



HUMAN REPRODUCTION

Anne Retuerma-Dioneda
Associate Professor V

TOPICS:

After Labor and Delivery:

1. Post Natal Care of the Newborn
2. Breastfeeding
3. Postpartum Care of Mothers
4. Postpartum Depression
4. Role of the Father

RECEIVE THE BABY ON A WARM, CLEAN AND DRY TOWEL

- ✓ Warmth is provided by keeping the baby dry and wrapping the baby with adequate clothing in the two layers.
- ✓ Ensuring head and extremities are well- covered.
- ✓ Baby should be kept by the side of mother, so that the mother's body temperature can keep the baby warm.



- ✓ Baby can be placed in skin to skin contact with mother (kangarooing) to maintain temperature of infant and facilitate breastfeeding.
- ✓ Bathing is avoided to prevent hypothermia and infections.
- ✓ Ambient atmosphere temperature to be kept warm adequately (28 – 32 °C)



- ✓ Temperature should be recorded (axillary, skin and human touch method) frequently during initial postnatal period.
- ✓ Warmth to be maintained during transfer from hospital to home on discharge or whenever needed.

✓ Prevent the baby from heat loss.

❖ **Convection** :- The flow of heat from the body surface to cooler surrounding air.

- Cover the baby with a blanket, wear a cap.

❖ **Conduction** :- The transfer of body heat to the cooler solid object in contact with the baby.

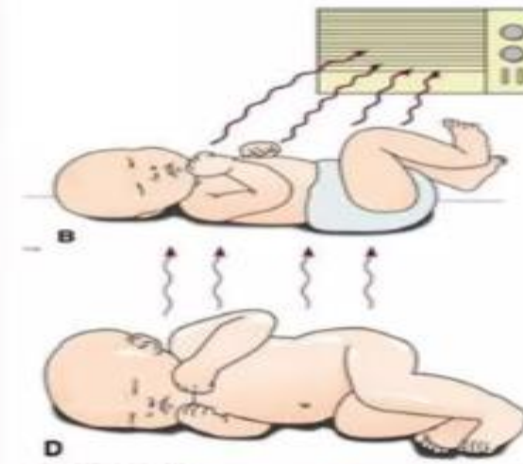
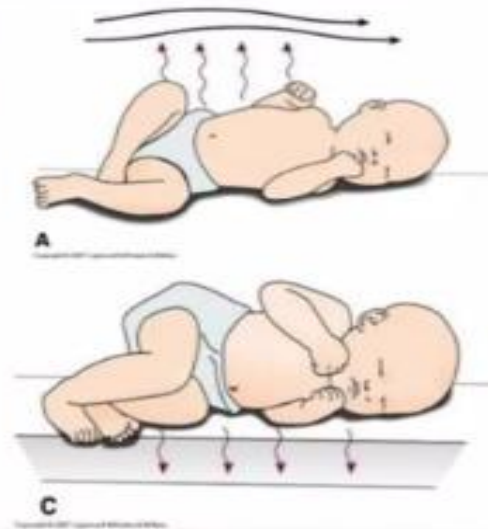
- Place on mothers body skin to skin contact.

❖ **Radiation** :- The transfer of heat to a cooler object not in contact with the baby.

- Keep away from cold windows and cold objects.

❖ **Evaporation** :- Loss of heat through conversion of a liquid to a vapor.

- Dry the infant immediately.



BREASTFEEDING

- ✓ The baby should be put to the mother's breast within half an hour of birth or as soon as possible the mother has recovered from the exertion of labor.
- ✓ No prelacteal feeds to be given and the colostrum feeding must be offered.
- ✓ Initially the feeding should be in short interval of 1 to 2 hours and then every 2 to 3 hours.



- ✓ Nurse should assist the mother to feed her baby adequately for the maintenance of hydration and optimum nutrition.
- ✓ Exclusive breastfeeding procedure should be explained to the mother and family members.



Breastfeeding is the feeding of an infant or young child with breast milk directly from female breasts (i.e. via lactation).

It is the normal way of providing young infants with the nutrients they need for healthy growth and development.



“Breast fed Infants... are Healthy Infants”

ANATOMY AND PHYSIOLOGY OF BREAST FEEDING

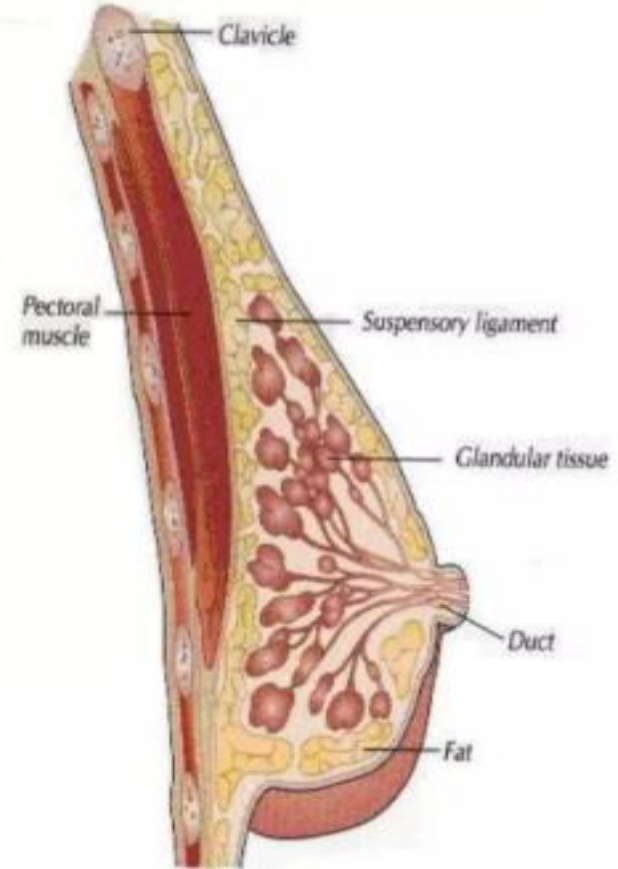
Breasts consists of gland tissues (consisting lactiferous sinuses) that make milk, which goes along milk ducts towards the nipple.

Suckling stimulates nerve endings,

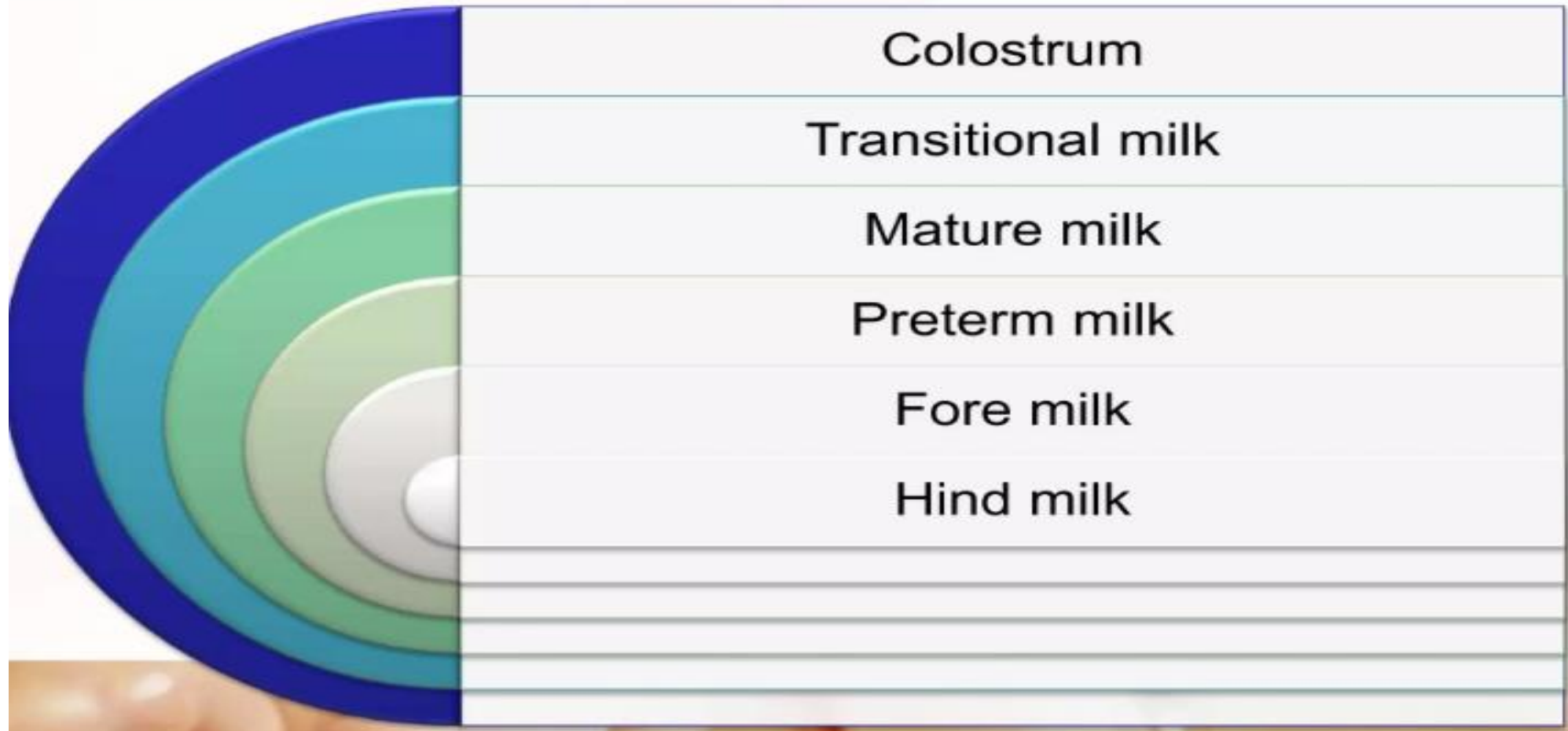
Message is carried to anterior pituitary which synthesizes prolactin.

Prolactin stimulates gland cells to stimulate milk production.

Oxytocin is released from posterior pituitary, which helps in contracting the muscle cells around the alveoli, resulting in milk ejection from nipple.



TYPES OF BREAST MILK



COLOSTRUM

- Is milk secreted during first week after delivery
- Yellow, thick, has more antibodies and WBC
- Secreted in small quantity
- High protein
- **NEVER BE DISCARDED**

TRANSITIONAL MILK

- Milk secreted during two weeks
- Contain immunoglobulin and low protein content
- Increase fat and sugar content



MATURE MILK

- Follows transitional milk
- More thinner and watery
- Contains all essential nutrients for growth of the baby

PRETERM MILK

- Is breast milk of a mother who delivers prematurely
- High quantity proteins, sodium, iron and immunoglobulins



FORE MILK

- Milk secreted at the start of a feed
- Watery, rich in proteins, sugar, vitamins, minerals, water
- Satisfied the baby's thirst

HIND MILK

- Comes later towards the end of a feed
- Richer in fat content
- Provides more energy, satisfies baby's hunger
- For optimal growth baby needs both fore and hind milk
- Baby be allowed to empty one breast fully first
- Baby receives only foremilk cry excessively



STORAGE OF BREAST MILK

- Human milk can be stored at room temperature for 6-8 hours.
- Expressed milk can be stored in an insulated cooler bag with ice packs for 24 hours.
- Breast milk can be stored in the refrigerator for about 5 days at about 40°F.
- It can also be kept in a freezer compartment of a fridge for up to 2 weeks at 0-5°F.
- It can be stored in a deep freezer for about 3-12 months.



Breast-Feeding Positions



Cradle hold



Cross-cradle hold



Football hold



Lying down

SIGNS OF EFFECTIVE BREAST FEEDING

- Frequent feedings 8-12 times daily.
- Intermittent episodes of rhythmic suckling with audible swallows should be heard while the infant is nursing.
- Infant should have about 6-8 wet diapers in a 24 hour period once breast feeding is established.
- Infant should have minimum of 3-4 bowel movements every 24 hours.
- Stools should be soft and yellow after day 3.
- Average daily weight gain of 15-30g.
- Infant has regained birth weight by 10th day of life.



ADVANTAGES OF BREASTFEEDING TO CHILD

1. Complete nutrition-

- contains most suitable protein and fat rich in essential fatty acids- linoleic acid and linolenic acid
- More lactose than other milk
- Offers enough vitamins, iron and water and has correct proportion of salt, calcium and phosphate.
- Special enzyme 'lipase'- helps in proper digestion of fat



ADVANTAGES OF BREASTFEEDING TO CHILD

2. Cover Against Infection-

Has anti-infective factors-

- Immunoglobulins (IgA)
- Lactoferrin
- Lysosymes
- Cells (T & B lymphocytes)
- Antiviral factor



ADVANTAGES OF BREASTFEEDING TO MOTHER

1. Convenient
2. Cheaper than artificial milk
3. Helps in expulsion of placenta & minimizes risk of PPH
4. Calming effect
5. Contour of body come back to normal



ADVANTAGES TO BOTH MOTHER AND CHILD

1. Develop a close loving bond
2. Child spacing
3. Cost benefits



BARRIERS TO EFFECTIVE BREAST FEEDING

- ☐ Lack of confidence in mother
- ☐ Belief that breast milk is not sufficient
- ☐ Lack of adequate support system
- ☐ History of previous breast surgery
- ☐ Breast engorgement, crackled and sore nipples.
- ☐ Embarrassment by mother
- ☐ Chronic illness in mother; psychosis, cancer

CONTRAINDICATIONS TO BREAST FEEDING

- HIV infection
- Active Tuberculosis
- Herpes lesions on mother's breast
- Infant with inborn error of metabolism, phenylketouria should not be breastfed.
- Mothers on certain medications; anticancer therapy, radioactive isotope, etc.- Feeding is withheld for the period the mother is on the drug. She can express and discard the feed. After cessation of the medication.

NOT ENOUGH MILK

- Mothers often complains
- Reassurance and psychological support only if baby is gaining weight and passing adequate amount of urine
- CAUSES- not breastfeeding frequently, too short or hurried breastfeeds, poor position, breast engorgement or mastitis

Importance of Postpartum Care

- More than 60% of maternal deaths take place during postpartum period
- First 48 hours are most crucial
- Most maternal and neonatal complications occur during this period.

Advice to the Mother

1. Postpartum care and hygiene

- Wash perineum daily
- Wash hands frequently and take a bath daily.

2. Breastfeeding

- Exclusive breast feeding, at least 6 to 8 times during the day & 2-3 times during the night

2. Nutritional Advice

- To increase intake of fluid and food especially iron and protein rich foods like green leafy vegetables, eggs and meat.

2. Adequate Rest



1. Taking Care of New Moms:

- After childbirth, new mothers need special care to recover and postnatal care facilitates the recovery process for new mothers.
- It as a personalized healing plan mothers. Care during this time may tackle physical challenges like uterine contractions, vaginal bleeding, and discomfort.
- Regular check-ups with the healthcare providers ensures any issues are caught early, promoting faster healing and reducing the risk of complications.

2. Supports Emotional Wellbeing:

- It is no secret that postpartum period can be emotionally intense. This duration is like a rollercoaster ride for new moms. The rollercoaster of feelings like mood swings, anxiety of being a mother.
- Family, friends and health provides can extend support to new mothers. They provide emotional support to the new mother and provide counseling to moms, helping moms navigate these emotional waves. This support not only boost a mother's mental well-being but also lowers the risk of postpartum anxiety and depression.

3. Essential Nutrients:

- Imagine a plate full of colorful fruits, vegetables, healthy postpartum care snacks, whole grains, lean proteins, healthy fats etc.
- Such foods provide essential vitamins, minerals, antioxidants, iron, folic acid, omega-3 etc. these nutrients are like tiny repair tools for your body, supporting healing and rejuvenation post childbirth and promotes your overall well-being.

4. Healthy Weight Loss:

- Eating a balanced yet nutritious diet can help new mothers gradually lose any excess weight gained during pregnancy in a healthy and sustainable way. it is not about having crash diets, it's about feeling healthy and strong as you embrace your new role a mom.

Postpartum Physical Self-Care



Rest and Sleep

Get enough rest and sleep, nap as your baby sleeps, and seek help for night time sleep

Gentle Exercise

Do approved exercises, start with walking or stretching, and increase intensity gradually

Balanced Nutrition

Eat healthy meals with green foods and protein, and drink water to stay hydrated

Pelvic Floor Exercises

Get professional guidance to do pelvic floor muscle exercises preventing incontinence

Pain Management

Consult healthcare provider for pain management, and use recommended medication

Personal Hygiene

Maintaining good hygiene is crucial, practice wound care, and change pads regularly

Postpartum Depression



- Having a new baby brings on a lot of big feelings – love, joy, excitement, frustration, and nervousness to name a few.
- Experiencing highs and lows in the first weeks and months after birth are to be expected given the big emotional and physical changes that come with having and caring for a new little one.
- But for many, feelings of depression and anxiety can overshadow the celebration of welcoming your new family member

What are the “baby blues” ?

About two to three days after giving birth, feelings of depression and anxiety are common. You may experience crying for no reason, having trouble sleeping or questioning your ability to care for your new baby. “

This is largely due to the shift in levels of progesterone”. But changes in hormones are unlikely to be the only cause. Beyond these hormonal changes, there are other factors that can lead to these feelings such as extended periods of tiredness or exhaustion, challenges with breastfeeding and other postpartum complications.

Understanding Postpartum Depression

What is Postpartum Depression?

Postpartum depression (PPD) is a severe type of depression that develops following childbirth.

Unlike the "baby blues," which are fleeting sensations of melancholy and exhaustion, PPD is more powerful and persistent. It can limit a mother's capacity to care for herself and her child.

Signs and Symptoms Symptoms of Postpartum Depression

- Persistent Sadness:** Feeling hopeless, sad or empty for most of the day.
- Loss of Interest:** Lack of interest in activities you once enjoyed, including spending time with your baby.
- Fatigue:** Extreme tiredness that doesn't improve with rest.
- Sleep Issues:** Difficulty sleeping, even when the baby is asleep or sleeping too much.
- Appetite Changes:** Appetite fluctuations might result in significant weight loss or increase.
- Difficulty Bonding:** Struggling to connect with your baby.
- Feelings of Worthlessness:** Intense feelings of guilt, shame or inadequacy.
- Thoughts of Harm:** Intrusive thoughts about harming yourself or your baby.

Understanding Postpartum Anxiety

What is Postpartum Anxiety?

Postpartum anxiety (PPA) involves excessive worrying, fear and anxiety after childbirth.

It can manifest as constant worry about the baby's health, overwhelming feelings of dread and an inability to relax.

Symptoms of Postpartum Anxiety

- Excessive Worry:** Constant worry that something bad will happen to the baby.
- Restlessness:** Inability to sit still or relax.
- Physical Symptoms:** Experiencing panic attacks, nausea or heart palpitations.
- Irritability:** Becoming easily frustrated or angry.
- Hypervigilance:** Being overly alert and unable to switch off.

Risk Factors

Several factors can increase the risk of developing postpartum depression and anxiety:

- History of Mental Health Issues:** Previous depression or anxiety.
- Lack of Support:** Limited emotional or practical support from family and friends.
- Stressful Life Events:** Significant life changes, such as relocation or financial issues.
- Complications in Birth:** Difficult pregnancy or childbirth experience.
- Hormonal Changes:** Drastic changes in hormone levels after birth.

How to Get Help

Seek Professional Help

If a mother suspect she has postpartum depression or anxiety, it is essential to seek professional help.

Contact a healthcare provider, who can conduct a thorough assessment and recommend treatment options.

These may include:

- Therapy:** Cognitive behavioral therapy (CBT) and other forms of counseling can help manage symptoms.
- Medication:** Antidepressants and anxiety medicines may be administered.
- Support Groups:** Joining a group for new mothers experiencing similar challenges can provide emotional support.

Selfcare Strategies

In addition to professional help, selfcare strategies can also aid in recovery:

- Rest and Sleep:** Prioritize sleep and rest whenever possible.
- Healthy Diet:** Maintain a balanced diet to promote general health.
- Exercise:** Gentle exercise, such as walking, can boost mood and energy levels.
- Connect with Others:** Contact friends, relatives or support groups for emotional assistance.

The role of the Father

Preparing for Fatherhood



- The journey of becoming a father is different for everyone. Some partners are fearful, some are excited. There is no “right” way to feel.
- Some men experience sympathetic pregnancy symptoms, know as “Couvade Syndrome.” The men may gain weight, crave foods, or have mood swings.



- When a woman becomes pregnant, her partner also undergoes a wide range of emotional changes.
- After finding out they will be a father, men often reflect upon their own childhood to form an idea of how they do or do not want to raise their child.
- The expectant father and mother must communicate and be honest about the baby. The father can still be active during the pregnancy by helping plan the birth, driving the mother to doctor's appointments, or providing financial support.

- Being a father means getting involved. A father should participate in feedings and changings. Skin-to-skin contact is optimal for creating that close bond. It is also calming for the parent and baby. Some parents prefer the use of a sling. This practice, called Kangaroo Care, is wonderful for everyone. The physical and emotional development of the newborn is supplemented by it and it is used to treat and comfort premature babies and those born with drug addictions or illnesses.



- As the newborn grows into an infant, the father has more opportunities for play time.
- Infants are really good copy cats and love to babble along with what daddy is saying. A classic game of peekaboo will elicit deep belly laughs from the baby and entertain daddy, as well.



Thank you!