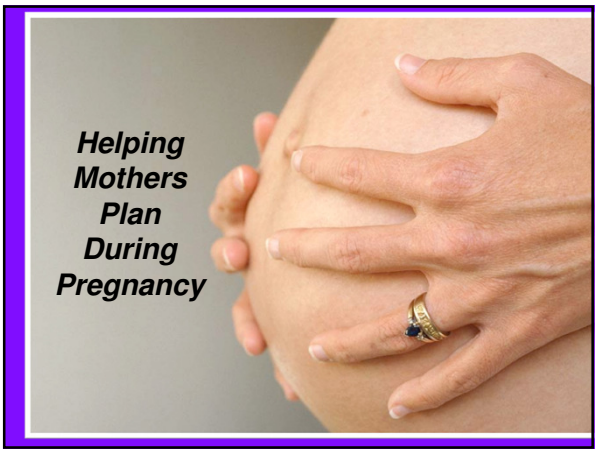

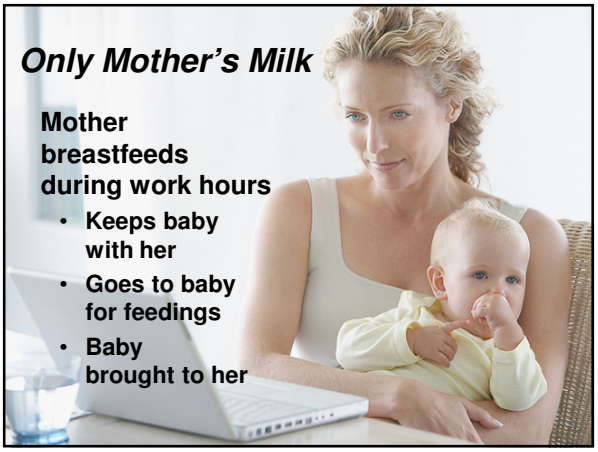

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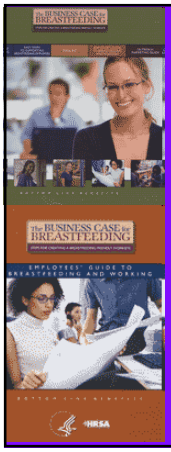
When Apart,
Some Mother's Milk,
Some Formula

Breastfeed When Together, Formula-Feed When Apart

Work Schedule

Flexibility?

- ✓ Part-time
- ✓ Job-sharing
- ✓ Flex-time
- ✓ Phase back part- to full-time
- ✓ Compressed work week (same hours, fewer days)
- ✓ Work from home, telecommute
- ✓ On-site day care, bring baby to work



The Business Case for Breastfeeding

Government toolkit includes:

- Color brochures for CEO, HR Dept., employed mothers
- Order free at www.hrsa.org (Search: "The Business Case for Breastfeeding")

Worksite Lactation Support Doesn't Have to Be 'All or Nothing'

- Privacy screen in manager's office
- Unpaid break time to express milk
- Creative use of vacation, sick days, holidays to ease into work

Time At Work

Breastfeeding: ~20-30 min/feeding

Milk expression

- 10-15 min per breast, 5 min clean-up
- Calculate number of daily pumps: Divide hr apart (include travel) by 3 (9 hr ÷ 3 = 3 pumps)

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Time At Work

- On average, mothers of 3- to 6-mo-olds pumped ~2x/day at work
- Spent ≤1 hr/day pumping

Slusser, et al. *J Hum Lact* 2004; 20:164-69; N=283

Time At Work

On average, mothers pumped 6.3 mo

Mean age of baby when stopped pumping: 9.1 mo

Ortiz, et al. *Pediatr Nurs* 2004; *30*:111-119; N=462

After Birth, When Together Breastfeed

Milk Removal Key to Milk Production

First 40 days, milk increases quickly

- From ~1 oz on Day 1
- To 25-35 oz at ~5 wk

Milk removal pattern main driver of milk production

Storage Capacity & Working Mom

Large capacity

- Can go longer before feeling full
- May not need to pump as often
- If very large, may not need to pump at all

Storage Capacity & Working Mom

Small capacity

- Breasts feel full sooner
- Needs to pump more often to maintain production

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Preparing to Return to Work

Pumps, Bottles, and Daily Routines

Expressing Milk

Wait 3-4 wk to start giving a bottle

- **Pump to comfort as needed and store**
- **Overpumping & oversupply, pros and cons**

When home, avoid schedules

Average Milk Intake by Age

Baby's Age	Average Volume of Milk Per Feeding	Average Milk Intake Per Day
First week	1-2 oz	10-20 oz (after Day 4)
1-3 weeks	2-3 oz	15-25 oz
1-6 months	3-5 oz	25-35 oz

Key Milk Production Facts

A breastfed baby's milk intake:

- **↑Increases from Birth to Week 5**
  Hill, et al. *J Hum Lact* 2005; 21(1):22-30
- **↔ Plateaus til 6 mo**
- **↓Decreases when other foods started**

Peak milk intake averages ~ 25-35 oz/day

Baby's growth rate slows

Between 1 & 6 mo, breastfed baby needs ~ same volume of milk/day

Nielsen, et al. 2011. *Pediatrics,* 128(4):e907-14

On average, formula-fed babies consume much more milk per day:

- **15% @3 mo**
- **23% @6 mo**
- **20% @9 mo**
- **18% @12 mo**

Heinig, et al. *Am J Clin Nutr* 1993; 58:152-61

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Bottle flows faster, more consistently

- Overrides baby's appetite control mechanism
- May contribute to overfeeding, obesity

Taveras, et al. *Pediatrics* 2006; 118:2341-48
Li, et al. *Pediatrics* 2008;122 Suppl 2, S77-84
Li, et al. *Pediatrics* 2010; 125:e1386

Flow Affects Baby's Milk Intake

To avoid overfeeding use pacing and slowest flow nipple

- Minimize milk needed to feel full
- Trigger appetite control mechanism with less milk

The Magic Number

Total # of milk removals per day needed to maintain production long term

Main factor: breast storage capacity

Mohrbacher. *Clin Lact* 2011; 2(1):15-18

The Magic Number

During maternity leave, start by counting breastfeedings per 24 hr

Mohrbacher. *Clin Lact* 2011; 2(1):15-18

Gives idea of storage capacity

And # milk removals per day needed to maintain long-term production

The Magic Number

After returning to work, try to keep stable daily total of milk removals

Daily milk removals = breastfeeds + pumps

Mohrbacher. *Clin Lact* 2011; 2(1):15-18

Many mothers pump enough at work but don't breastfeed enough at home

As daily total drops, milk production slows

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The breastfed baby does not take fewer & larger feedings during 1st 6 mo

This is a bottle-feeding pattern

Kent, et al. *Pediatrics* 2006;117: e387-95

Spectrum of Normal

	Largest Capacity	Large Capacity	Average Capacity	Small Capacity	Smallest Capacity
# milk removals/day to increase milk	4-5	6-8	8-10	10-11	≥12
# milk removals/day to maintain milk	3-4	5	6	7	8
# milk removals/day to decrease milk	2	3	4-5	6	7

Spectrum of Normal

	Largest Capacity	Large Capacity	Average Capacity	Small Capacity	Smallest Capacity
Maximum longest stretch	10-12 hr	8-10 hr	8 hr	6-7 hr	4-5 hr
Maximum pump yield	10-12 oz	5-9 oz	3-5 oz	2-3 oz	1-2 oz
Type of pump	?	?	?	?	?
Response to pump	?	?	?	?	?

Easing the Transition

- Start work on a Thurs or Fri, short days, or part-time
- Buy extra pump parts for less washing at work

With a strong mother-baby bond, the return to work can be emotional

- Baby has no sense of time
- Feeding, sleeping patterns may change
- Give more skin-to-skin, focused attention

Back to Work: Maintaining Milk Production Long Term

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Calculating Milk Needed

Total: ~30 oz/24 hr
Mother away 8 hr
- 8 hours is 1/3 of 24
- 1/3 of 30 oz = 10 oz

Average—may be more or less

Calculating Milk Needed

Total: ~30 oz/24 hr
Mother away 12 hr
- 12 hours is 1/2 of 24
- 1/2 of 30 oz = 15 oz

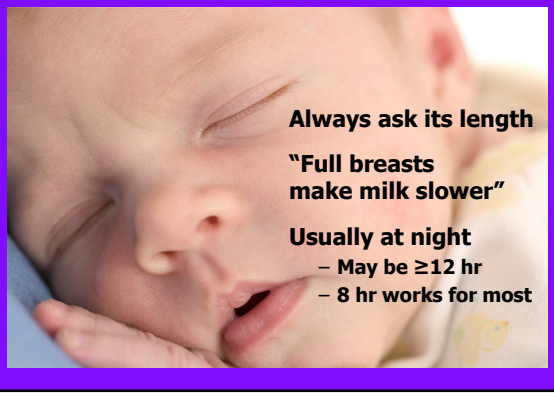
If apart 8-12 hr, baby needs ~10-15 oz

If Baby Takes Much More, Find Out Why

When Helping an Employed Mother

Expand your focus beyond her number of milk expressions at work

Impact of the Longest Stretch



Always ask its length

"Full breasts make milk slower"

Usually at night
- May be ≥12 hr
- 8 hr works for most

Focus on 24-Hour Day

- *~ 30 oz* needed/day
- After 1 month, *3-4 oz* average milk volume per breastfeeding

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MORE BREASTFEEDING when together means LESS EXPRESSED MILK NEEDED when apart

Every *breastfeeding added*

= 3-4 oz LESS milk needed at work

Every *breastfeeding dropped*

= 3-4 oz MORE milk needed at work

The Magic Number

Many mothers pump enough at work, but don't breastfeed enough at home

As daily total drops, milk production slows

Troubleshooting with Employed Breastfeeding Mothers

"My baby is taking more milk than I pump at work. What should I do?"

~What is your *first* response?~

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Before answering, ask:

- Volume of milk expressed
- Volume of milk fed
- Times per day she:
  - Breastfeeds
  - Expresses milk
- *Magic Number* when home & daily total now
- Length of longest stretch
- 24-hr routine

May Also Need to Know…

- Is baby eating solids?
- Pumping issues?
  - Pump quality, malfunction, fit
  - Milk-ejection issues
- Galactogogues used?
- Mother or baby health issues, meds (birth control)?

1: "Jen" & "Colin"

"My baby is taking more milk than I pump at work. What should I do?"

Baby Colin 10 wk old

Jen@work full-time 2 wk ago

1: "Jen" & "Colin"

Goal: Breastfeed 1 yr

Magic Number @home: 8

Apart 8 hr

- Colin taking 20 oz EBM; Jen can't keep up
- Jen pumps 12 oz at work

Expected volume

- 8 hr apart = 10 oz

1: "Jen" & "Colin"

Breastfeeds 1x am, 2x pm, pumps 2x at work, sleeps 8 hr per night

- Now daily total = 5 *(Magic Number* 8*)*

Colin is fed 4 5oz bottles

- 1 at arrival at caregiver
- 2 during day
- 1 just before Jen arrives

What is the issue?

What can Jen do?

2: "Abby" & "Beth"

"My baby is taking more milk than I pump at work. What should I do?"

Baby Beth 6 mo old

Abby@work full-time 4 mo ago

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2: "Abby" & "Beth"

Goal: Breastfeed 1 yr
Milk production issues @3 mo
Magic Number @home: 8-10
Early, Beth slept 10-12 hr

Abby@work @2 mo, apart 8 hr
- Milk production dropped right away
- Pumped at night so as not to wake Beth
- Used galactogogues to boost milk production

2: "Abby" & "Beth"

Abby dropped night pumps
- Longest stretch: 10-12 hr

When galactogogues stopped, milk production drops, uses formula
Dropped feedings over time
Now daily total = 5
(Magic Number: 8-10*)*
- Pumps 2x at work, breastfeeds 3x at home
- Pumping 6 oz at work, Beth takes 12 oz

What is Abby's issue?

3: "Josie" & "Claire"

"I pump less milk at work than I used to. What can I do?"

Baby Claire 8 mo old

Back to work full-time 5 mo ago

3: "Josie" & "Claire"

Goal: Breastfeed 1 yr
Magic Number: 8
Josie@work 3 mo, away 9 hr
Production stable until ~6.5 mo
- Was pumping 12 oz, now 9 oz
- Now, daily total: 8
- 3 pumps at work
- 5 breastfeedings at home
- Longest stretch: 8 hours

What's affecting production?

3: "Josie" & "Claire"

What's affecting production?
Breastfed babies' milk intake
- Increases birth to Week 5
- Plateaus (until ~6 mo)
- Decreases when foods started

Questions to ask:
- Is Claire taking solid foods?
- If so, how much? (~3 oz/day)

Does Josie need to increase milk?

To Increase Milk Production

The sooner, the better
- Check pump fit
  Jones, et al. *Arch Dis Child Fetal Neonatal Ed* 2001; 85:F91-95
- Use hands-on pumping
  Morton, et al. *J Perinatol* 2009; 29(11), 757-764
  - Drained breasts make milk faster
- Increase daily total
  - Breastfeed more
  - Pump more
- Galactogogues

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One Size Does Not Fit All

Different strategies address differences in:

- **Breast storage capacity**
- **Responsiveness to pumping**
- **Factors as yet unknown**

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