



Infant and Toddler Nutrition: A Mental Health Perspective

Feeding Infants & Toddlers
More than food: an attachment approach to parenting around eating for the very young.

+ Presenters

- Dr. Lisa Graves, MD, CCFP, FCFP
- Dr. Patricia Mousmanis, MD, CCFP, FCFP
- Dr. Mireille St-Jean, MD, CCFP FCFP

+ Disclosure

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The presenters have no conflicts to declare.

+ Objectives

By the end of this presentation, the participant will be able to:

- 1) provide key information on how best to support optimal infant & toddler nutrition (including breastfeeding, formula and introduction of solid foods)
- 2) describe how feeding issues potentially impacts maternal mental health and extended family dynamics
- 3) explain to parents how to implement strategies in dealing with picky-eating and other mealtime issues that interfere with the parent-child relationship

+ How does nutrition and mealtime impact family dynamics?

- Feeding is a key part of infant-parent interaction and as such can be seen as a conduit to build foundations for early mental health.
- Feeding can be a stressful topic, and information from service providers and other information sources can be contradictory or confusing, or at times condemning.
- This presentation will provide a framework to assist professionals interacting with families in this important subject.

+ Part #1

Nancy is absolutely in love with her son Kevin, now 4 weeks old. She is breastfeeding, something that she never expected to do. The initial days were hard with latching difficulties and sore nipples. She is through what she has been told to be the most difficult until...

Kevin is on a "Nursing Strike"!

+ “Nursing Strike”!

Suddenly, unannounced and totally unexpected, Kevin refuses the breast, using what he can of his little hands to push Nancy away, fussing and in tears. Only once well asleep, does Nancy manage to have Kevin feed.

Nancy is worried about her son and feels lost without the ongoing intimacy shared.

What can she do?

+ Breastfeeding

- Current evidence supports exclusive breastfeeding as the optimal method of early infant feeding, providing multiple health benefits and disease prevention for both infants and their mothers
- Families receive much of their early care in primary care family practice setting, in the postpartum unit, from lactation consultants and from public health nurses doing home visits.
- Knowledge and support from EVERY PROFESSIONAL in their care team is essential to help promote, protect and support successful and continued breastfeeding

+ Breastfeeding Schedule

- Breastfeed based on infant's hunger cues, for unrestricted lengths of time
 - Prevents excessive weight loss and jaundice in the infant.
 - Prevents maternal breast engorgement.
- The normal healthy term newborn will feed about every 1 to 4 hours, to a total of 8 to 14 times or more in 24 hrs.

+ Review: 1st week of baby's life

- **Day 1:** usually sleepy, erratic feeds, 1 wet diaper, meconium (dark black thick stool)
- **Day 2:** more alert and demanding, frequent feeds
- **Day 3-5:** transitional milk, breast fullness, green/brown stools; no more weight loss
- **Day 6+:** mature milk, yellow seedy stools, 6 heavy wet diapers, weight gain 20-30g/day
- **Day 10-14:** return to birth weight

+ Signs of adequate hydration in infant

- **Urine:** 1 wet diaper for each day of life, until day 6 → then at least 6 heavy wet diapers/24 hrs.
- **Stools:** yellow, soft stools by day 5 of life
- **Activity:** alert baby, waking up at least every 1-4 hrs to feed
- **Breast:** fullness vs. softness after feeds
- **Weight:** 7 -10% weight loss regained by day 10-14, then 20-30g/d

+ Initial Newborn Visit(s)

The Health Care Professional will always

Address any new concerns and:

- Confirm appropriate weight gain:
 - up to 8% loss of birth weight, regained by 2 weeks
 - acceptable weight gain 20 - 30 g/day
- Observe breastfeeding and check and latch
- Inspect mother for sore nipples and examine infant

Manual expression works better to extract the thick, honey-like colostrum than a breast pump. According to the WHO, all new mothers should learn how to manually express while in hospital → fast and easy, no need for equipment

+ Pacifiers

- Although pacifiers may play a role in protecting against Sudden Infant Death Syndrome, it may be prudent to delay the introduction of pacifiers until after breastfeeding is established. Evidence on this topic is conflicting and requires further study. In the NICU, pacifiers may be used for suck training and pain relief.
- The Baby-Friendly Initiative: Protecting, promoting and supporting breastfeeding CM Pound, SL Unger; Canadian Paediatric Society Nutrition and Gastroenterology Committee, Hospital Paediatrics Section Paediatr Child Health 2012;17(6):317-21

+ The key to breastfeeding success...

- What is the ONE aspect of breastfeeding that is so important, so vital to success, especially early on?
- What, if properly established, can avoid many breastfeeding problems like → early weaning, poor milk supply, nipple pain and trauma ?
- What is the most common cause of early nipple pain with breastfeeding?

THE LATCH

+ Bringing the baby to the breast



Photo: Frank Roop and McGill Instructional Multimedia Services

+ To summarize, a good latch means..

- Nose is away from breast
- Chin is touching breast
- Mouth is wide open → most of lower areola in mouth
- Head is back
- Lips are everted
- Tongue is down

If it hurts, it's not right!

+ So do we have to fix the latch ourselves?

- **NO!**
- Step 1 → Importance of recognizing a poor latch, and identifying that there is a problem
- Step 2 → Appropriate referral to lactation consultants and/or public health nurses who can support the breastfeeding dyad
- Step 3 → Link breastfeeding dyad to community resources for education including on line videos

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Asked Questions - What can I do if my baby has a nursing strike?

What can I do if my baby has a nursing strike?

During the time that your baby is refusing to nurse, you will need to express your milk either by hand or by pumping, in order to maintain your milk production. Do this as frequently as your baby would normally nurse. If your baby has refused several feedings, you can offer your expressed milk in a cup. Avoiding bottles and pacifiers is recommended during this period in the hope that your baby's sucking urges will encourage him to start nursing again.

Spending lots of time skin-to-skin with your baby can be very helpful. You can also try:

- taking a warm bath together
- making the breast available while baby is sleepy, especially when he is just waking up
- singing to or rocking your baby while holding him skin-to-skin
- nursing in a different position or location

FIND A GROUP
JOIN
DONATE
Leader Resources
Access LLLC Resources

+ Strategies to handle nursing strikes

First, continue nursing the baby in his sleep.

Then also, spend time together, skin to skin, have a bath together, dance together, sing to your baby and nurse somewhere different or offer a whole new position.

The answer from working through the "senses", the first mode of attachment learned.

Six Attachment Modes

Mode	Connection through...
Senses	Being physically near another person through seeing, hearing, touch, etc. "I like being together with him/her; I like getting hugs from him/her, etc..."
Sameness	Connect by having something in common with another person, either naturally or by copying "We have a lot in common..."
Belonging and loyalty	Connect by being loyal to attachments (or people) that we value, and not sharing those attachments (or people) with others "I feel that s/he is loyal to me... That s/he has my back..."
Significance	Connect by being valuable and useful to another person "I can depend on him/her... And s/he depends on me..."
Heartfelt love	Connect by expressing heartfelt love and affection "I feel loved..."
Being known	Connect by confiding in another and being accepted by another no matter what "I feel loved/accepted for whom I am, and no matter what..."

Neufeld, 2006

+ Child-Parent Relationship: Six Ways to Connect

1. Physical

- Parent-child being physically close together and connecting by the senses (e.g. seeing, touch, smell, etc.)

2. Sameness: Child copying parent; parent copying child; having something in common

- "We have a lot in common"

3. Belonging/loyalty:

- Child possesses the parent; parent belongs to the child, e.g. "My daddy"/"My mommy"
- Loyalty: "My daddy/mommy is the best"

4. Significance: Being useful or valuable or important to someone, e.g. such as by meeting a need they have

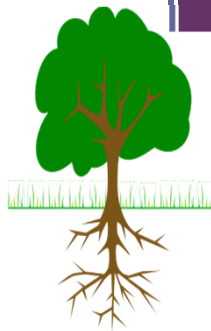
- "I am useful" "I am valued"

5. Expression love/affection

- Child gives you his/her heart: "I like you" "I love you"

6. Being known (aka Acceptance/validation)

- Child wants to share everything (in his/her heart) and wants to be accepted no matter what



+ Part #2

Kevin is now 6 weeks old.

Grandma has arrived to save the day. She comes from 'home' with her bags ready to move-in. Her son Trevor, Kevin's father, has told her about the troubles Nancy is having in feeding Kevin.

In trying to be helpful, Grandma has given Nancy the afternoon "off" from baby.

+ While Nancy is out...

Grandma spends the day re-arranging the furniture. The bassinet has come out of the parent's room and has been moved to Kevin's nursery.

Grandma has purchased baby formula. She plans on giving some to Kevin tonight so that he can "sleep through the night".

If formula was good enough for Trevor then it should be even better for Kevin as it seems to have been improved with the addition of all sorts of good stuff like "omega" and "vitamins".

How do you think Nancy will respond to Grandma's assistance?

+ "The Importance of Understanding Women's Intentions"

A large study of 14 000 children born in Bristol, England, published in "Maternal and Child Health Journal" August 2014.

Mothers who intended to breastfeed and were successful have the lowest rates of Post Partum Depression (PPD).

Mothers who intended to breastfeed and were unsuccessful had the highest rates of PPD.

Impact of feeding issues on Mood

Parenting infants and toddlers can be challenging at times.

Nutrition can be a window into the parent child relationship.



+ Edinburgh Postnatal Depression Scale (EPDS)

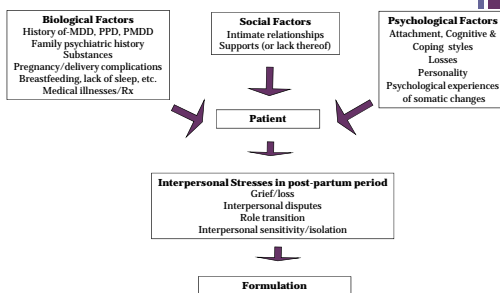
...how you have felt IN THE PAST 7 DAYS...

- I have been able to laugh and see the funny side of things.
- I have looked forward with enjoyment to things.
- I have blamed myself unnecessarily when things went wrong.
- I have been anxious or worried for no good reason.
- I have felt scared or panicky for not very good reason.
- Things have been getting on top of me.
- I have been so unhappy that I have had difficulty sleeping.
- I have felt sad or miserable.
- I have been so unhappy that I have been crying.
- The thought of harming myself has occurred to me.

J.L. Cox, J.M. Holden, R. Sagovsky. British Journal of Psychiatry
June, 1987

+ Formulation Worksheet for PPD

Protective, adaptive, vulnerability, life events, relationships & stressors



+ Importance of maternal nutrition

- All women who could become pregnant and those who are pregnant or breastfeeding need a multivitamin containing folic acid every day
- Pregnant women need to ensure their multivitamin also contains iron
- Pregnant and breastfeeding women need more calories. Include an extra 2 to 3 Food Guide Servings each day
- For most women, a healthy amount of weight to gain while pregnant is 11.5 to 16 kg (25 to 35 pounds)

+ Mother's Dietary Considerations

Special attention should be given to the intake of:

- 1) Calcium (1000 mg/day) and Vitamin D (2000 IU)
- 2) Folic acid (0.4 -1.0 mg/day, (5 mg/day Prenatally if high risk)
- 3) Iron (18 mg/day)
- 4) Vitamin B12 if vegetarian diet (2.8 ug/day)
- 5) Essential fatty acids

+ How Grandma connects...

Grandma is trying to connect with the family through "sameness" in feeding her grandson the same way that she has fed her own son.

She is also trying hard, in her misinformed way, to be of "significance" to the family by her attempt to be "helpful".

It will be important to "validate" Grandma's efforts in redirecting her energies to solutions that will support Nancy's desire to breastfeed.

How can a provider assist this family?

+ WHO

- WHO Infant and young children nutrition Global strategy section 18, April 2002:
- "For those few health situations where infants cannot, or should not, be breastfed, the choice of the best alternative-expressed breast milk from an infant's own mother, breast milk from a healthy wet-nurse or a human-milk bank, or a breast-milk substitute fed with a cup, which is a safer method than a feeding bottle and teat-depends on individual circumstances."

+ When is Supplementation Needed

- Maternal illness causing separation from infant: Mothers receiving radioactive isotopes or radiation therapy may also be counseled to temporarily suspend breastfeeding during their treatment course
- Medications contraindicated in breastfeeding, i.e. Antineoplastic agents: Mothers receiving cytotoxic chemotherapy should be counseled to discontinue breastfeeding for the duration of treatment chemotherapy (especially cyclosporine, methotrexate, bromocriptine, cyclophosphamide, doxorubicin)

+ When is Supplementation Needed

- Certain infections → HIV in developed countries (Mothers who are HIV-positive in Canada are recommended to formula-feed their infants) and active untreated TB
- Inadequate milk production or delayed lactogenesis II

+ When is Supplementation Needed

- Certain inborn errors of metabolism, i.e. Galactosemia, Infants with classic galactosemia should not receive breast milk
- PKU: While breastfeeding was considered contraindicated in phenylketonuria in the past, current practice in many, if not most, metabolic disease treatment centres encourages breastfeeding to supplement a low-phenylalanine formula, along with strict monitoring of phenylalanine levels

+ When is Supplementation Needed

- Hypoglycemia unresponsive to frequent unrestricted breastfeeding
- Significant dehydration or excessive weight loss (>10%) unresponsive to frequent unrestricted breastfeeding

+ Commercial Infant Formula: Safety Concerns

- Sterile liquid formula is recommended
 - Liquid concentrate
 - Ready-to-feed
- Powdered formula is not recommended unless medically indicated because it is not sterile

+ Commercial Infant Formula: Safety Concerns

- Linked to *Cronobacter sakazakii* and *salmonella enterica* outbreaks in infants. Use WHO safe handling and preparation guidelines
- Always sterilize equipment/bottles by boiling in water for 2 minutes
- Mix the powder with water that has been boiled for 2 minutes and cooled to no less than 70° C (mix within 30 minutes of boiling)

+ Safe Preparation Guidelines

- Cool formula quickly under running water and use immediately
- If preparing more than one bottle at a time, store in the fridge for up to 24 hours
- Only prepare bottles for one day and discard unused bottles after 24 hours
- Use formula within 1 hour after starting a feed; throw out any unused formula

+ Part #3

Nancy has come to appreciate her mother-in-law who helps with the household and enables her to focus on Kevin.

Kevin is now 20 weeks old, holds his head well and is showing interest in food. Grandma is ecstatic and makes "homemade food". Unfortunately, her sense of taste & smell is no longer what it used to be and she is heavy with use of salt & sugar. Grandma is proud of what she thinks is leaps & bounds better than off the shelf rice cereal.

Nancy is torn between her "loyalty" for Grandma and her desire to do the best for her son in following her MD's advice on introduction of solids.

How can a provider support Nancy and Grandma to best meet Kevin's nutritional and emotional needs?

+ Introduction of Solids

At four to six months old, breast milk is still the most important food but the time has come to add solid foods

- Extra iron is needed by six months (sooner if premature)
- A baby is ready to start eating solids when she:
 - holds her head up
 - sits up in a high chair
 - opens her mouth wide when you offer food on a spoon
 - turns her face away if she doesn't want the food
 - closes her lips over the spoon and
 - keeps food in her mouth and swallows it instead of pushing it out

+ Allergy Prevention

While there is no evidence that delaying the introduction of any specific food beyond six months of age helps to prevent allergy, the protective effect of early introduction of potentially allergenic foods (at four to six months of age) has been suggested and remains under investigation.

(CPS and the Canadian Society of Allergy and Clinical Immunology)

+ Allergy Prevention

- Recent research appears to suggest that **regularly ingesting a new, potentially allergenic food may be as important as when that food is first introduced**
- A baby is more likely to have an allergy if one or both parents or brothers or sisters have allergies, asthma, or eczema
- Foods that can cause allergies in children include fish, wheat, cow's milk, whole eggs and nut products

+ Part #4

Kevin is 12 months old and mom just returned to work last week. Grandparents have moved in as full time caregivers. Kevin sits at the table crying while everyone runs around trying to fetch something to appease him. Grandfather tries airplane spoons full of food while Grandma encourages him to at least finish his milk bottle.

When Mom and Dad come home from work, loud voices and arguments come to dinner every night!

Grandma reminds everyone that her son was never allowed to leave his chair before he finished his plate: "think of all the children in poor countries that would go hungry!".

What strategies can you suggest for this family?

+ Back to Work Strategies

- returning to work after a maternity, parenting or adoption leave can be difficult
- challenge of time constraints, finding and paying for childcare, and the separation from child can be overwhelming at times
- this stage of life can also provide the opportunity to re-evaluate career and personal life goals
- consider flexible hours, part-time work, working from home, job sharing and/or a gradual return to work

+ Part #5

Kevin is 20 months old.

A toddler he sure is and a picky eater too!

Nancy describes mealtimes as the land of the unexpected...one day Kevin loves peas only to be using them as artillery the next day. Anything sauces is a failure to amuse his palate and his preference remains to complete his meal with a few large cups of milk. Nancy tries to compensate throughout the day by offering his favorite snack: "Goldfish" crackers.

What Strategies can you offer Nancy to help with Kevin's "picky eating"?

+ Current Recommendations for Feeding in the Second Year

- Joint working group of the Canadian Pediatric Society, Dietitians of Canada and Health Canada
- "Small, frequent, nutritious and energy-dense feedings of a variety of foods from the different food groups are important to meet the nutrient and energy needs during the second year"
- Emphasis on small, frequent feedings and variety
- Solids now start between 4 to 6 months- when the infant shows signs of readiness for swallowing solid foods

+ Toddler Portion Sizes

- Balance of food group servings should be the same as for adults, but the size of the servings is smaller
- Should have 4-6 small feedings per day
- Sample lunch: ½ bagel with butter, 4oz whole milk, ½ apple, 1" cubed piece of cheese

+ Parents Decide:

- What – small frequent feedings, a variety of foods based on Canada's Food Guide
- Where – meals should be eaten at the dinner table, with the child seated in a comfortable chair
- When – at consistent times each day, with the rest of the family

+ More on the “What”

- Soft, moist and easy to chew
- Adequate in its fat content
- New foods with favorite foods
- Bread
- Other starchy choices
- Favorite foods some of the time

+ The Toddler Decides:

• How much to eat:

Toddlers are not growing as quickly as infants, and so their energy needs are not as great, they won't be as hungry and will eat less overall.

• Whether to eat:

When children are provided consistent access to a varied diet including foods from all food groups that they will get adequate intakes of nutrients and energy

+ Factors that interfere with toddlers' self-regulation

- Parental pressure to eat
- Parents/caregivers failing to recognize or respect verbal and non-verbal cues with respect to hunger and satiety
- Parental control
- Lack of limits or structure

+ Picky Eaters

- Young children who are small eaters need to eat more often. They also need to eat nutritious, higher fat foods like peanut butter and cheese to meet their energy needs.
- Vitamin supplements are usually not necessary, even for picky eaters.
- The tiny tummies of children mean portion sizes need to be small. As children grow, portion size can grow too.
- Children are born with the ability to know when they are hungry and when they are full.
- The more a parent pushes foods, the less likely a child is to eat them.

+ Picky Eaters (cont.)

- Taking a detailed history
- Detailed three- to seven-day dietary history
- Typical portion sizes
- Time taken to finish a typical meal
- Mealtime atmosphere
- Unrealistic expectations
- Thorough physical examination
- Accurate measurements of weight and height

+ Beverages and Dental Caries

- Avoid letting a preschooler nibble on food or sip beverages all day long as this can cause dental cavities
- Offer water to drink between meals, when preschoolers are active, and when the weather is hot
- Juice intake should be limited to no more than 125–175 mL (4–6 oz) a day
- Milk and Alternatives are important for growth as well as healthy bones and teeth, but too much milk can be filling and leave little room for other healthy foods

+ And now for the “How”

Toddlers are great observers of human behavior and connect through “sameness”, by imitating others.

Watching the family eat together at mealtimes will engage their mirror neurons to imitate with pleasure.

There is no better ‘argument’ for the family dinner!

It is important to keep the atmosphere calm with social conversation and good role modeling from parents, extended family and caregivers.

+ Contacts

■ Contact your local public health unit or community health centre for:

- Further advice on eating problems, supplements, children and diets (e.g. vegetarian)
- Handouts on growth, healthy eating, meal and snack ideas, picky eaters, food budgeting, reading food labels and more
- Contact information for nutrition related support groups and agencies in your community
- Parent education workshops.

+ Books

- The Family Table. Marie Breton and Isabelle Emond, 2008.
- Child of Mine: Feeding with Love and Good Sense. Ellyn Satter, 2000.
- Your Child's Weight... Helping Without Harming. Ellyn Satter, 2005.
- Secrets of Feeding a Healthy Family: Orchestrating and Enjoying the Family Meal. Ellyn Satter, 2008.
- Raising Vegetarian Children – A Guide to Good Health and Family Harmony. J. Stephaniak and V. Melina, 2003.
- Better Food for Kids: Your Essential Guide to Nutrition for all Children from Age 2 to 6. J. Saab and D. Kalnins, 2002.
- FitKids – A Practical Guide to Raising Healthy and Active Children from Birth to Teens. Gavin, M; Dowshen, S; Izanberg, N. Heart and Stroke Foundation of Canada/Kids Health, 2004.

+ Websites

- Food Allergy Network: www.foodallergy.org
- Anaphylaxis Canada: www.anaphylaxis.ca
- Best Start Resource Centre: www.beststart.org
- Dietitians of Canada: www.dietitians.ca
- Canada's Food Guide: www.canadasfoodguide.net
- Healthy Start for Life: www.dietitians.ca/healthystart
- Nutrition for Kids: www.nutritionforkids.com
- Canada's Physical Activity Guide for Children: www.paquide.com
- World Health Organization; Nutrition: <http://www.who.int/topics/nutrition/en/>

+ Websites

- Fathers Resources: <http://www.dadcentral.ca/>
- La Leche League Canada: <http://www.lllc.ca/>
- Dr. Jack Newman and lactation consultant Edith Kernerman: <http://www.breastfeedinginc.ca/>
- Health Canada Food and Nutrition: <http://healthy Canadians.gc.ca/eating-nutrition/index-eng.php>
- Public Health Agency of Canada (PHAC) ;Canada Prenatal Nutrition Program (CPNP): <http://www.phac-aspc.gc.ca/hp-ps/dca-dea/program/cpnp-pcnp/index-eng.php>
- PHAC; Food Safety: <http://www.phac-aspc.gc.ca/fs-sa/index-eng.php>

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