

The Importance of Solid Foods While Maintaining Breastfeeding: Food Before One is More than Fun!

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BABY-FRIENDLY
INITIATIVE STRATEGY
ONTARIO



The importance of solid foods while maintaining breastfeeding

* Notes

- * Today's webinar is not an exhaustive overview of introducing solid foods
- * Population-based messaging
 - * Health Canada's *Nutrition for Healthy Term Infants* ([Birth to six months](#), [six to 24 months](#))
- * If clients are not breastfeeding
 - * Support clients to make an [informed decision](#)
 - * Support the client's feeding decision



“Solid foods before one are just for fun”

- * Where did this statement come from?
 - * Unknown origins
 - * Possible intents of the statement
 - * Acknowledgment that breastmilk plays an important role in overall nutrition
 - * Reduce parental anxiety around how much their baby is eating
- * Fact – Solid foods play a critical role in nutrition and development



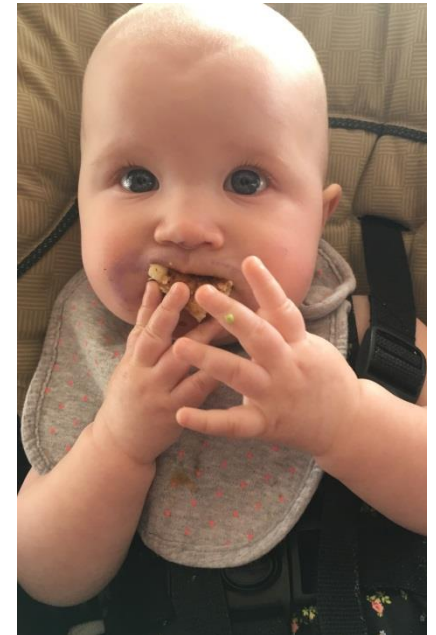
The importance of solid foods

- * Exclusive breastfeeding for six months
 - * With continued breastfeeding for up to two years and beyond
 - * At about six months of age, introduce appropriate solid foods to meet nutrient and development needs
 - * Supported by Canadian Paediatric Society (CPS), Dietitians of Canada (DC), Health Canada, Breastfeeding Committee of Canada
 - * [Rourke Baby Record](#) – CPS, the College of Family Physicians of Canada, and DC.



Nutrient needs during the 2nd half of the 1st year

- * Energy needs from solid foods
 - * 6-8 months of age: $\sim \frac{1}{5}$ total energy
 - * 9-11 months of age: just under $\frac{1}{2}$ total energy
 - * 12-24 months: $\sim \frac{2}{3}$ total energy
- * Breastmilk contributes to total nutrient intake
 - * Protein and many vitamins
 - * However, breastmilk is relatively low in several minerals such as iron and zinc
 - * Even after accounting for the high bioavailability

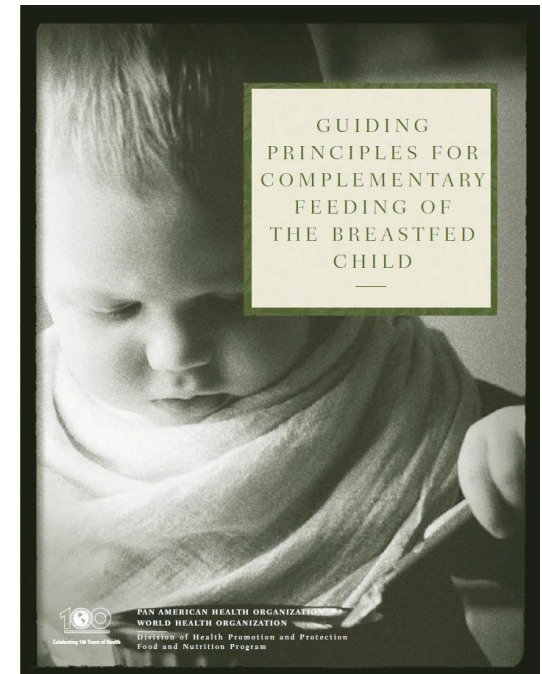


Nutrient needs during the 2nd half of the 1st year

- * Solid foods play an important role

- * At 9-11 months of age, the proportion of the Recommended Nutrient Intake that needs to be supplied by solid foods is:

- * 97% for iron
 - * 86% for zinc
 - * 81% for phosphorus
 - * 76% for magnesium
 - * 73% for sodium
 - * 72% for calcium



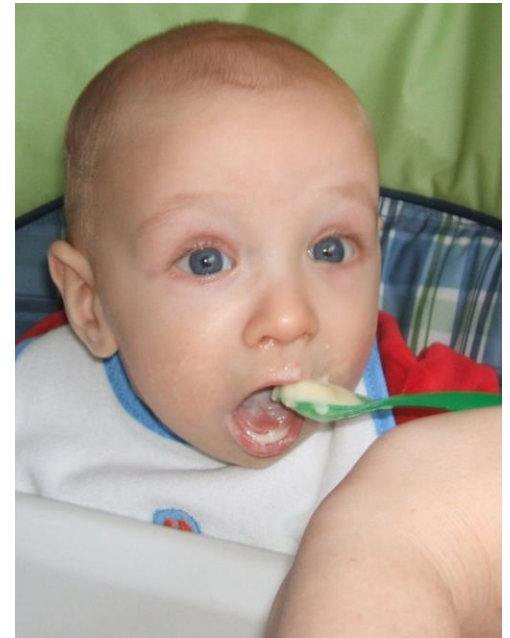
The importance of continued breastfeeding

- * Supporting families to continue to breastfeed to two years and beyond remains a key national feeding recommendation
- * Breastmilk contributes to:
 - * Energy and nutrient intake
 - * Brain and immune development
 - * Positive health outcomes for both child and breastfeeding parent



Readiness and timing for solid foods

- * At about six months of age, introduce solid foods based on signs of readiness, which includes the ability to:
 - * Hold their head up
 - * Sit up and lean forward
 - * Let you know when they are full
 - * Pick up food and try to put it in their mouth
 - * In individual practice, it may be a couple of weeks before or just after six months



Readiness and timing for solid foods

- * Signs of readiness do not include:
 - * Drinking a certain volume or frequent breastfeeding
 - * Reaching a certain weight (e.g. double birth weight)
 - * Growth concerns
 - * Night feeds (this is normal)
 - * Watching others eat

The importance of iron-rich foods

- * Risk of iron deficiency can be lowered by the timely introduction and regular consumption of iron-rich solid foods
- * Offer iron-rich food as the first foods
 - * Heme iron sources – beef, lamb, chicken, turkey, fish
 - * Non-heme sources - commercial iron-fortified infant cereals, eggs, lentil, beans, tofu
- * Offer iron-rich foods at least twice per day
 - * More if only non-heme sources are offered

The importance of introducing new foods

- * All foods can be offer one at a time and in any order
 - * Avoid honey until 12 months of age
- * No need to wait “x” number of days between new foods
 - * Exceptions are the common food allergens
 - * Mixed foods may have more than one new food
- * Exposure, exposure, exposure!
 - * Consider added exposure to new tastes/flavours via breastmilk
- * Limit added salt and sugars
 - * Herbs and spices are ok

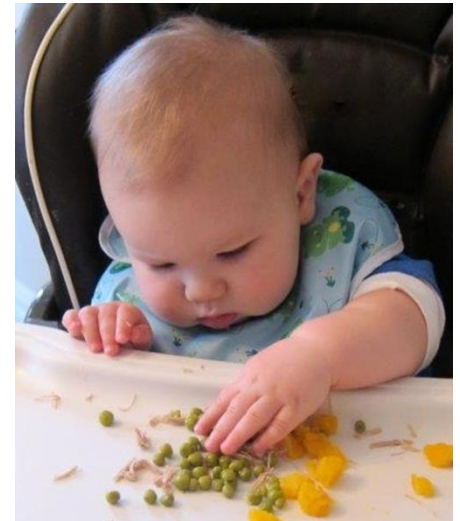
Milk products

- * Milk products (e.g. yogurt, cheese) can be offered
 - * Avoid low-fat (i.e. 2% M.F. or less)
- * Fluid milk
 - * Delay introduction until 9-12 months of age
 - * If breastfeeding, additional fluid milk is not needed
 - * Continue 400 IU vitamin D supplement daily if breastfeeding
 - * Full-fat (3.25% M.F.), unflavoured cow (or goat)
 - * Limit to 750 mL per day
 - * Plant-based beverages are not suitable milk alternatives



The importance of textures

- * Offer a variety of textures at six months
 - * It does not need to be a progression
 - * Minced or finely chopped
 - * Pureed and mashed (lumpy)
 - * Finger food (cut-up pieces to self-feed)
 - * Take into account choking risks
 - * Some gagging is normal
 - * “Critical period” to introduce textures
 - * Delaying beyond nine months of age is linked with feeding difficulties and a lower intake of nutritious foods (i.e. vegetables and fruit)



The importance of textures

- * Both of these textures are options



The importance of self-feeding

- * Babies have the desire and ability to self-feed
- * Self-feeding can begin at 6 months
- * Options: by fingers and/or spoon
- * If parent spoon-feeds baby
 - * Offer minced and cut-up foods also
 - * Follow baby's lead and feeding skills
 - * Baby may begin to prefer to self-feed



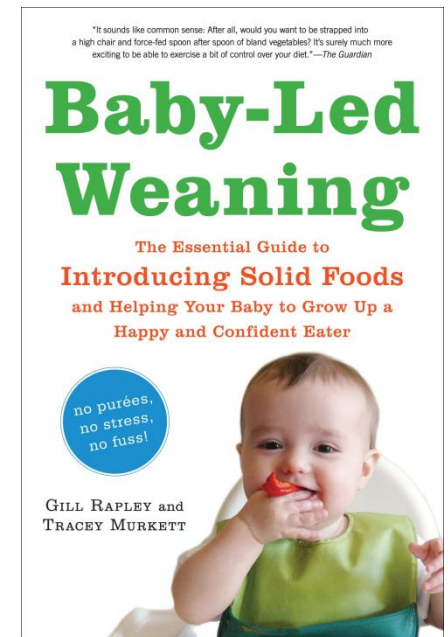
The importance of self-feeding

* Meal ideas



Baby-led weaning

- * Pros (in-line with NHTI)
 - * Encourages responsive feeding, table foods and self-feeding
- * Cons (not in-line with NHTI)
 - * Absence of iron-containing foods as first foods
 - * Risk of choking
 - * [BLISS study](#) on choking risk used a modified BLW
- * National feeding guidance, *Nutrition for Healthy Term Infants* (NHTI) promotes self-feeding, texture variety (using family foods prepared in a safe way), responsive feeding as well as iron-rich foods



The importance of responsive feeding

- * Responsive feeding
 - * *A parent/ caregiver responds in a prompt, emotionally supportive and developmentally appropriate manner to a baby's hunger and satiety cues*
- * Hunger cues
 - * Put hands in their mouth
 - * Lean forward/reach for food
 - * Open their mouth wide when food is offered
 - * Self-feeding/'actively' eating



The importance of responsive feeding

- * Satiety cues

- * Early:

- * Slow down the pace (spoon or self-fed)
 - * Look around the room or interest is less on the food
 - * Play more (without eating)

- * Later:

- * Turn their head or face away
 - * Spit food out
 - * Keep their mouth closed
 - * Lean back away from food
 - * Get upset



The importance of responsive feeding

- * Division of Responsibility (sDOR) for [feeding infants](#) by Ellyn Satter - ellynsatterinstitute.org
- * For the older baby on solid foods
 - * Parent/caregiver is responsible for *what* is offered (milk source and selection of nutritious foods) and is becoming responsible for *when* and *where* your child is fed
 - * Baby always decides *how much* and *whether* to eat at all
 - * Parents do not interfere
 - * No pressure to try a new food or eat a certain amount
 - * It can take many exposures of a new food

The importance of cue-based feeding

- * Cue-based feeding

- * Continue to breastfeed based on feeding cues
 - * Not based on the clock
- * Solid foods can be offered before or after breastfeeds
 - * Can vary from feeding to feeding



The importance of offering solids several times each day

- * Frequency of solid food feeds
 - * Less than nine months of age
 - * 3-4 times per day
 - * Nine months and older
 - * 4-5 times per day
- * Reminder
 - * Continue to breastfeed on-cue
 - * Solid foods can be offered before or after
 - * Allow babies to decide how much to eat, if any



The importance of eating together

- * Eat at the same time and enjoy the same foods
 - * Modify textures, as needed
 - * If baby does not eat, do not go back to the kitchen to get other foods (e.g. “back-up foods”)
- * Role model healthy eating and table behaviour, like manners customs and boundaries
- * Distraction-free environment
 - * No TV, cell phones, tablets, toys, games



Special Considerations: Food Allergens

COMMON FOOD ALLERGENS SOME EXAMPLES

Eggs	eggs, pasta
Milk*	cheese, yogurt
Mustard	mustard, tomato sauce
Peanuts	peanut butter
Seafood	fish, shellfish
Sesame	tahini (sesame paste)
Soy	tofu (bean curd)
Tree nuts	almond butter
Wheat	cereal, bread

- * When to introduce:
 - * No or Low Risk
 - * 6 months
 - * High Risk
 - * 4-6 months
 - * Not before 4 months!

High Risk Infants with Severe Eczema

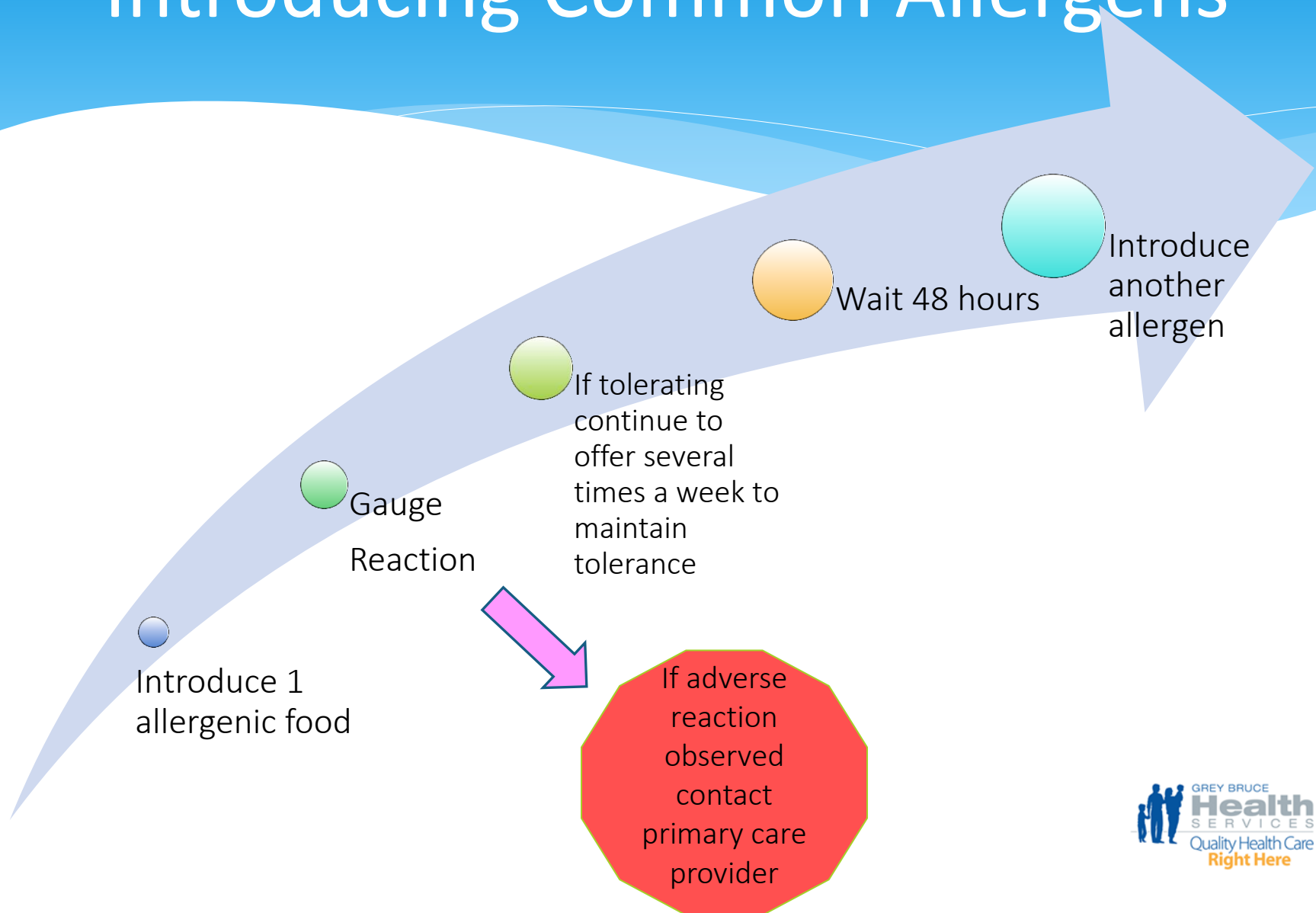
Peanut

- * Complete IgE or SPT specific to peanut
- * Oral peanut challenge 4-6 months of age
- * May require medical supervision secondary to IgE or SPT results and/or parental concerns

Egg

- * Complete IgE or SPT specific to egg
- * Oral egg challenge at 6 months of age
- * May require medical supervision secondary to IgE or SPT results and/or parental concerns

Introducing Common Allergens



Allergy Introduction Practical Tips

- * Peanut Early Exposure in High Risk Infants

- * 4-6 months:

- * This is prior to the introduction to solid foods at 6 months. Medical approach to allergy reduction.
 - * Small amount of smooth peanut butter can be diluted with breastmilk and trialed

- * Peanut No or Low Risk Infants

- * 6 months +: smooth peanut butter can be added to previously tolerated cereals or fruit purees or spread lightly on a piece of thin toast

What happens when we fail to get the evidenced-based message to parents?



Dr. Google Comes to the Rescue ☹️

Best First Foods for Baby



Fruits:

Banana
Pear
Avocado
Peach
Apple
Melon, etc.

Vegetables:

Sweet potato
Butternut squash
Carrots
Pumpkin
Beets
Green beans, etc.

Other ideas for later:

Chicken, turkey, fish
Scrambled egg
~~Pasta~~
Cheese
Tofu
Toasted bread

Worst First Foods for Baby



White rice cereal or any grain-based infant cereals.

When flour is refined to make cereal, the most nutritious part of the grain is removed, so the flour essentially becomes a form of sugar.

When you feed your baby a bowl of infant cereal, picture yourself dipping directly into your sugar bowl and feeding baby a spoon or two, because that's essentially what it amounts to. - Dr. Mercola

BABY FOOD STARTER GUIDE

for the BUMP

4-6 Months

Apples
Avocados
Bananas
Butternut squash
Green beans

Pears
Sweet Potato
Oatmeal
Rice

6-8 Months

Apricots
Carrots
Mango
Nectarines
Parsnips
Peaches
Peas

Plums
Prunes
Pumpkin
Zucchini
Chicken
Tofu
Turkey
Yogurt

8-10 Months

Asparagus
Beets
Blueberries
Broccoli
Cantaloupe
Cauliflower
Cherries
Coconut
Cranberries
Cucumber
Eggplant
Figs

Grapes
Kiwi
Papaya
Peppers
Turnips
White Potato
Pasta
Quinoa
Cheese
Beef
Eggs
Pork

10-12 Months

Citrus (12 mos)
Corn
Spinach
Strawberries
Tomatoes
Cow's milk

Source: Wholesome Baby Food

Consequences of not getting the message out

- * Iron deficiency
- * Constipation
- * Failure to thrive
- * Protein malnutrition-Kwashiorkor
- * Texture sensitivities
- * Increased rates of food allergies
- * Lower parental confidence around feeding baby
- * Knowledge deficit
- * Unclear division of responsibility around feeding

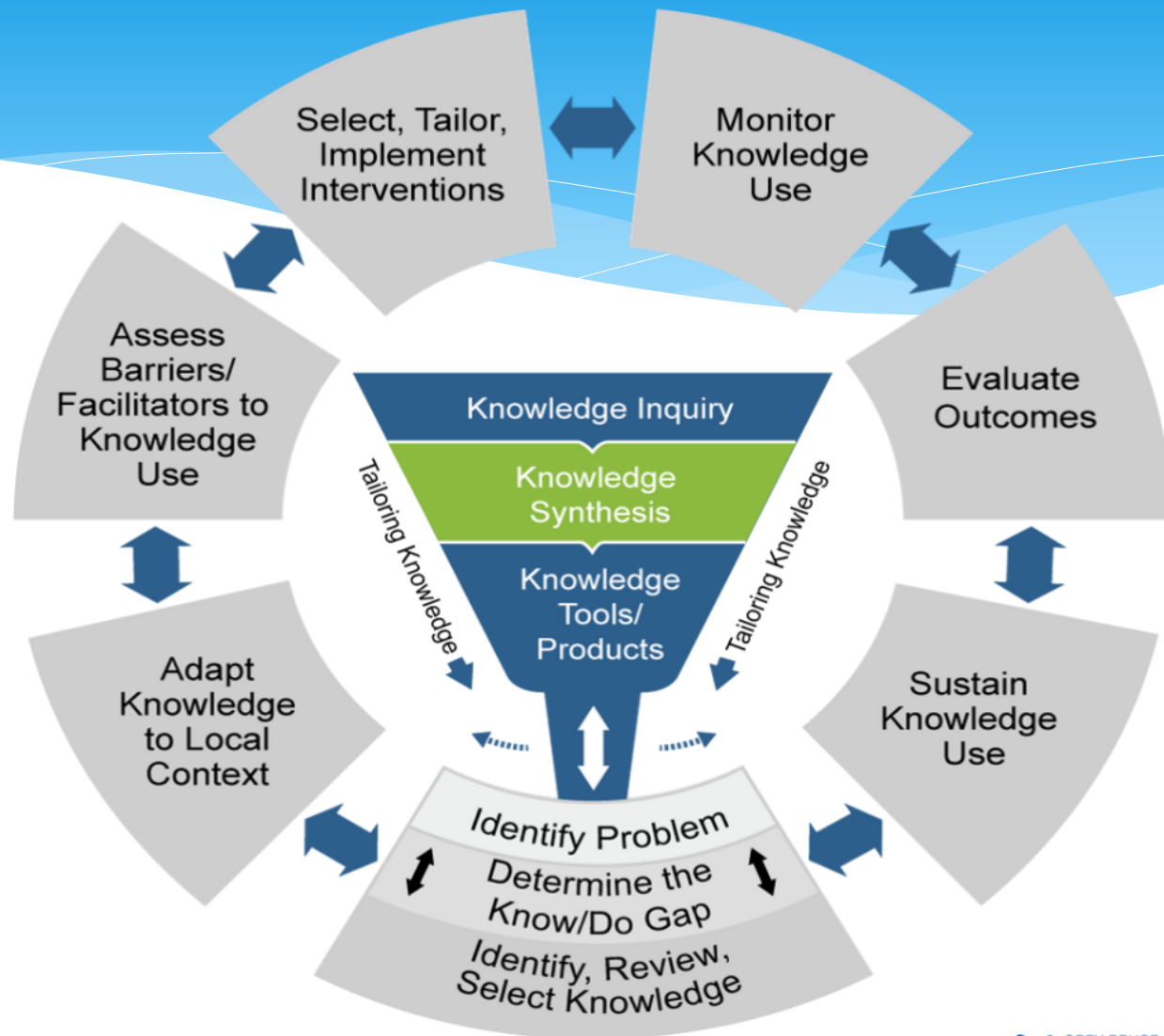
Bridging the Knowledge to Action Gap for this Will Take Teamwork



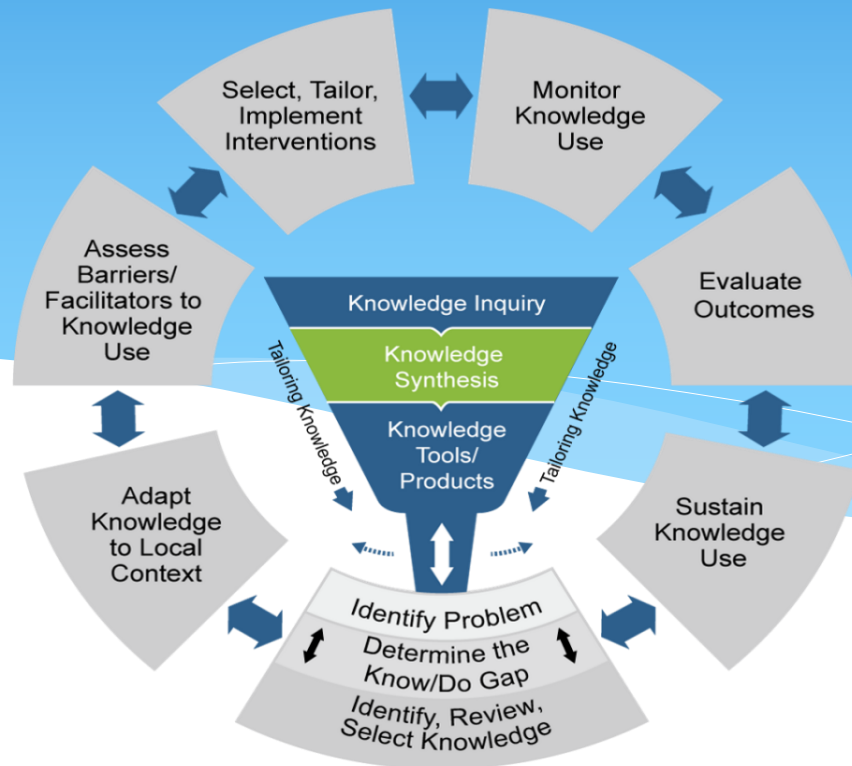
Knowledge to Action Gaps

- * Unfortunately data shows that it can take 10-20 years for a new practice to go from development to widespread practice (HBR, 2010)
- * Public health guidelines are not being adopted at the policy level or the patient level to get research to the patients
 - * 45% of the time, care that is being given is not meeting generally accepted medical standards

Knowledge to Action Framework



Let's Brainstorm...



Identify the Problem

- * Many parents are not receiving the latest information on how to introduce solids
 - * Identified by Public Health
 - * ER visits or hospital admissions
 - * Informal baby groups
- * What is current practice at the WBC for 2, 4, 6, 9 & 12 months with regard to nutrition and education?
 - * What is our nutrition messaging at these visits?
 - * Who does the education?

What is best practice?

- * Messaging from feeding guidelines we reviewed in the beginning
- * What resource should parents be directed to?
 - * Recommended resource is the Best Start Booklet



Adapt Knowledge to the Local Context

Is this needed?

Feeding guidelines remain the same and should not be changed from the Best Start resource



Barriers to Changing Routine Practice Around Intro to Solids Education



- * Knowledge
 - * Lack of awareness or familiarity with latest recommendations
 - * Forgetting to teach patient
- * Attitudes
 - * Support the latest recommendations
 - * Practical
 - * Challenge professional autonomy
 - * Patient Outcomes/Do providers see benefit?
 - * Lack of motivation to change current practice
 - * Whose job is it to educate parents?
- * Behaviour
 - * Environmental factors
 - * Lack of time, resources, organizational constraints

Facilitators to Changing Routine Practice Around Intro to Solids Education

- * RD staff & Physician lead to help champion the project internally
- * Community partner support
- * Strength of the evidence
- * Receptive parents
 - * Start the conversation early before Dr. Google spreads misinformation
- * Exposure opportunities for the right messaging at all WBC around nutrition
- * Patient respect for physician advice



Interventions to consider...

- * Formal education for health care providers
 - * Lunch & Learns
- * Informatics interventions
 - * Can this reminder be built into the EMR for all WBC?
- * Patient directed interventions
 - * How to start solids class by facilitated by RDs
 - * Posters with web links attached in treatment & waiting rooms?

Monitoring Knowledge Use & Evaluate Outcomes

- * Determine if there are any stats kept on this education at this time.
 - * If not can this be tracked by asking at the 6, 9 & 12 month WBC if parents found the information on starting solids helpful, how are they currently feeding baby?
 - * Can there be a check box added to the EMR to capture this data?

Sustain the Change!

- * Goal:
 - * To institutionalize the change to every day routine practice.
- * Sustainability-Oriented Action Plan addressing:
 1. Health needs and patient benefits
 2. Effective system to monitor progress
 3. Ability to adapt and align with other processes
 4. Multi-level and collective leadership
 5. Financial and Human Resources
 6. Community Stakeholder Engagement

Tips on Implementation

Develop A Process That Addresses Barriers To Change In Your Organization:

* Barriers

- * Forgetting - implement reminders
- * Information not accessible - have copies of handouts available for providers to hand out at routine WBCs
- * Knowledge - facilitate lunch and learns, one-on-one discussion with MDs
- * Lack of leadership engagement - ask for small ways they can be supportive that don't take a large time commitment
 - * Look for front line leaders to help drive change

Organizational Readiness for Change Theory

- * Focus on creating a shared sense of readiness for change by using practical strategies to:
 - * Help other find value in the change
 - * Build confidence that the organization is capable making and sustaining the change
 - * Embrace a culture that supports change and ongoing process improvements

Supports for clients

- * Local supports (e.g. health units)
 - * Possible telepractice services, web pages and social media
 - * Parenting supports (group or home visiting program)
- * Provincial RD services
 - * TeleHealth Ontario: 1-866-797-0000
- * Dietitians of Canada
 - * [UnlockFood.ca](https://www.unlockfood.ca)
 - * Infant feeding [landing page](#)
 - * Raising our healthy kids [videos](#)



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Supports for professionals

- * *Pediatric Nutrition Guidelines (Birth to Six Years) for Health Professionals*



Ontario Dietitians in Public Health
Diététistes en santé publique de l'Ontario

- * Produced by the [Ontario Dietitians in Public Health](#)
- * Evidence-based nutrition and feeding guidelines and red flags for healthy, full-term infants and children up to 6 years of age
- * 2019 almost complete – 2014 version currently online
 - * Visit odph.ca/png
- * Available in English and French

References



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QUESTIONS?



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