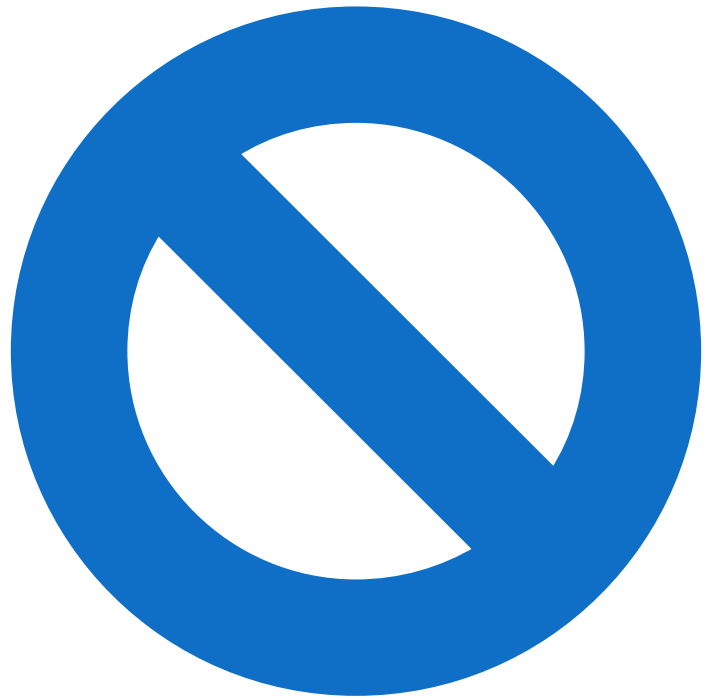


# *Feeding Arizona Babies: Breastfeeding Needs Support*

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**Taryne Scott, DNP, APRN, CPNP-PC**





I have no disclosures



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# Background & Significance

## Helps Prevent:

- Diabetes (Type 1&2)
- Obesity
- Hypertension
- Cardiovascular/Respiratory Diseases
- Hyperlipidemia
- Infectious Diseases
- Certain types of cancers

## Contains:

- Immunoglobulins A&G
- Glycans

(Binns et al., 2016; DiFrisco et al., 2011; Centers for Disease Control and Prevention [CDC], 2021c; Feldman-Winter et al., 2017; M'Rabet et al., 2008; Newburg et al., 2005; Victoria & Barros, 2000).

# BARRIERS

Breastfeeding is a “natural form” of feeding

Reasons many mothers stop breastfeeding early:

- Medical
- Social
- Mental
- Time
- Resources



# What is the Problem?

Save **\$13 billion**  
per year

**900+**  
preventable  
deaths per year

**< 24.9%**  
breastfed infants  
by 6 months

**34<sup>th</sup>** for exclusive  
breastfeeding by 6  
months

**49<sup>th</sup>** for breastfed infants  
receiving formula before 2  
days of age

# INITIATIVES

Healthy People 2030

The World Health Organization

Center for Disease Control

United Nations Children's Fund

Infants should be breastfed for the 1<sup>st</sup> six months of life

American Academy of Pediatrics

Arizona Department of Health Services

# Evidence Synthesis: Guiding the Project

## Breastfeeding

Interventions used:

- Educational classes
- Follow-up telephone calls
- Evidence-based resource materials
- Individualized support



## Time Pressure

**Spending time** with patient decreases adverse outcomes

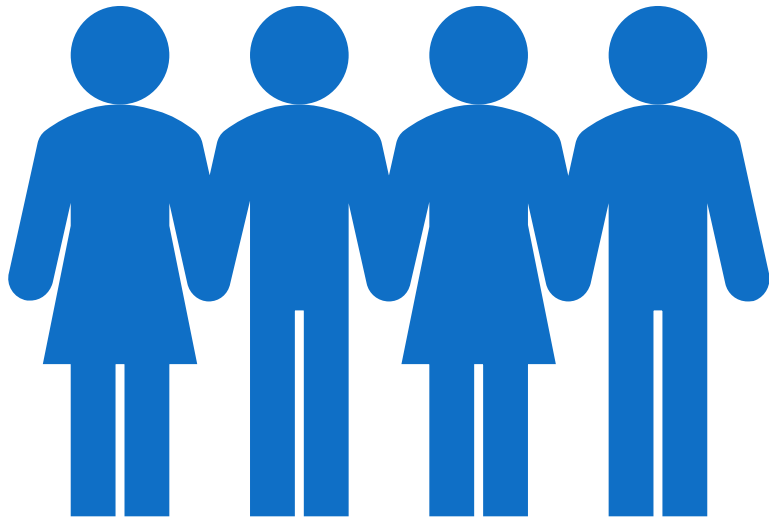


## What is the Evidence Showing?

If a provider can:

- Provide individualized **breastfeeding education** with resources
- Conduct **follow-up phone calls**
- Should **increase** a mother's self-efficacy → increase breastfeeding rates
- Should **decrease** the need for future appointments.

# Methods: Participants



## Inclusion criteria

- First time breastfeeding experience
- $\geq 18$  years of age
- Single live birth
- English proficiency

## Exclusion Criteria

- <37 weeks gestation
- Multiple pregnancy
- + Drug screen
- Pre-eclampsia requiring treatment
- Breast augmentation
- Prescribed medications contraindicated for breastfeeding
- Active herpes lesions on breasts
- HIV positive
- Ebola or Varicella virus
- Not discharged with mother
- Any significant cardiac or metabolic abnormalities

**Setting:** Pediatric Primary Care Clinic in the Southeast Valley of Arizona

### **Human Subject**

**Protection:** Approval from ASUs IRB on: September 14, 2022



# Tools: Data Collected

	0 Poor	1 Moderate	2 Good	Score
<b>POSITIONING</b> Baby well supported; Tucked against mother's body; Lying on side /neck not twisted; Nose to nipple; Mother confident handling baby	No or few elements achieved  Needs to be talked through positioning	Achieving some elements  Some positioning advice still needed	Achieving all elements  No positioning advice needed	
<b>ATTACHMENT</b> Positive rooting; Wide open mouth; Baby achieving quick latch with a good amount of breast tissue in mouth; Baby stays attached with a good latch throughout feed	Baby unable to latch onto breast or achieves poor latch. No/few elements achieved  Needs to be talked through attachment	Achieving some elements  Some advice on attachment needed	Achieving all elements  No advice on attachment needed	
<b>SUCKING</b> Able to establish effective sucking pattern on both breasts (initial rapid sucks then slower sucks with pauses). Baby ends feed.	No effective sucking; no sucking pattern	Some effective sucking; no satisfactory sucking pattern; on and off the breast	Effective sucking pattern achieved	
<b>SWALLOWING</b> Audible, regular soft swallowing- no clicking	No swallowing heard; clicking noises	Occasional swallowing heard; some swallows noisy or clicking	Regular, audible, quiet swallowing	

## Demographic questionnaire

- Newborn appointment

## Bristol Breastfeeding Assessment Tool (BBAT)- Newborn/One Month Appointments

- Cronbach's alpha 0.668/0.77
- Intraclass Correlation (ICC) 0.782/0.89

## Likert scale questionnaire

- Weekly follow-up phone calls
- 1 month appointment

## Qualitative Data

- Weekly Follow-up phone calls
- 1 month appointment

# Breastfeeding Educational Binder



## FEEDING ARIZONA BABIES BREASTFEEDING NEEDS SUPPORT

**ASU**

Edson College  
of Nursing and  
Health Innovation  
Arizona State  
University

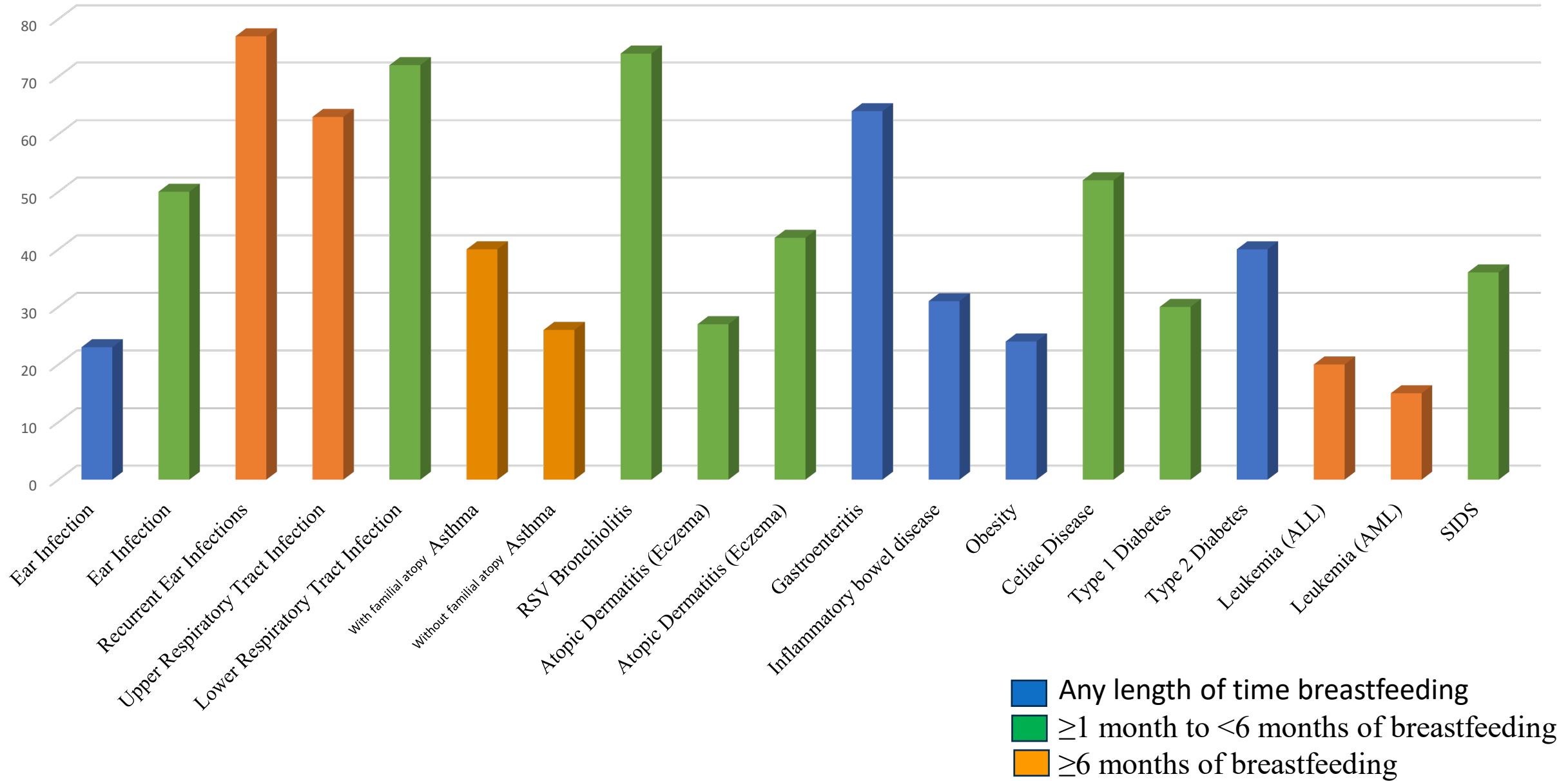
ARIZONA STATE UNIVERSITY  
DOCTOR OF NURSING PRACTICE

Taryne Scott BSN, RN  
Sarah Bay DNP, PNP



**Phoenix Children's**  
Care Network

# Medical Reasons Why Breastfeeding Is Important



## Myth vs. Fact

**Myth:** Breastfeeding is painful in the beginning, you have to let your nipples toughen up

**Fact:** Babies breastfeed, they don't nipple feed. Pain is NOT normal. Pinched, creased, cracked, and damaged nipples need attention right away.

**Myth:** If the latch looks good it must be right

**Fact:** If it hurts, the latch is wrong. Re-latch.

**Myth:** If your breasts are not full you don't have any milk

**Fact:** Your breasts do not have to be engorged to have enough milk for your baby.

**Myth:** There is no milk for the first few days.

**Fact:** You have colostrum which is liquid gold. This is all your baby needs until your supply comes in.

**Myth:** If you go back to work you have to wean

**Fact:** Your work has to allow you to pump. You can get on a pumping schedule prior to returning to work.

**Myth:** Babies who breastfeed will be clingy.

**Fact:** Babies want to eat and be with their mother who provides care and comfort.

**Myth:** Breastfeeding at night causes tooth decay

**Fact:** Babies have to eat at night until they grow older. It does not cause tooth decay.


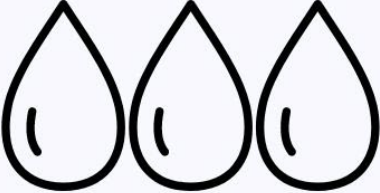
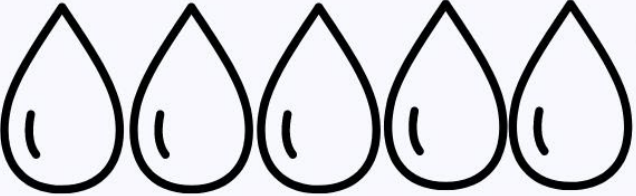
**Myth:** You shouldn't breastfeed when you're sick.

**Fact:** Your body is producing antibodies that are helping your recover from your illness. Those antibodies go in the breastmilk which will protect your baby.

## Sample of Participants Favorite Pages

*On Average*

### HOW MUCH BREASTMILK DOES YOUR BABY EAT?

Baby's Age	Average Milk Volume Per Feeding
First week after Day 4	1-2 Ounces (30-59mls) 
Weeks 2&3	2-3 Ounces (59-89mls) 
Months 1-6	3-5 Ounces (89-148mls) 

## DIAPERED INFANT STOOL SCALE

- TYPE 1**  
Hard/solid
- TYPE 2**  
Pasty, soft but takes a shape
- TYPE 3**  
Soft but spreadable
- TYPE 4**  
Mucousy, stringy, more fluid than soft
- TYPE 5A**  
Watery with curds/solids
- TYPE 5B**  
Watery without curds/solids

Amount	Consistency	Color
1: smear	A: watery	I
2: up to 25%	B: soft	II
3: 25-50%	C: formed	III
4: >50%	D: hard	IV
		V
		VI

# Stool Consistency

## What is normal?

-**Mucus** is believed to be related to infant food intolerance and allergy symptoms. However, current research has shown that small to moderate amounts of mucus is normal. Monitor how your baby is reacting when having mucus in your stool and talk to your pediatrician.

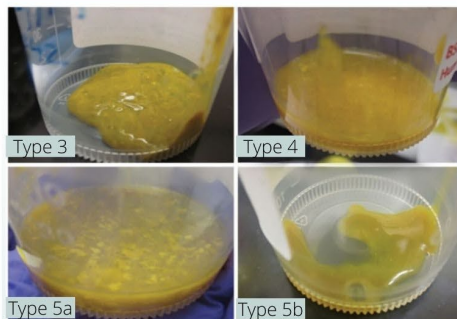
-A **watery** stool a few times a day is normal, however, going 8+ times per day warrants a call to your pediatrician. Too many watery stools can lead to dehydration.

-**Hard and solid** stool, known as constipation, can be indicative of food intolerance or food adjustment. Some infants can go extended periods of time without a bowel movement and not be constipated. Constipation refers to the type of stool being passed.

-**Soft but spreadable** poop is the all-elusive baseline poop. Can be referred to as peanut butter.

-Seeing **undigested** food particles in your baby's poop is completely normal especially when solids are first introduced.

-**Banana poop??** Some babies have black strings in their poop after consuming a banana. This is completely normal. A variation of this can be red strings.



\*\*If you ever have any cause for concern contact your pediatrician

Free to Feed. (2021). Diaper decipher. Free to Feed. <https://www.freetofeed.com/diaper>



## NUTRITION TIPS FOR BREASTFEEDING MOTHERS

Nutritional requirements for breastfeeding are similar to those for pregnancy. A breastfeeding mother needs 200 more calories per day than she did while she was pregnant and those calories should come from nutritious foods. Breastfeeding women usually lose 1-4 pounds per month without restricting caloric intake.

### PROTEIN

2-3 servings of protein each day are needed. A serving is equal to 3-4oz of meat, fish or poultry.

- Meat
- Poultry
- Seafood
- Eggs
- Cheese
- Milk and yogurt
- Cottage Cheese
- Tofu
- Dried Beans
- Humus

The FDA recommends that nursing mothers do not eat shark, swordfish, king mackerel or tile fish because they are high in mercury

### CALCIUM

The suggested daily intake of calcium for breastfeeding mothers is 1,300mg per day. For example, one cup of milk or yogurt contains 300mg of calcium

- Milk
- Yogurt
- Hard Cheeses
- Calcium-fortified orange juice
- Calcium-fortified tofu

### IRON

Iron is very important for breastfeeding mothers. The suggested daily intake is 9mg

- Meat
- Poultry
- Seafood
- Dried beans
- Dried fruit
- Egg yolks

### VITAMIN C

Nursing mothers need more vitamin C than while pregnant. The daily recommended dose is 120mg per day

- Citrus fruits
- Broccoli
- Cantaloupe
- Potato
- Bell Pepper
- Tomato
- Kiwi
- Cauliflower
- Cabbage

### OTHER TIPS

- Continue taking a multivitamin every day
- You need to drink at least 8 cups of water each day.
- In addition to water other good liquids are juice, milk, broths, herb teas, and soups.
- Exercise and high temperatures will increase your liquid amount
- Limit Caffeinated foods and beverages to 8oz per day
- Avoid drinking alcohol and smoking cigarettes.

# The Volume Might Not Change, But Your Breastmilk IS Changing

Did you know your Breastmilk is constantly changing! The antibodies, the type of fat, the hormones, and even the calories are constantly changing, even if the volume hasn't changed much.



At birth, your baby only needs about 5-10mls of colostrum at each feed. By week 1 they will eat about 1-2oz then by 1 month it's about 2.5-5oz or roughly 19-30oz/24hrs.

The amount of Breastmilk your baby takes at 1 month is what your baby will continue to eat until you give solids. Then the amount will be determined based on how much solid food your baby is eating.

But won't your baby need more as they grow? NOPE! The calories in Breastmilk continue to change and increase even though the volume you give is the same. So you will never have to give more Breastmilk as they grow. Unlike formula where the calories never change, you have to continue to increase the amount as they grow. So don't stress if you are "still" pumping the same amount you pumped when your baby was 6 weeks old but now is much older.

Your body goes off of time and knows when your baby was born and your milk will continue to change to meet your baby's needs. So if you are exclusively pumping, don't worry! Your body knows to continue to change the calories as time goes on.



# YOUR GUIDE TO FLANGE FITTING

Flanges come in various sizes with tubes ranging from a 15 to a 36mm and larger, however, in most cases, full pump starter kits come with about a size 24mm flange. Some parents may need a smaller or bigger size, or two different sized flanges for each side to get the job done! Use the following guide to help find a flange best fit for you. Have further questions? Book an appointment with a Lactation Consultant here at The Breastfeeding Center!

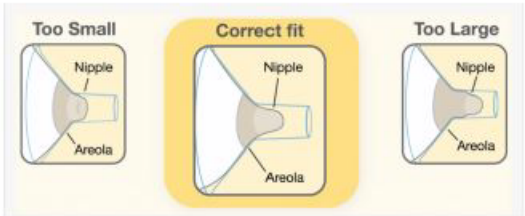
### WHAT IS A FLANGE?

A flange the funnel part of a pump that makes contact with the breast/chest. Having the proper flange tube size can have a big impact on your pumping experience, so ensuring you have the correct fit is very important.

### WHY DOES FIT MATTER?

An ill-fitted flange can actually make a large impact on your pumping experience and output. Often times wearing the wrong flange size can lead to pain and irritation and because the pump is mimicking the sucking sensation to express milk, it is important for the proper fit to help suction comfortably and efficiently.

### WHAT SHOULD I LOOK FOR?



#### TOO SMALL:

- Nipple does not move freely in the tunnel or rubs along the tunnel
- Pumping is painful even on a low suction
- Milk flows slowly or less milk is pumped than expected.
- Redness or discoloration after pumping

#### JUST RIGHT:

- Nipple is centered and moves freely
- No areola tissue is being pulled into the tunnel
- No pain and pumping is comfortable
- space is around the nipple but not much.
- The breast is fully drained a completed pumping session

#### TOO BIG:

- More tissue from the areola is being drawn into the tunnel causing the areola to rub on the side of the tunnel
- You feel discomfort, even on a lower suction
- You cannot get a good air seal while pumping

photo credit: medela.com

# Pumping Shouldn't Hurt

# Fit To Perfect

## FLANGE SIZES CHEAT SHEET (BY BRAND)

BRAND	AVAILABLE FLANGE SIZES					
Ameda	21mm (stimulator)	22.5mm (insert)	25mm	28.5mm (flange or insert)	30.5mm	32.5mm (insert) 36mm
Baby Buddha	21mm	24mm	28mm	32mm		
The Elvie	21mm	24mm	28mm			
Evenflo	21mm	24.5mm	28mm	30.5mm	34mm	36mm
Freemie	Inserts for sizes 15mm-25mm	25mm	28mm			
Lansinoh	25mm	30.5mm				
Medela	21mm	24mm	27mm	32mm	36mm	
Motif	21mm	24mm	28mm	32mm		
Spectra	20mm	24mm	28mm	32mm		
The Willow	use sizing inserts for under 21mm	21mm	24mm	27mm		

# Pumping from Birth

## To Establish Supply

For the first 1-3 weeks:

- Pump 10-12 times in 24 hours
- Don't go more than 3-4 hours without pumping
- Hand express after pumping

## To Maintain Supply

- Pump 8-10 times in 24 hours
- Don't go more than 5-6 hours without pumping
- Pump during the night. A session between 2-4am is most effective
- Hand express during & after pumping

Re-imagined from @az.breastfedbabies

# Pumping Tips







**1** Around 4 weeks postpartum, start pumping once a day after a morning feed

**2** Don't pay attention to how much milk you get, just let yourself get into a rhythm

**3** Freeze your milk in 2-3oz. increments

**4** When your baby does get a bottle, pump in place of that feed.

# Storage Tips

Location of Storage	Temperature	Maximum Recommended Storage Duration
 Room Temperature	 16-29°C 60-85°F	4 Hours optimal 6-8 hours acceptable under very clean conditions
 Refrigerator	 ~4°C ~39.2°F	4 days optimal 5-8 days acceptable under very clean conditions
 Freezer	 <-4°C <24.8°F	6 months optimal 12 months acceptable u

Reimagined from The Academy of Breastfeeding Medicine & @az.breastfedbabies

# Baby Poop Color Wheel





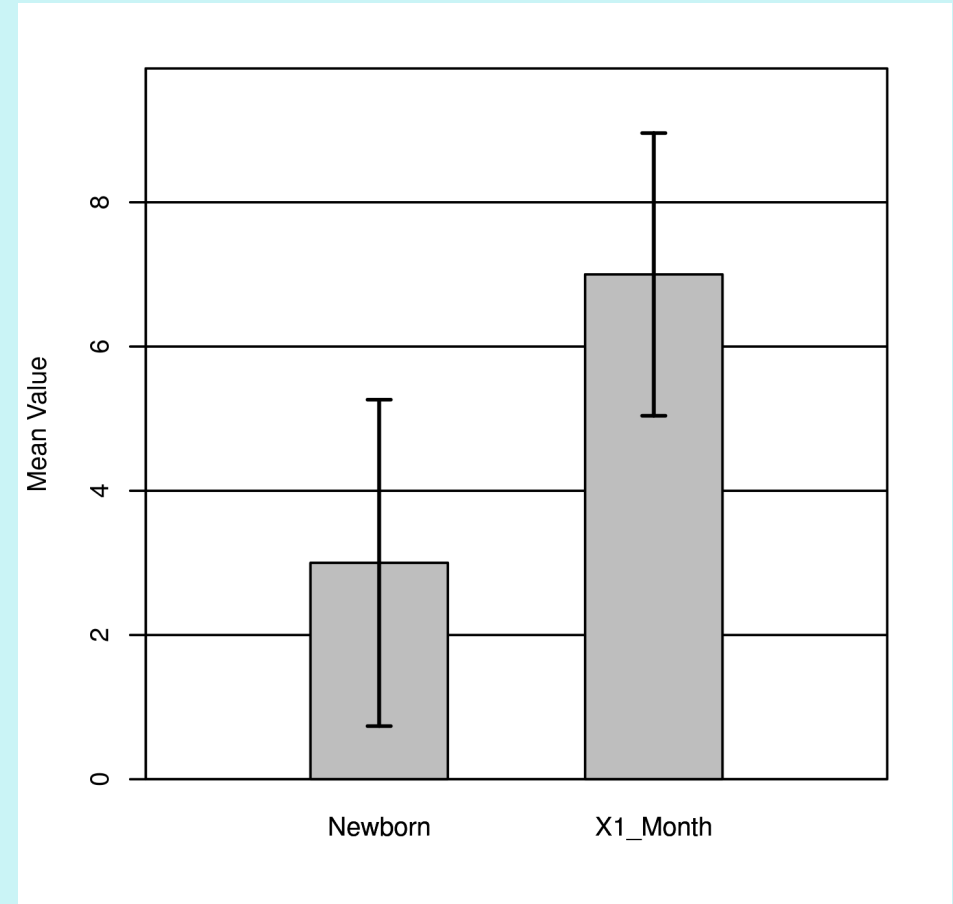


# Results



Newborn		1 Month				
M	SD	M	SD	<i>i</i>	<i>p</i>	<i>d</i>
3.00	2.31	7.00	2.00	-4.00	.028	2.00

# Outcomes: BBAT Newborn vs. One Month Appointment



# Weekly Themes

## Newborn

- Reassurance
- Increase milk supply
- Nipple damage

## Week 2

- Let down reflex
- Internal clock
- Infant stool

## Week 1

- Proper latching
- Passive vs active sucking
- Increasing milk supply

## Week 3

- Healthy eating/water intake
- Pumping
- Weaning

# Overall Project Themes/ Impact Statements From Participants

## Reliability

- "I could count on someone call me every week"
- "It was nice knowing I had someone I could talk to"

## Questions

- "I wasn't sure if a lactation consultant would be able to answer my questions"
- "My provider seemed busy; I didn't feel like I could call them"

## Support

- "My mom said 'it's been 30 years, I can't help you'"
- "My friends were confusing me; it was nice being able to validate my abilities every week"

## Mental Health

- "I didn't feel judged for not wanting to breastfeed anymore"
- "Having weekly calls helped lessen my anxiety"

## Ease

- "I didn't have to search for help"
- "I didn't have to expose my baby to an office of sick children"

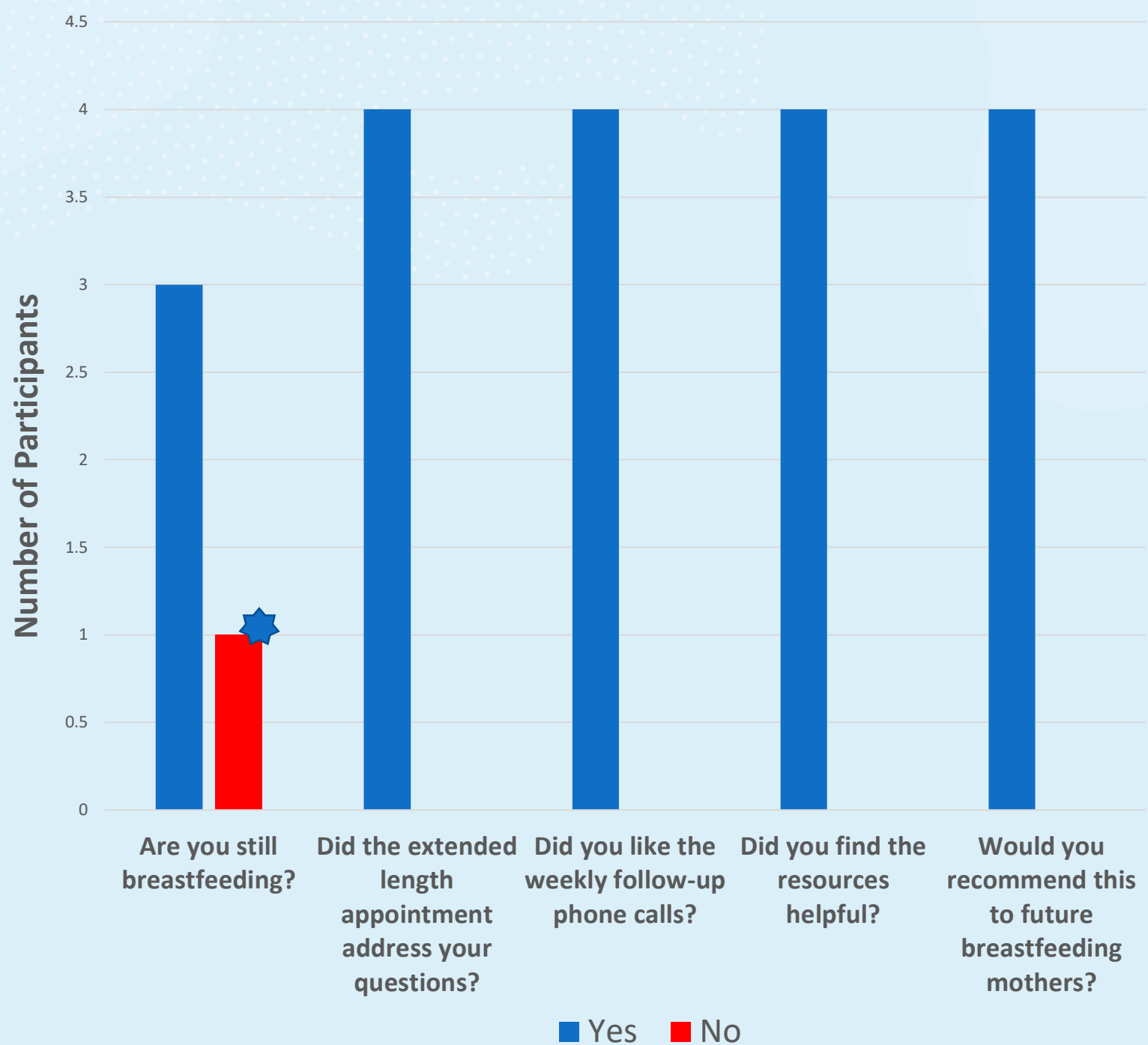
## Educational Binder

- "It has been helpful to be able to flip to anything I need late at night"
- "I like that it's 'credible'"

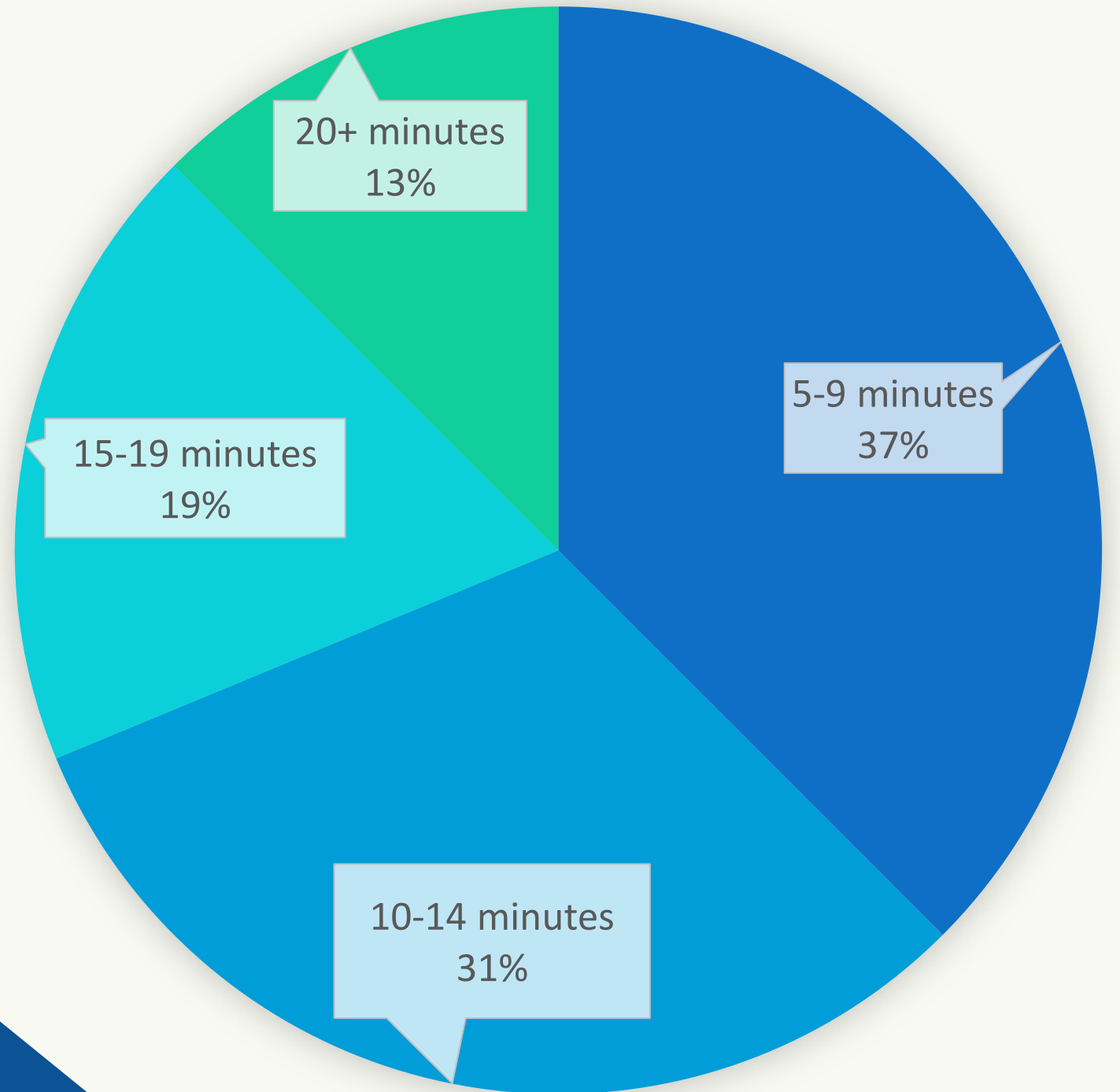
## Extended Appointment

- "I liked being able to spend time talking about my breastfeeding concerns or fears"
- "I didn't feel rushed"

# Outcomes: One-Month Appointment Follow Up Questions



# Sustainability: Time Spent For All Weekly Calls



# Summary of Findings

- Breastfeeding handouts are an easy form of support for new parents
- Weekly calls was the greatest form of support for parents
  - Doesn't take significant amount of time
- Performing the BBAT at the newborn appointment
- 1<sup>st</sup> time breastfeeding mothers need more assistance during the first month

# Lactation Resources for Providers

## **Academy of Breastfeeding Medicine:**

[International breastfeeding organization for providers](#)

## **American Academy of Pediatric:**

[Breastfeeding-Friendly Provider Office](#)

[Breastfeeding Telephone Triage and Advice](#)

[Great videos for providers/parents in English/Spanish](#)

## **Arizona Breastfeeding Coalition:**

[Professional Breastfeeding Education for professionals](#)

**U.S. Department of Health & Human Services:**

[Breastfeeding Hotline](#): 800-994-9662



# Lactation Resources for Parents

**Healthy Children.org:**

[Handouts for Parents on Breastfeeding/ Pumping](#)

**Arizona Department of Health Services:**

[Breastfeeding Resources/WIC](#)

**La Leche League International:**

[Support and education for mothers](#)

**US Dept of Agriculture Food & Nutrition Service WIC Breastfeeding  
Program:**

[Information about WIC breastfeeding services](#)

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[breastfeeding-for-six-months-best](https://www.who.int/news/item/15-01-2011-exclusive-breastfeeding-for-six-months-best-for-babies-everywhere)-for-babies-everywhere