

# **Transitioning Your Baby to Solids Using the Baby-Led Weaning Approach**

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# Disclosure and Disclaimer

## **Financial Disclosures:**

Self-employed in private practice as speech pathologist,  
lactation consultant and early intervention provider  
Employed by New Mother New Baby

## **Non-financial disclosures:**

Member of 2018 NADS Conference Planning  
Committee

Board Member for Julia's Way

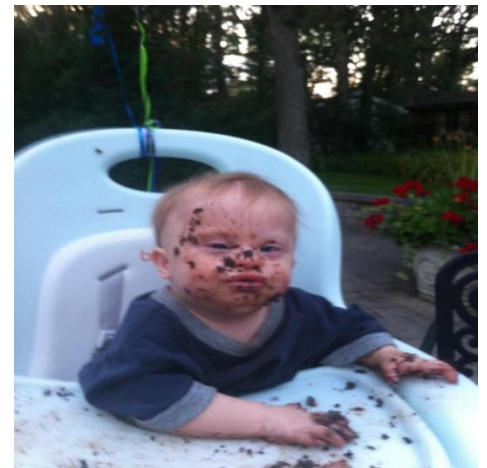
Board Member for Gigi's Playhouse Deerfield

Contributing author to "Nursing Down Syndrome"

# Food Choices and Feeding Methods for Babies with Down Syndrome

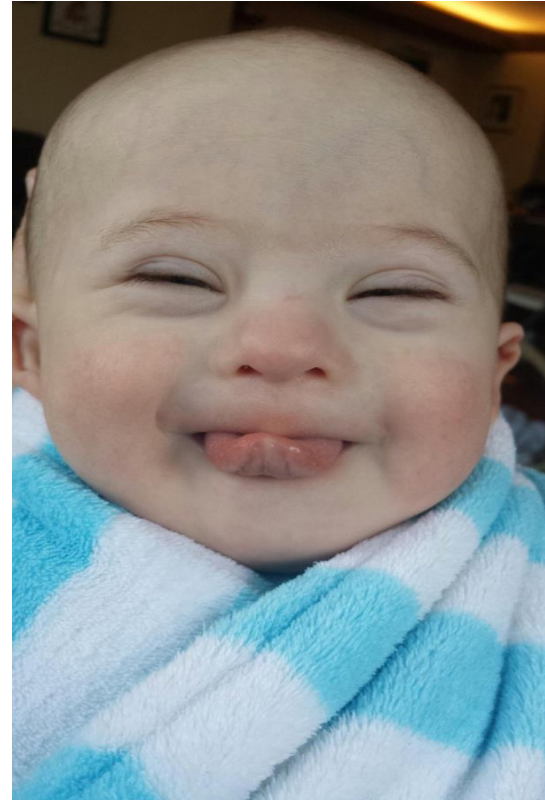
- Importance of what we feed them
- Importance of how we feed them
- Food choices affect health and structural development
- Food textures and feeding methods affect oral motor and speech development

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# Health Risks for Children with Down Syndrome

- Heart Issues
- GI Issues
- Celiac Disease
- Constipation
- Obesity
- Diabetes
- Hypothyroidism
- Leukemia
- Otitis Media
- Vision Issues
- Hypotonia
- Issues with dentition
- Feeding Aversion
- Alzheimer's/Dementia in adulthood



# Obstacles to Optimal Feeding Skills

- Health issues
- Low muscle tone
- Protruding tongue
- Tongue blade vs. tongue tip use
- Structural Issues
- Trunk control
- Posture in sitting
- Motor planning
- Decreased sensory awareness



“The diagnosis doesn’t define the person; the person defines the diagnosis.”

-SLP Erik X. Raj, in a post on his blog about his favorite saying.  
([bit.ly/raj-diagnosis](http://bit.ly/raj-diagnosis))

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# Importance of Early Food Choices

- Breast milk vs. formula
- Breastfeeding mother's diet
- Duration and exclusivity of breastfeeding
- Rice cereal?
- Purees vs. table foods
- Cow's milk at age one year
- Processed foods
- Added sugar



# Influential Environmental Factors in Food

- Organic vs. conventional
- Dirty Dozen
- “Genetically Modified Organisms” (GMOS) (Non-GMO Project)
- Processed foods
- Hormones/antibiotics
- Added Sugar/High fructose corn syrup
- Use of microwaves
- Storage containers: Plastic vs. glass
- Cooking utensils



# Nutrition for Your Baby with Down Syndrome

- Food Choices
- Breast milk
- Organic vs. Conventional
- Targeted Nutritional Intervention
- Impact of gluten
- Impact of dairy
- Biomedical treatment
- Vitamins/Supplements
- Foods for low muscle tone
- Timeliness of starting solids
- Appropriate Feeding Tools/Aids
- Portion Sizes/Child directed feeding



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# How what Children eat can affect their oral anatomy

- Teeth alignment and jaw development is not just hereditary but comes from what foods we chew and break down
- Ancestors teeth were not only used for eating but for making clothes and weapons
- Increased incidence of impacted wisdom teeth and teeth crowding
- Processing of food has impacted our need to chew, pull on and break down harder to chew foods
- Anatomical changes in our face can impact how we breathe
- Dairy products and grains introduced into our diet created a softer and more calorie dense diet
- Increased processing of foods with blenders, food processors and use of utensils, allow us to break things into smaller pieces
- Is the traditional way of spoon feeding babies the best method for our patients?

<http://darwinian-medicine.com/how-the-western-diet-has-changed-the-human-face/>

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# Does how we eat affect our oral anatomy?

- Use of spoons, forks and utensils versus taking bites off of whole foods
- Eating purees (pouches and spoon feeding) versus taking bites off of real foods
- Effect on palatal and jaw development and sensory input
- BLW and eating real food assists in jaw development

# Child Directed Feeding and its impact on Oral structural development

- Breastfeeding: shapes palate and spaces teeth
- Nose-breathing: shapes palate, helps jaw develop and opens airway
- Eating whole foods and taking bites develops jaw strength
- Utensils results in smaller bites
- Purees in pouches sucking versus chewing
- Affects sensory input/feedback

Child-directed feeding approaches:

Breastfeeding: helps shape palate allows more room and space for teeth to come in

BLW: allows for increased jaw strength due to breakdown of real foods versus just swallowing spoonfuls of food

# Impact of the Jaw on health

*“Jaws: The Story of a Hidden Epidemic”* by Sandra Kahn and Paul Ehrlich

- Maxilla and Mandible-if enough room, no teeth crowding
- Eating softer food and not developing the jaw
- Our dietary changes are resulting in smaller jaws and more malocclusions
- Can result in sleep apnea and subsequent cardiovascular issues and sudden death
- More incidence of sleep apnea, ADHD and behavioral issues
- Sleep is as important as food

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<http://www.ndss.org/Resources/Health-Care/Associated-Conditions/Obstructive-Sleep-Apnea--Down-Syndrome/>

**“It’s estimated that 50-100% of individuals with Down syndrome have Obstructive Sleep Apnea (OSA), and most parents can’t predict whether or not their child has it. “**

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# When to Introduce Solids:

- **The American Academy of Pediatrics, the World Health Organization and many other organizations recommend that babies be exclusively breastfed (no cereal, juice or other foods) for the first 6 months of life.**



# **Why Delay Introduction Of Solids?**

## **Impact of Starting Solids Too Soon**

- It has been linked to a higher risk of obesity and diabetes
- It will prevent baby from getting extra immune protection from mother's milk
- It can increase risk of allergies
- It doesn't give baby's digestive system time to mature
- It can reduce the efficiency of baby's iron absorption
- It may make the transition to solids more difficult



# Determining Readiness for Solids With Baby-Led Weaning

- Baby can sit well with support
- Has good head and neck control
- Baby is able to get their hands to their mouth
- Can lateralize and elevate tongue
- Baby appears interested in the food you're eating

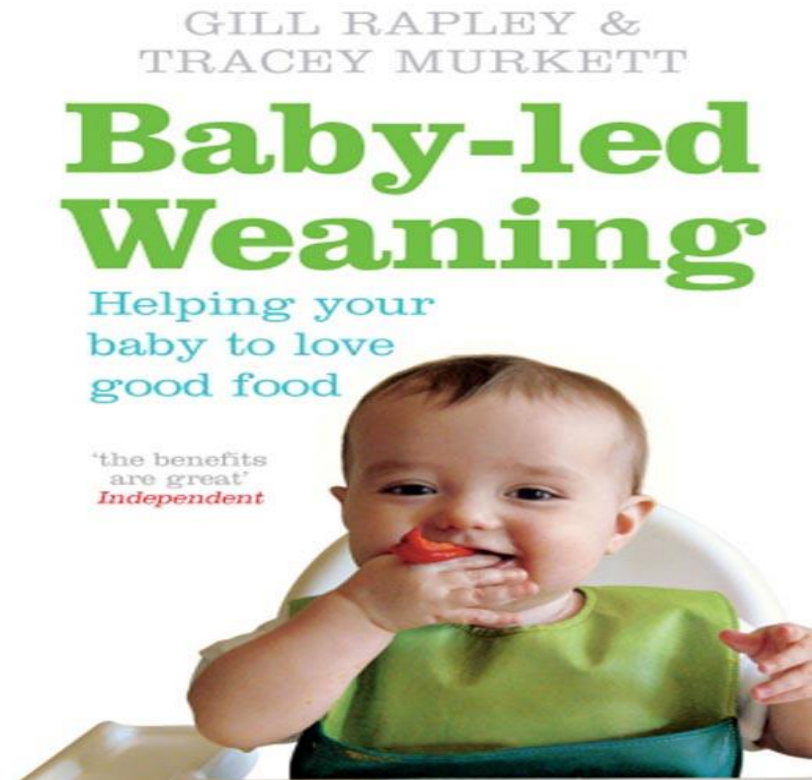


# Feeding Approaches to Begin Solids

## Standard American Way



## Baby-Led Weaning Approach



# Standard American Approach

- American Way:
  - Start with single ingredient cereals
  - Transition to Stage 1 purees of vegetables
  - Transition to Stage 1 purees of fruits
  - Transition to Stage 2 and 3 baby foods
  - Transition to soft-semi solids, e.g. small pieces of banana, avocado, potato or sweet potato.
  - Transition to meltable solids: Puffs, Cheerios, Ritz crackers, etc.

# Pros and Cons of Standard American Way to Introduce Solids

- Easy to follow
- Spoon feeding facilitates lip closure and bilabial sound production
- Hierarchy of steps
- Parent directed
- Questionable first food choices
- Foods of convenience, e.g. pouches
- Portion sizes



# Baby-Led Weaning Approach

- Term coined by Gill Rapley
- Weaning in the U.K. means introducing complementary foods, not weaning from breastfeeding
- It's an approach where the babies feed themselves from the time that they begin solids



# Baby-Led Weaning Definition:

**BLW means the baby eats with the rest of the family, sharing the same nutritious and varied food. She feeds herself and chooses what to eat, how much and how fast. To start with, the food is offered in a way that's easy to handle, i.e. sticks or strips of food that are firm enough to hold but soft enough to munch, with the baby gradually managing different textures and shapes with practice. There's no specially made purees, no spoon feeding (by someone else), and no persuasion or pressure. (Gill Rapley and Tracey Murkett July 2018)**

# Baby-Led Weaning Video



# When Should Baby-Led Weaning Begin with Babies with Down Syndrome?

- Starting at 6 months or later, depending on the developmental abilities of the child
- First three months are more about learning to eat versus volume intake
- Not concentrating on volume initially helps takes pressure off





# Connection Between Breastfeeding and Baby-Led Weaning



# Child-Directed Feeding approaches

- Breastfeeding
- Baby-Led Weaning
- Ellyn Satter approach: Division of Responsibility :  
Parents decide what and when they will feed the baby  
Baby decides if they will eat the presented food and will determine how much

# Child-Directed vs. Parent-Directed Feeding

- Child-directed: breastfeeding and baby-led weaning
- Child determines when they're hungry and when they're full
- Parent-directed: bottle-feeding and spoon-feeding
- Parent determines satiation (Finish jar/finish bottle)
- Mixed Feeding: Combination of BLW and Spoon Feeding

# Pros and Cons of the Baby-Led Weaning Approach:

- Child directed
- Healthy food choices
- Encourages self-feeding
- Facilitates more sophisticated oral motor skills early on
- Dangers of choking with incorrect food selection
- Parents have to self-navigate
- Nutritional/volume differences
- Can result in decreased weight gain if baby can't take in enough volume with self-feeding

# Why Baby-Led Weaning Works Well for Kids with Down Syndrome:

- Child directed
- Nice follow-up to breastfeeding
- Encourages use of hands and hand to mouth
- Engages core muscles
- Earlier self-feeding
- Less pickiness about food
- Provides oral proprioceptive input
- Encourages lateral movement of the tongue
- Food is a motivating factor for them
- Facilitates oral motor skill development from an early age
- At risk for feeding aversion
- Functional activity that they can participate in with family
- Results in longer attention span as they have better use of their hands for fine motor and play
- Independence
- Can do what their peers do

# **Obstacles to the Baby-Led Weaning Approach:**

- People are not familiar with it
- It is very different than the standard American approach to introducing solids
- Harder to measure actual intake
- Parents/medical professionals are fearful of choking
- Gagging versus choking
- Health care professionals think children with Down syndrome can't do it

# Gagging versus choking

- Gagging is normal in babies learning to eat
- Babies learning to suck food off of spoons may try to carry over that technique to a solid food texture
- BLW allows babies to practice moving food around in their mouths
- Babies naturally chew foods before swallowing
- Babies should always be supervised during eating
- Babies who do BLW are thought to be less at risk for choking
- Caregivers should know CPR in case of choking

Fangupo, Louise J., Ann-Louise Heath M., Sheila Williams M., Liz Erickson Williams W., Brittany Morison J., Elizabeth Fleming A., Barry Taylor J., Benjamin Wheeler J., and Rachael Taylor W. "A Baby-Led Approach to Eating Solids and Risk of Choking." 22 Sept. 2016.

- Randomized controlled trial of 206 healthy infants who were fed via the traditional method or with Baby-Led Weaning to Solids (BLISS)
- Infants follow a baby-led weaning approach when the parents were given advice on minimizing choking risk did not appear more likely to choke than infants who were fed with the traditional approach



# How to Get Started

- Watch Baby-Led Weaning DVD
- Talk to others who have done it
- Work with an SLP who is comfortable with BLW
- Decide which foods you would like to begin with
- Have appropriate seating
- Understand gagging vs. choking
- Visit BLW websites for videos and food ideas
- Understand food textural and safety differences: soft solids, meltable solids, etc.
- Foods cut into strips
- Baby must be supervised at all times

# How To Transition a Baby With D.S. to Solids using BLW

- Parent preparation
- Prefeeding Hierarchy (Lori Overland and Robyn Merkel-Walsh)
- Supportive Seating
- Equipment Modifications, e.g. Preloaded spoons and silicone feeders
- Trained feeding therapist who understands how to do BLW
- Collaboration with dietician, occupational therapist, physical therapist and medical provider
- Food choices based on shape, texture and breakdown

**Overland, Lori L., and Robyn Merkel-Walsh. *A Sensory Motor Approach to Feeding*. Talk Tools, 2013.**



## Pre-Feeding Kit

# Transitional Phase

- Slightly reclined sitting
- Facilitation of hand to mouth by an adult
- Use of smooth purees
- Use of a silicone feeder (Stage 2 puree consistency)
- Use of preloaded spoons (thicker purees like mashed avocado)
- Longer duration of smooth and easier to breakdown foods

# Baby-Led Weaning Food Plan

- Baby should begin eating food on their timeline
- Age 6 to 9 months: It is more about learning about how to eat and likes and dislikes versus food volume intake
- Age 6 to 9 months: One meal a day
- Age 9 to 12 months: Two meals a day
- By age 1: Transitioned to 3 meals a day with food being primary source of nutrition complemented by milk feedings
- By 9 months, feeding skills have improved significantly from practice
- Baby should always be part of family meals
- BLW may result in less picky eaters

# •Food Textures

- **Purees:** Range from thin to thick; can be liquid-like. They are swallowed with no chewing required. (Stage 1 and 2 baby food, smooth guacamole, hummus, cream cheese, applesauce, pudding, etc.)
- **Soft Solids-**Can be mashed. Will start in solid form and are easily squished.(avocado, banana, cottage cheese, baked sweet and white potatoes, scrambled eggs, etc.)
- **Meltable Solids:** These foods dissolve with saliva.(Bamba, Puffs, Pirate Booty, Mum-Mums, Veggie Straws, etc.)
- **Solids:** These foods need chewing prior to being broken-down and swallowed.(Chicken, steak, toast, pastas, etc.)
- **Mixed Textures:** These foods have more than one food texture mixed together and require more advanced feeding skills.(Stage 3 baby foods, soups and casseroles)

**Coulthard, Helen, et al. “Delayed Introduction of Lumpy Foods to Children during the Complementary Feeding Period Affects Child's Food Acceptance and Feeding at 7 Years of Age.” *Maternal & Child Nutrition*, vol. 5, no. 1, 2009, pp. 75–85.**

- This study followed up children who were interested to lumpy foods at different ages
- Self-report questionnaires were given at 6 months, 15 months, and 7 years post-partum to look at foods eaten and feeding difficulties
- Children introduced to lumpy foods after 9 months ate less of the many food groups at 7 years of age than those introduced to lumpy foods between 6-9 months of age
- Long term feeding problems and reduced consumption of important food groups such as fruits and vegetables is cause for concern for babies not introduced to lumpy foods until after 9 months

Northstone, K., et al. "The Effect of Age of Introduction to Lumpy Solids on Foods Eaten and Reported Feeding Difficulties at 6 and 15 Months." *Journal of Human Nutrition and Dietetics*, vol. 14, no. 1, 2001, pp. 43–54., doi:10.1046/j.1365-277x.2001.00264.x.

- Infants introduced to lumpy solids at the earliest ages consumes a greater variety of family foods at the age of 6 months
- Infants introduced to solids at 10 months or later had been given fewer solids by the age of six months and at 15 months were significantly less likely to be having family foods compared to babies receiving lumpy foods between 6 to 9 months



# What You might Expect by Age One Year:

- Possible weaning from the bottle
- Baby eats all table foods
- Baby can finger feed
- Milk complements food versus being the primary food source



# Baby-Led Weaning Foods



# Baby-led weaning foods



# Baby-Led Weaning Foods

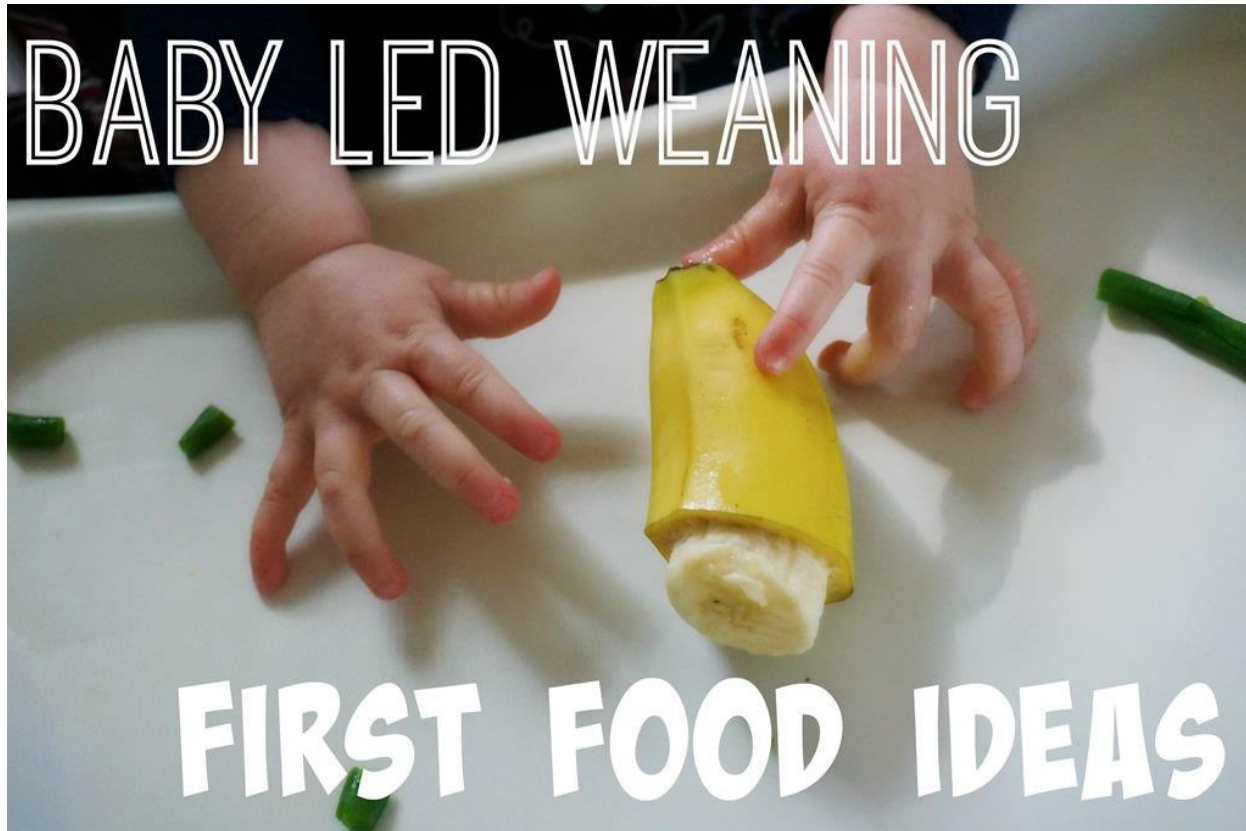




# Baby-Led Weaning Foods



# Partially Exposed Banana



# Baby-led weaning foods





# Baby-Led Weaning Foods





# Baby-Led Weaning Foods



## Foods For Baby

courtesy of [wholesomebabyfood.com](http://www.wholesomebabyfood.com)

### FRUITS

Apples 4-6 months  
Avocados 4-6 months  
Apricots 6-8 months  
Bananas 4-6 months  
Blueberries 8-10 months  
Cantaloupe (Melons) 8-10 months  
Cherries 8-10 months  
Citrus 12 months  
Coconut 8-10 months  
Cranberries 8-10 months  
Figs 8-10 months  
Grapes 8-10 months  
Kiwi 8-10 months  
Mango 6-8 months  
Nectarines 6-8 months  
Peaches 6-8 months  
Papaya (6)8-10 months  
Pears 4-6 months  
Persimmons 8-10 months  
Plums 6-8 months  
Prunes 6-8 months  
Pumpkin 6-8 months  
Strawberries 10-12 months



### VEGETABLES

Asparagus 8-10 months  
Broccoli 8-10 months  
Beans (Green) 4-6 months  
Beans (Dried/Lentils) (8)10-12 months  
Beets 8-10 months  
Carrots 6-8 months  
Cauliflower (6)8-10 months  
Corn 10-12 months  
Cucumber 8-10 months  
Eggplant 8-10 months  
Leeks 8-10 months  
Onions 8-10 months  
Parsnips 6-8 months  
Peas 6-8 months  
Peppers 8-10 months  
Potato-White 8-10 months  
Sweet Potato 4-6 months  
Spinach 10-12 months  
Squash-Butternut etc 4-6 months  
Squash-Zucchini etc 6-8 months  
Tomatoes 10-12 months  
Turnip 8-10 months



### MEATS & PROTEINS

Beef 8-10 months  
Chicken 6-8 months  
Eggs 8-10 months  
Fish 8-10-12 months  
Pork 8-10 months  
Tofu 6-8 months  
Turkey 6-8 months  
Wild Game - consult doctor

### GRAINS

Barley 4-6 months  
Buckwheat/Kasha 8-10 months  
Flax 8-10 months  
Kamut 8-10 months  
Millet 8-10 months  
Oatmeal 4-6 months  
Pasta 8-10 months  
Quinoa 8-10 months  
Rice 4-6 months



### DAIRY

Cow Milk 12 months  
Cheese 8-10 months  
Cottage Cheese 8-10 months  
Cream Cheese 8-10 months  
Yogurt (6)8-10 months



\* This chart is conservative in nature. It should not be used to replace the advice of your doctor. Foods are grouped by age relative to ease of digestibility, taste, texture and possible allergy risks for baby's stage.

Always consult your baby's pediatrician about introducing new foods, and feeding your baby.

# BLW Happy Family





# Claire: 6 to 12 Months



# Parent Quote

"You have been an incredible help to me and I would love for some of what we have done to be able to help others.

Blake and I both really feel like breast feeding and BLW are 2 major factors in why Claire is doing as well as she is. The BLW approach is scary at first. Very scary. But I am so glad we pushed through. It helped me a ton to understand the gag reflex and that she wasn't always choking when she would gag a little. I think the key for BLW for us was to start it early. We started right at 6 months so she was still getting most of her nutrition from breast milk. Food was for fun at that age. If she didn't eat anything for a meal, it was ok. I didn't stress that she had to eat "real food." This gave her time to explore and figure out what to do with the food. After a few weeks though, she caught on :)

Using BLW seems to have improved her oral motor skills and I know it has helped with her fine motor. She is so independent and doesn't have any aversions to textures or tastes. I've talked to several parents of older (14-18 months) kiddos with Ds and they say their kiddos have no interest in table food or self-feeding. They only want to be spoon fed purees or drink milk. This is not the case for Claire at all. She will let us spoon feed her but she will just as easily pick up her own food and eat it. I also think BLW has given me greater control over the quality and variety of food she eats and is exposing her to tastes she might not otherwise get until later. She loves avocado, broccoli, cauliflower-foods and flavors you don't normally see in typical baby food jars.

I also think having the Tripp Trapp chair was a major factor in Claire having such great success with BLW. When we tried it in a traditional high chair that was much too big for her, she didn't do as well. She didn't have any place to put her feet and steady herself and she ended up slumped over and couldn't reach her food. I am incredibly cheap and hated the idea of spending that much on a high chair when I could get a Graco for \$50 but I am sold on it now! Best investment we made in baby gear and that's exactly how I look at it. She will be in that chair for years and years to come; I have no doubt."

Jennifer Cannon May 2014

# Hudson with Preloaded Spoons: Age 15 Months



# Liam with Kidsme Feeder: age 10 months



# Zev: 7 to 9 Months





# Nathan: 9 Months



# Moriah: 9 Months Old



# Noelle 8 to 12 months





**Where are they now?**

**Luke: 19 months**



**Where are they now?**  
**Cristian: 19 months**



# Where are they now?

## Corey: 20 Months



# First Chairs for babies with motor challenges



**Mamaroo Infant Seat**





# Seating Options



**OXO Tot Sprout Highchair**



**Boon Chair**



# More Seating Options



**Stokke Tripp Trapp Chair**



**Ikea Highchair**



**Special Tomato Height Right Chair**

# Seating Options



**Joovy New Nook Highchair**



**Phil and Ted's Highchair**



**Peg Perego Siesta Highchair**

# Cup Choices



Honey Bear Straw Cup



**Boon snug straw**

# Cups



**Reflo Cup**



**Doidy Cup**



**Cutout Cup**





# Self-Feeding Instruments



Nuby Popsicle Molds



Boon Feeders



Kidsme Feeder



Choome Spoons



Pouchbuddy Chub Chub



Boon Spoons

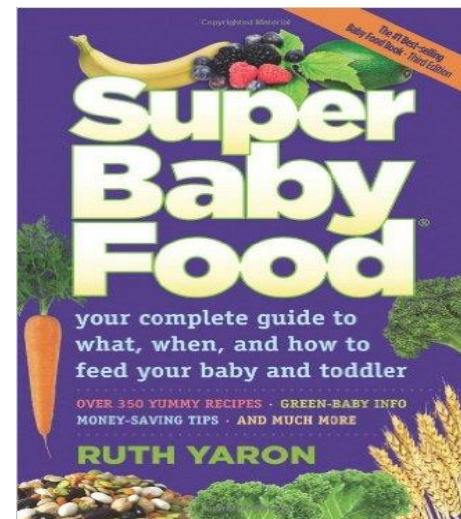
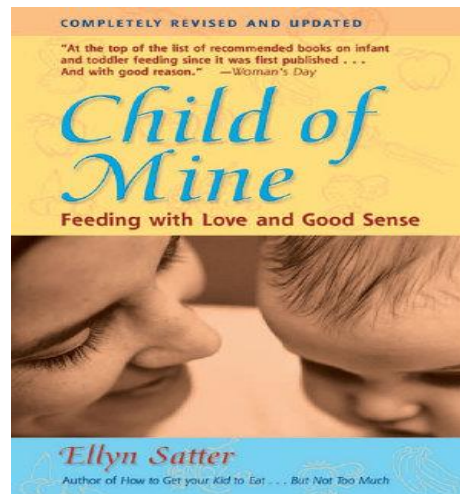
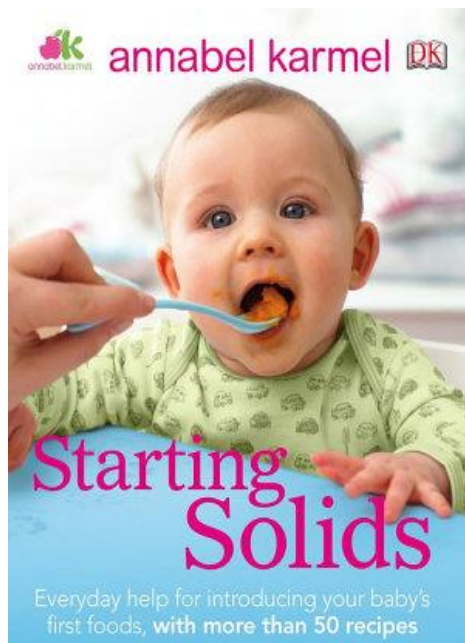
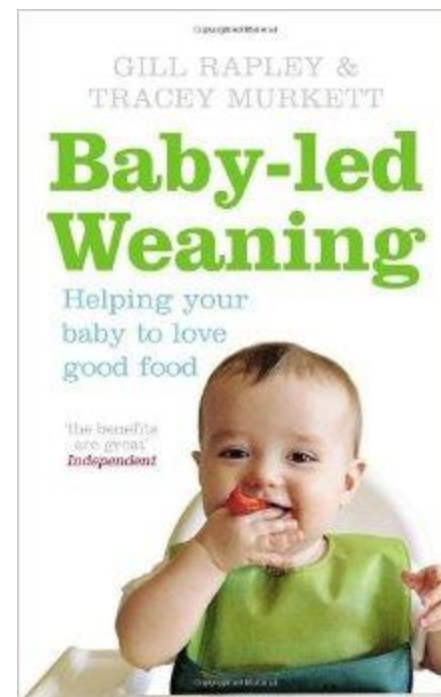
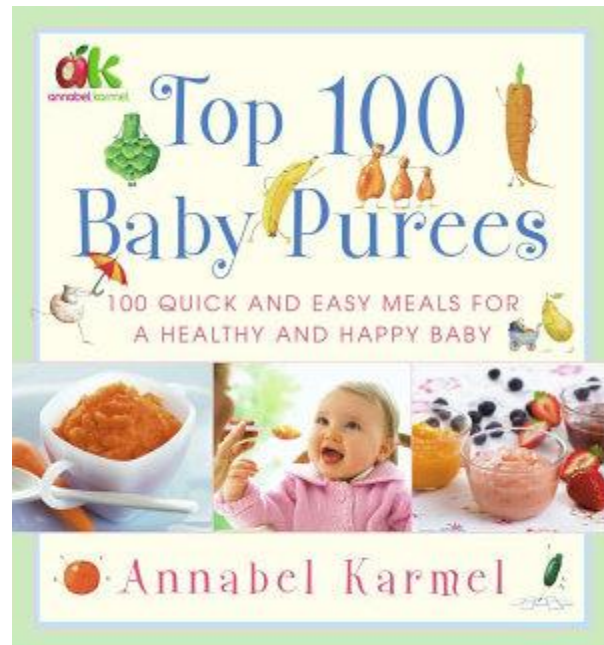
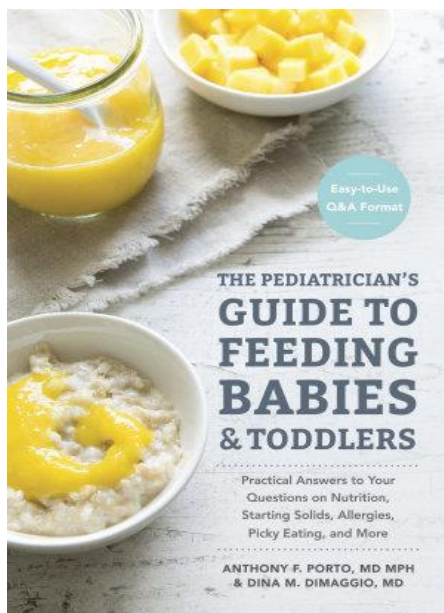
# Bibs



# Plates and Bowls









# Resources

- [www.nutritionfacts.org](http://www.nutritionfacts.org)
- [www.nongmoproject.com](http://www.nongmoproject.com)
- [www.kellymom.com](http://www.kellymom.com)
- [www.markbittman.com](http://www.markbittman.com)
- [www.ellynsatterinstitute.org](http://www.ellynsatterinstitute.org)
- [www.drhyman.com](http://www.drhyman.com)
- [www.doctoryum.org](http://www.doctoryum.org)
- <http://wholesomebabyfood.momtastic.com/>
- <http://www.robynobrien.com/>
- <http://www.rapleyweaning.com/>
- <http://www.mywholefoodlife.com>
- <http://www.superhealthykids.com/>
- [www.feedingbytes.com](http://www.feedingbytes.com)

# Books

- Feeding Baby Green by Alan Greene
- Super Baby Foods by Ruth Yaron
- 201 Organic Baby Food Purees by Tamika L. Gardner
- The Best Homemade Baby Food on the Planet by Karin Knight
- The Pediatrician's Guide to Feeding Babies and Toddlers by Anthony F. Porto and Dina M. Dimaggio
- Child of Mine by Ellyn Satter
- Raising a Healthy, Happy Eater: A Parent's Handbook: A Stage-by-Stage Guide to Setting Your Child on the Path to Adventurous Eating by Nimali Fernando, Melanie Potock and Roshini Raj

# Questions???

