallowing air.
- Make sure that baby is not too tightly swaddled during feedings as tight swaddling tends to put nursing babies to sleep.

BURPING

- Burp baby in the middle and at the end of feeding sessions.
- Gently rub baby's back for 1 to 3 minutes and check to see if he or she is still hungry. Swallowed air can fill the stomach with a space equivalent to 30 mL of milk. Do not persist in burping if the burps do not come.
- Bear in mind that a nursing baby generally drinks most of a bottle in about 20 minutes (not counting burps).
- Do not force a nursing baby to finish a bottle.

REGURGITATION VS. VOMITTING

REGURGITATION

- Regurgitation is the normal spitting up of a small quantity of milk (5 mL to 15 mL) during burping or after feeding.
- Goes away by age 1.
- Not a concern in babies who show weight gain, who do not cough and whose general demeanour is good.

STRATEGIES TO REDUCE THE RISKS OF REGURGITATION

- Attempt to find a connection between regurgitations and the way a child is fed in order to correct the situation, if possible.
- Feed a nursing baby slowly, in a calm atmosphere.

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Make sure that the nipple opening is wide enough:

- Turn the bottle upside-down
- Check to see if flow is a little less than one drop a second.
- Always keep the nipple full during feedings.
- Take timed breaks during feedings for burping (at around 30 mL and 60 mL), according to the baby's needs.
- Avoid overfeeding a nursing baby.
- Once baby has nursed, avoid any unnecessary movement.

VOMITTING

- Ejection of stomach contents.
- Occasional vomiting in babies who have eaten too much is not a concern.

WARNING

► **Seek medical attention if vomiting is repetitive.**

FREQUENCY OF FEEDINGS

- Frequency of feedings varies from one baby to the next and often, in the same baby, from one day to the next.
- In general, every 24 hours, babies drink 6 to 10 bottles during the first 15 days of life; and 6 to 8 bottles between day 15 and 1 month of age.
- The required quantity of milk varies from one baby to the next.
- Babies can drink around 45 mL to 115 mL of milk per bottle during the first 15 days of life, and 60 mL to 125 mL from 15 days to 1 month of age.
- Babies communicate when they are hungry by giving specific cues: sucking motions with their mouths, moving hands towards the face, waving arms and legs, and crying. Crying is a sign that feeding has been delayed for too long.
- Responding to a baby's hunger cues before crying occurs makes for calmer feeding periods.

WATER BETWEEN FEEDINGS

- Babies fed on milk formula may need water. Before 4 months of age, babies can be given a boiled and chilled bottle of water (any kind) for about one minute.
- Boiled water may be stored for 2 or 3 days in the refrigerator, in a sterilized, well-sealed container, or for 24 hours at room temperature.
- Avoid giving water within the hour that precedes feedings so that baby's appetite is not suppressed.
- Milk remains the basic food for babies during the first year.

GROWTH

- It is perfectly normal for a baby to lose weight in the days following birth.
- Birth weight is generally regained between the 10th and 14th day.
- Weight gain should proceed at approximately 20 g to 30 g per day until 5 months of age.
- Height should increase by about 2.5 cm per month until 1 year of age.

GROWTH SPURTS (INTENSE HUNGER)

- Growth spurts are normal.
- Rapid growth in nursing babies during the 1st year brings about sudden increases in appetite.
- Growth spurts are especially pronounced during the first three months of life.
- Signs of growth spurts: babies cry more, give hunger cues and feedings are closer together.
- Increase the ratio of milk from 15 mL to 30 mL per bottle, up to a maximum of 240 mL.

TAKING CARE OF NIPPLES AND BOTTLES

- After feeding, rinse the bottle, nipple and cap with cold water.
- Cold water should flow through the hole in the nipple so that excess milk deposits are eliminated.
- Wash all parts of the bottle (bottle, nipples and caps) in soapy water.
- Rinse in very hot water.
- Generally speaking, sterilization is not necessary if washing is careful and thorough.
- Sterilization may be recommended if a baby's immune system is weak (e.g., for a premature baby).

STERILIZATION METHODS

- Sterilize in the dishwasher or boil bottles, caps (without milk or nipples), and all of the utensils used in the preparation of the bottles for 15 to 20 minutes in a large covered pot.
- Drain.
- Cover and avoid all contact with air. •

From *Tiny Tot to Toddler*, 211–225.

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INFORMATION FOR PARENTS

Bowel movements

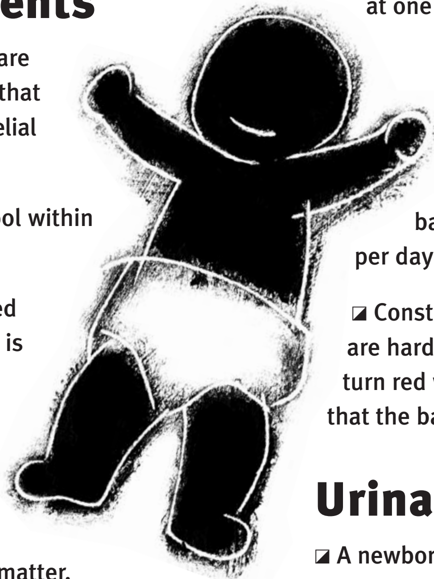
◪ Before birth, the intestines are filled with meconium — black sticky feces that look like tar. These stools are made of epithelial cells, bile, lanugo, and amniotic fluid.

◪ Most babies pass their first meconial stool within the first 12 hours following birth.

◪ This first meconial stool should be passed within the first 48 hours after birth. If such is not the case, a medical examination is essential.

◪ Around the third day, meconial stools are replaced by transitional stools. These stools are greenish or brownish in colour. They are composed of meconium and fecal matter.

◪ Stools can vary in texture, colour and frequency, according to what the baby is fed.



THE STOOLS OF BREASTFED BABIES

◪ Colostrum acts as a natural laxative and helps baby pass his or her first stool.

◪ Within 48 hours of birth, lactation begins, the baby feeds at the breast and stools change their colour and consistency.

◪ Babies under 4 weeks of age should pass at least 4 to 6 stools every 24 hours. These stools are semi-liquid, pasty, mustard yellow and practically odourless. The occasional green stool is perfectly normal.

◪ Less frequent bowel movements may also be perfectly normal in breastfed babies over 6 weeks of age. Some babies can only produce one stool per week, but show no signs of constipation.

◪ Babies produce less than 2 stools per day in the first 6 weeks of life. This can be a sign that they are not taking in enough breast milk.

CONTINUOUS GREENISH STOOLS

◪ Greenish stools can sometimes indicate that a baby has received too much watery milk foremilk (rich in lactose) at the beginning of a feeding and not enough hindmilk (rich in fat) at the end of a feeding.

◪ The excess lactose stimulates peristalsis (the wave of contraction that carries food matter around the body's food canals), which speeds up intestinal transit and forms greenish, liquid to semi-liquid stools.

◪ If it is suspected that foremilk and hindmilk intake is out of balance, wait until the baby has completely finished feeding at one breast before offering the other breast.

THE STOOLS OF BOTTLE-FED BABIES

◪ Stools are pasty, and yellowish to brownish.

◪ The frequency of stools is variable from one baby to the next. There should be from 5 to 6 stools per day or 1 stool every 3 days.

◪ Constipation can be recognized by the fact that stools are hard and dry. It is perfectly normal for a baby's face to turn red when passing a stool; it does not necessarily mean that the baby is constipated.

Urination

◪ A newborn baby is expected to urinate for the first time within 24 hours of being born.

◪ There after, the incidence of urination corresponds to the number of days of life: 1 wet diaper on day 1, 2 wet diapers on day 2, 3 wet diapers on day 3, 4 wet diapers on day 4, and so on, until the 6th day of life.

◪ After 6 days, the baby should be urinating at least 6 to 8 times per day.

◪ The urine of newborns is straw yellow and almost odourless.

◪ Salmon-coloured deposits may also be present in diapers. These are urate crystals, which are normal during the first 2 or 3 days of life.

◪ Insufficient urination (accompanied by weight loss, a sunken anterior fontanel and/or a skin fold) may indicate dehydration.

From *Tiny Tot to Toddler*, 27–29.

WARNING

A baby who passes fewer than 2 stools per day in the 6 first weeks of life may not be getting enough breast milk.

Seek medical attention if one or more of the following symptoms persists:

- **Ongoing presence of greenish stools**
- **Blood in the stools, diarrhoea (liquid ring around the stools, liquid to semi-liquid stools)**
- **Urinating less than 3 times a day**
- **Concentrated (dark) urine**
- **Meconium still present after the 4th day of life**
- **Hard, dry stools** •

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INFORMATION TO PARENTS

Buttocks

DIAPER RASH (redness on the buttocks)

- Contact in the diaper with urine can make baby's buttocks bright red, hot and painful.
- Sometimes redness is associated with fungal infections, especially if the baby has thrush in the mouth.

TIPS TO CURE DIAPER RASH

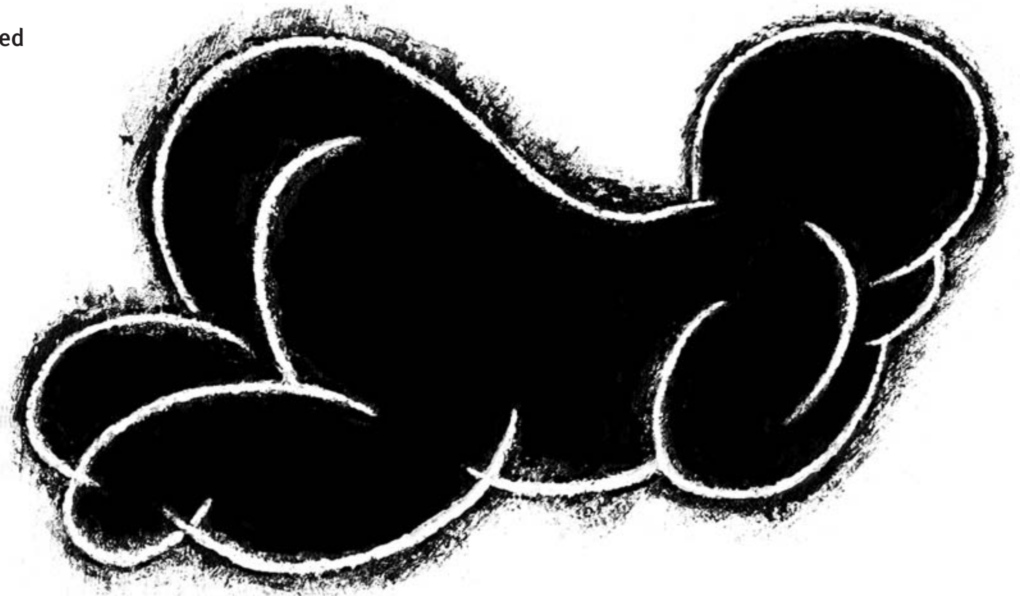
- Make sure that cotton diapers are well rinsed after they are used.
- Some paper diapers are more irritating than others. Change brands if necessary.
- Change baby diapers as soon as they are wet or soiled.
- Wash buttocks with warm water and a dash of olive oil. Lightly pat the skin with a towel to dry. Do not rub.
- Air the buttocks for 20 minutes, 3 or 4 times a day.
- Apply a fragrance-free zinc oxide cream or petroleum jelly.
- If there is a fungal infection, a topical fungicide should be used. Redness does not disappear with zinc oxide type creams.
- If redness continues after 3 or 4 days despite the use of zinc oxide-based cream, see a health care professional.

Genital organs: Girls

- The lips of the vulva are normally swollen for 2 to 3 days after birth.
- Vaginal secretions may be tinted with blood. This pseudo-menstruation is also normal and results from the sudden absence of a mother's hormones after birth.

GENITAL CARE

- Clean the vulva during baths and with every diaper change.
- Use water and mild soap if stools are present, at least once a day.
- Clean starting with the urinary meatus (opening of the urethra) and ending at the anus in order to prevent the spread of fecal matter around the vagina and urethra.
- Thoroughly rinse and dry the area to prevent irritation.



Genital organs: Boys

- Testicles have generally fallen into the bursas and the scrotum is a purplish red.
- The foreskin is stuck to the gland; it will detach naturally from the gland within the first year of life. In 90% of cases, by age 3 most boys' foreskins have naturally dilated.

GENITAL CARE

- Wash the penis daily with mild soap, rinse and dry.
- Never manipulate the penis to dilate it from the glans (head of the penis). •

From *Tiny Tot to Toddler*, 24.

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INFORMATION FOR PARENTS

CHARACTERISTICS OF THE UMBILICAL CORD

◪ Whitish in colour at birth, it becomes black and dries out over time.

◪ The umbilical cord usually falls off between the 7th and 20th day after birth, or may take up to a month to fall.

CARE OF THE UMBILICAL CORD

◪ Use a Q-tip soaked in water to wash the base of the umbilical cord 2 to 3 times a day or at every diaper change, until scarring begins. Never use alcohol, as it will prolong the period required for the umbilical cord to fall off.

◪ Dry well to reduce odour and fight the risk of infection.

◪ Always keep the navel dry and exposed to the air. Never cover it with compresses or with diapers.

WARNING

Seek medical attention if the following symptoms are noticed:

- **Fever**
- **Persistent bleeding after the umbilical cord falls**
- **Redness and swelling around the cord**
- **Foul odour near the cord** •

From *Tiny Tot to Toddler*, 42–43.

INFORMATION FOR PARENTS

◪ A baby must fast (must not be fed) for 1 to 2 hours before being circumcised so that there is no aspiration of food (choking on vomit).

◪ The baby is strapped down onto a board with secure restraints to prevent his arms and legs from moving during the operation.

◪ After the foreskin is removed, petroleum jelly is applied to the bleeding penis along with a bandage to prevent it from sticking to the diaper. To remove the bandage, thoroughly soak it with water. It should be easy to remove.

◪ Diapers are attached loosely in order to avoid friction with the penis.

◪ The circumcised penis is checked every 30 minutes for the first 2 hours for excessive bleeding, and every 2 hours thereafter. It is normal for the bandage to be bloody. However, bleeding should not go on and on.

◪ The first urination is noted to ensure that the baby is not having any problem urinating.

◪ Around the second day, the yellowish exsudate (deposit of secretions) may appear on the glans (head of the penis). This is not a sign of infection and should not be removed. The exsudate will resorb (go away) as the penis heals. The penis must be gently washed at least once a day with water.

◪ Notify a health care professional (nurse, doctor) if you are concerned about bleeding, swelling, absence of urination or a suspected infection. •

From *Tiny Tot to Toddler*, 24.

INFORMATION FOR PARENTS

DETECTING JAUNDICE

◪ Place a baby in daylight to eliminate any distortion created by artificial light.

◪ Press one finger for a few seconds on baby's nose, then on the forehead and chest (sternum). If the baby is jaundiced, the skin will turn yellow immediately after it pales.

◪ Examine the whites of the eyes and the gums; jaundice is detected more easily this way in dark-skinned babies.

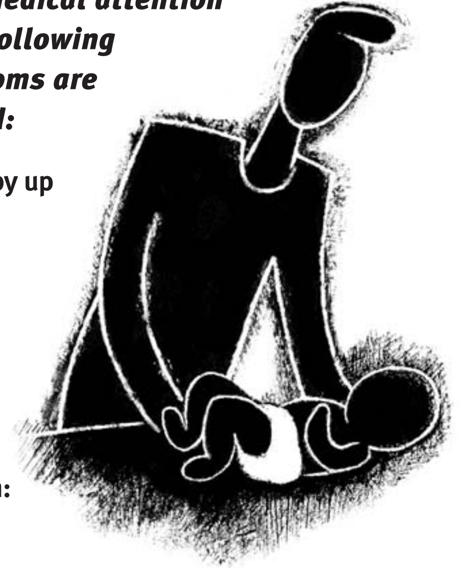
◪ When in doubt about skin colouration, see a nurse or doctor.

◪ Frequent feedings help eliminate bilirubin through bowel movements and urination:

- 8 to 12 times per 24 hours for breastfeeding babies.
- A minimum of 6 times per 24 hours for bottle-fed babies.
- Waken a sleepy baby for feedings by stimulating the head, palms of the hands, feet or by gently taking the covers off.

WARNING

Seek medical attention if the following symptoms are noticed:



- ▶ **Difficulty waking baby up**
- ▶ **Lethargic baby**
- ▶ **No interest in food**
- ▶ **Weak muscle tone**
- ▶ **Irritability**
- ▶ **Signs of dehydration:**
  - **Sleepiness**
  - **Dry mouth**
  - **Hollow eyes**
  - **Sunken fontanels**
  - **Dark, infrequent urination**
  - **Discoloration in stools and dark urine.** •

From *Tiny Tot to Toddler*, 25–26.

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INFORMATION FOR PARENTS

TAKING A BABY'S TEMPERATURE

A mercury thermometer is not recommended as there is a possibility that a baby could be exposed to its toxic contents if it broke.

Placing a thermometer in the mouth of a child under 5 years of age is not recommended as it is not safe.

CONVERSION TABLE

°F	°C
105.8	41
105	40.5
104.4	40.2
104	40
103.8	39.9
103.4	39.7
103	39.4
102.2	39
102	38.8
101	38.5
100.9	38.3
100.8	38.2
100.4	38
100.2	37.9
100	37.8
99.8	37.6
99.7	37.6
99.6	37.5
99.5	37.5
99	37.2
98.6	37
98	36.6

NORMALE TEMPERATURE for newborns varies according to the methods used.

UNDER-ARM READING: 36.2°C to 37.2°C

RECTAL READING: 36.2°C to 38°C

- Placing a thermometer in the ear of a child under 2 years of age is not recommended as it will not provide a reliable reading (too much handling involved).

Rectal temperature is the most precise way to take the temperature of an infant under 2 years of age.

- It is less precise to take a child's temperature under his or her arm. But a fever may be detected this way.

PROCEDURE FOR RECTAL TEMPERATURE READINGS (1ST CHOICE)

- Clean the thermometer with cold, soapy water and rinse it off.
- Cover the silvery end with petroleum jelly (Vaseline).
- Place baby on his or her back, with legs bent.
- Gently insert the thermometer about 2.5 cm into the rectum, while holding it between the fingers.
- A beeping signal will indicate when the temperature is ready to read.
- Clean the thermometer.

PROCEDURE FOR UNDER-ARM TEMPERATURE READINGS (2ND CHOICE)

- Use a rectal thermometer.
- Clean the thermometer in cold, soapy water and rinse off. Place the end of the thermometer in the centre of the underarm. Hold the arm of the newborn to his or her body.
- A beeping signal indicates when the temperature is ready to be read.

If an under-arm reading shows that baby has a fever, take a rectal reading for more accurate results.

Fever in newborns

- **If a fever is detected in a newborn, consult a health care practitioner.**
- Should immediate medical attention be required, it is not recommended that antipyretic (fever-reducing) medication be given. The child should be examined and treated on site under medical supervision.
- When the newborn's fever is over 38.5°C (rectal reading), an analgesic medication like acetaminophen is recommended.
- **Do not use ibuprofen for children under 6 months of age.**
- Do not use aspirin (ASA).
- The goal of treating a fever is mainly to make the baby more comfortable.
- Administer doses according the baby's size.
- Take the baby's temperature 60 minutes after administering the medication.
- Dressing the baby in light, loose clothing and lowering the room temperature to reduce a fever yield better results when done about 1 hour after taking acetaminophen.
- Do not give a feverish baby a sponge bath or a warm bath as neither are effective in treating fever and often cause discomfort and shivering.

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◪ Do not rub rubbing alcohol on babies as it could intoxicate them.

◪ Do have a feverish baby drink more often to avoid dehydration.

◪ Do make sure that the baby is wetting 6 to 8 diapers a day.

FEBRILE CONVULSIONS

If a baby loses consciousness or if his or her movements become jerky, what should be done?

◪ Remain calm.

◪ Turn the baby's head to one side and do not place anything in his or her mouth.

◪ Go see a doctor.

From *Tiny Tot to Toddler*, 402–408.

WARNING

Seek immediate medical attention if a nursing baby under 6 months has one or several of these symptoms:

- **Febrile convulsions**
- **General health deteriorating**
- **Difficult to awaken or comfort**
- **Refusal to drink**
- **Frequent vomiting**
- **Dehydration**
- **Generally distressing condition.**

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INFORMATION TO PARENTS

NEWBORN BEHAVIOUR

◪ From the time of birth, a healthy baby is alert and relatively calm. From the time that early skin-to-skin contact takes place, hunger cues are apparent.

◪ It has been shown that newborns that have skin-to-skin contact within 90 minutes of birth cry less than those who do not.

◪ During the first 24 hours of life, a newborn is recovering from the birthing experience. He or she may be sleepy and may sleep for several hours at a time. It is possible that a newborn may need to be stimulated in order to start drinking during this period.

◪ It is easier to stimulate a newborn when he or she is drowsy (i.e., heavy eyelids, sucking with tongue, movements of hands towards the mouth) than when deep sleep sets in (i.e., regular breathing, occasional starts, almost no facial movement).

◪ After the first 24 hours, babies cycle between sleep and wakefulness. Newborns try various combinations of these phases.

◪ Although there are individual differences, newborns sleep approximately 18 hours a day.

◪ A healthy newborn can cry up to 3 hours a day.

In the first days of their lives, newborn babies show innate abilities.

THE ABILITY TO SELF-COMFORT

Newborns self-comfort by:

◪ Placing hand to mouth.

◪ Sucking on fist or tongue.

◪ Focussing on a sound or object.

A newborn also needs consoling, which can include seeing a face, being picked up, or being tightly swaddled and rocked.

THE ABILITY TO SHUT OUT EXCESS STIMULI

Newborns can protect themselves against overstimulation by not reacting to repetitive stimuli. For example, while a newborn may start the first time a telephone rings, this reaction will diminish every time the sound is repeated.

ABILITY TO ORIENT TO SOUNDS AND SIGHTS

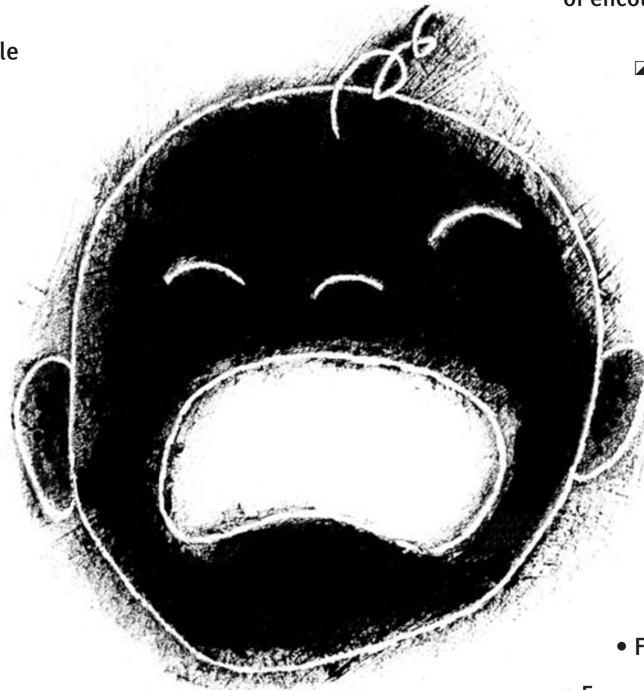
◪ VISUAL STIMULI

A newborn

- is attracted to faces and round forms.
- seeks out visual contact.
- sees at a distance of 25 cm to 30 cm.

Parents can stimulate a newborn's vision by sitting in front of him or her at a distance of 25 cm to 30 cm and slowly moving from left to right or by softly talking to their baby.

Some babies do not open their eyes. Swelling of the eyelids or noise in the room may explain this behaviour. Dimming the lights and reducing noise are two effective ways of encouraging newborns to open their eyes.



◪ AUDITORY STIMULI

- Newborns hear very well.
- They can turn their head to listen to a variety of noises.
- They are particularly attracted to the sound of their mother's voice, which is familiar to them.

When newborns make a face or turn their heads away from a source of stimulation, it may be too much for them.

A newborn who is ready to interact with his or her environment will give the following cues:

- Flexes arms and legs.
- Forms an "O" with the mouth.
- Makes direct eye contact.
- Remains alert.
- Can be comforted.
- Moves hand to mouth.
- Has stable breathing.
- Moves slowly and calmly.
- Smiles (6th week).
- Gurgles (6th week).

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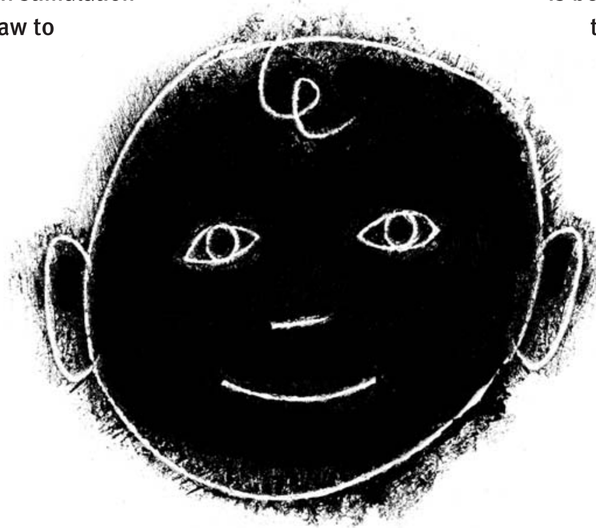
A newborn who is stressed or disengaged gives cues to show that there is too much stimulation or that he or she needs to withdraw to rest and regroup.

- Closes eyes
- Makes faces
- Sneezes
- Hiccups
- Yawns
- Shivers
- Sticks out tongue
- Regurgitates or vomits
- Breathes rapidly
- Groans
- Brings hand to ear
- Hyperextends body
- Cries.



Although these cues do not always mean that a baby is being overstimulated, recognizing them allows the informed observer to better assess the situations a baby may experience.

HOW TO REACT TO CUES THAT A BABY IS DISENGAGING

◪ Speak to him or her softly.

◪ Turn down the lights.

◪ Swaddle him or her.

◪ Comfort the baby on one shoulder for a few minutes. •

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INFORMATION FOR PARENTS

◪ Placing healthy babies on their backs does not endanger their health or increase the risk that they will choke or experience respiratory difficulties in their sleep.

◪ Inform all caregivers that a baby must be placed on his or her back to sleep.

◪ **There is no risk in letting a baby stomach lie stomach-down while he or she is awake and being closely monitored.** A wide-awake newborn can be placed stomach-down within the first few weeks of life.

◪ A stomach-down lying position promotes muscle development in the neck and midsection.

If a newborn falls asleep while lying stomach-down, it is important to reposition the infant on his or her back.

◪ When babies get older and can turn over on their own, they can choose the position they prefer best. Babies who can change positions on their own need not be repositioned on their backs in their sleep. Nonetheless, it is recommended that they be put to bed on their backs.

◪ Avoid environments where there are drugs or smoke.

◪ Breastfeeding can help protect babies against Sudden Infant Death syndrome (SIDS).

◪ Room temperature must be comfortable (20°C to 22°C). Avoid overheating.

Do not use comforters, lamb's skin, stuffed toys or protective crib barriers.

◪ A baby can sleep with his or her parents, but not if one or both have impaired reflexes (due to drug or alcohol consumption or excessive fatigue).

◪ Keeping a baby on his or her back all the time can lead to plagiocephaly (flat head). This phenomenon occurs when a newborn's head is always in the same position in sleeping or waking hours.

◪ Since babies' skull bones are soft, their heads can deform if they always sleep in the same position.

◪ This flattening of the head does not interfere in the least with brain development.

◪ Ways to guard against plagiocephaly (flat head):

- While supervising the baby, set him or her up stomach-down several times a day during waking moments.
- Alternate the baby's position when putting him or her to bed. One day the baby's head can be positioned towards the head of the bed, while another day the baby's head can be positioned towards the foot of the bed.
- A mobile can be placed beside the bed, out of baby's reach, in a direction where he or she is not used to looking. •

From *Tiny Tot to Toddler*, 62–64.

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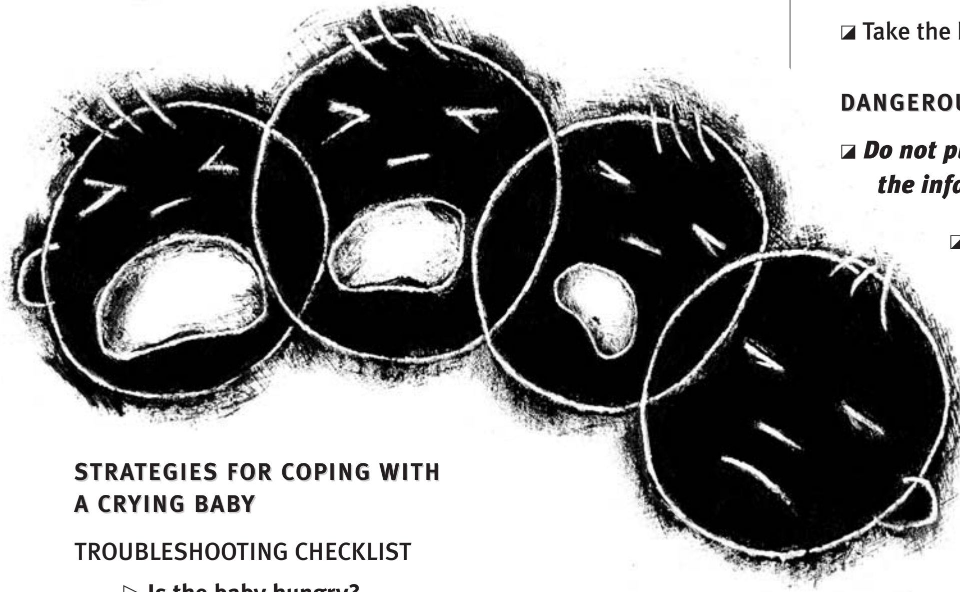
INFORMATION FOR PARENTS

Babies cry an average of 1 to 1.5 hours per day during the first 3 weeks of life.



STRATEGIES FOR COPING WITH A CRYING BABY

TROUBLESHOOTING CHECKLIST

- ▷ **Is the baby hungry?**
- ▷ **Is the nipple hole too large?**
- ▷ **Does the diaper need to be changed?**
- ▷ **Does the baby need to burp?**
- ▷ **Is the baby in pain?**
  - **Colicky behaviour often occurs in the evening.**
  - **It is more frequent from 3 weeks to 3 months of age and decreases over time.**
  - **The baby is tense with a red face and thighs folded to stomach.**
- ▷ **Is the baby sick? (Does he or she have a fever or have difficulty nursing?)**
- ▷ **Is the baby hot or cold?**
- ▷ **Should the baby's position be changed?**
- ▷ **Does the baby need to suck on something?**
- ▷ **Does the baby need to be comforted through physical contact?**
- ▷ **Is the baby tired?**

◪ When a baby cries, try to hold and console him or her as quickly as possible.

◪ Babies spend a good 9 months cozied up snug in the womb, listening peacefully to their mother's heartbeat. So there is no such thing as spoiling a baby by holding it too much. Babies need to be held — that is how they learn that they are cared for and come to trust their parents.

◪ Sing a lullaby or speak to a crying baby, play music or swaddle the baby tightly in a warm cover, just out of the dryer.

◪ Rub the baby's back.

◪ Give him or her a bath.

◪ Go for a stroll with a frontal baby sling.

◪ Take the baby for a ride in a car.

DANGEROUS SOLUTIONS

◪ ***Do not place a baby on a dryer. The vibrations can move the infant up to the edge and cause a fall.***

◪ ***Do not heat beanbags in the microwave and use them to warm up a baby, as they can cause burns.***

If, despite all efforts, your baby is still crying and you are upset, contact a nurse or doctor.

If, even after an examination by a nurse or doctor, your baby is still crying and you feel helpless, exasperated and lose hope, NEVER SHAKE A BABY.

WHY A BABY SHOULD NEVER BE SHAKEN

The musculature of babies' necks is very weak and their heads are relatively big and heavy. The impact of a blow to the head can cause internal bleeding in the skull and lead to major brain damage (mental retardation, loss of vision, hearing, paralysis, convulsions or death). NEVER SHAKE A BABY.

GIVE YOURSELF A BREAK

◪ If you need a rest, try to plan rest times in advance, by asking a trustworthy person to babysit.

◪ Screen your babysitters very carefully. In deciding who will sit with your baby, rule out any inexperienced sitters who may have difficulty controlling their frustration or who show any resentment towards any baby.

COPING STRATEGIES FOR PARENTS WITH CRYING BABIES

- ▷ When a baby is crying on and on and you feel yourself losing patience, swaddle the baby tightly in a blanket, place him or her in a crib (positioned on his or her back) and leave the room for a few minutes to calm down.
- ▷ Call someone to talk about the situation.

OR

- ▷ Ask a trustworthy, available, calm person to deal with your crying baby to take over.
- ▷ If you are concerned about your baby's level of irritability, contact a health care provider. ●

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INFORMATION FOR PARENTS

Car seats for newborns

◪ Car seats for newborns mould to the form of a baby's body and comfortably him or her in a semi-seated position, providing good back support.

◪ Place a baby seat facing away from traffic, towards the back window. This position will help protect his or her neck and rib cage in the event of an accident.

◪ **It is recommended that a baby seat be attached in the centre back seat area, beside another passenger who can watch the baby.**

◪ The baby seat may be placed on the front seat, provided that the vehicle not is equipped with a front air bag on the passenger side.

ATTACH THE BABY SEAT ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS

◪ Attach the baby seat to the back car seat with a safety belt by threading it through the loopholes in the baby seat.

◪ Place the shoulder strap behind the car seat.

◪ Thread the harness straps of the baby seat through the slots just under the baby's shoulders so that the straps cover the baby's shoulders.

◪ Click the metal seatbelt tongue into the buckle and raise the attachment for the straps, repositioning it in the middle of the baby's chest to prevent ejection on impact.

◪ Leave a finger-width of slack between the straps and the baby's collar bone.

All newborns must leave the hospital in an appropriate car seat.

For more information, see the pamphlet *Un siège d'auto pour enfants mal installé: danger!* from the Société de l'assurance automobile du Québec (available at the SAAQ, in Montreal police stations or in CLSCs). At all police stations, police officers are trained to assess the quality of child safety seats and know how to install them.

From *Tiny Tot to Toddler*, 17–19, 359–360.

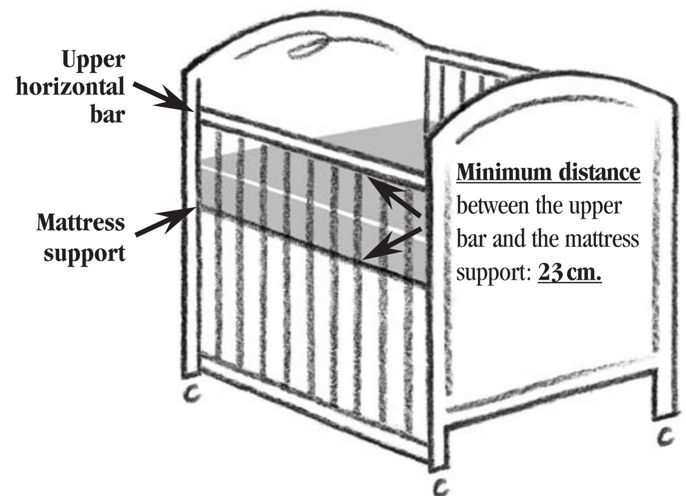
Cribs

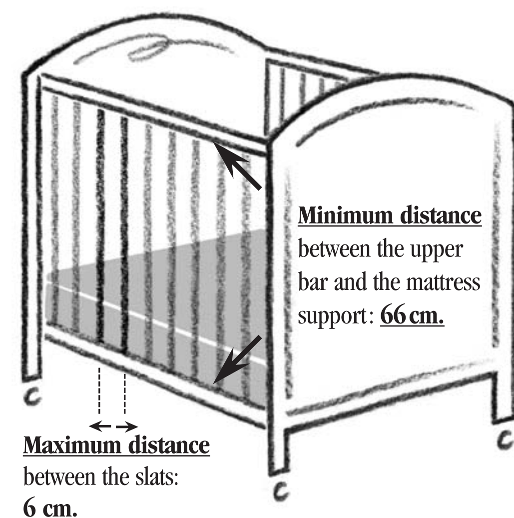
A BABY'S CRIB MUST MEET SPECIFIC NORMS TO BE SAFE

◪ The mattress support system must be fixed in place. If it can be moved without the use of tools, dispose of the bed (DO NOT GIVE IT TO ANYONE) and get a bed with a fixed mattress support.

◪ The maximum space between the slats must be 6 cm.

◪ The distance between the mattress and the sides or extremities of the bed must be a maximum of 3 cm.





◪ The mattress supplied with the crib must be no thicker than 15 cm and must fit snugly.

◪ The drop side can be unlocked (by applying two simultaneous knocks on both sides) and relocks automatically.

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◪ When the drop side is lowered to the maximum and the mattress support is raised as high as it can be, there must be a minimum distance of 23 cm between the upper bar of the drop side and the mattress support.

◪ When the drop side has been raised to its maximum height and the mattress support is in its lowest position, there must be a minimum distance of 66 cm between the upper bar of the drop side and the mattress support.

Exposure to the sun

SINCE WE KNOW THAT

◪ The skin is the largest organ

◪ Ultraviolet rays are most intense between 11 a.m. and 4 p.m

AND

◪ The most harmful exposure to the sun happens in early childhood,

WE RECOMMEND THE FOLLOWING:

◪ Keep babies under 6 months of age in shaded areas. Since the skin of a newborn baby is delicate, it is best to avoid using sunscreen, which can cause allergic reactions.

◪ Do not expose babies younger than 1 year of age to direct sunlight; keep babies in covered strollers, under parasols or in shaded areas.

◪ Generally speaking, all babies should be kept in the shade, protected by a broad-rimmed hat and dressed in tightly woven clothing. •

From Tiny Tot to Toddler, 370–371.

ISBN 2-89510-273-2
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