

# The Happiest Baby: Increase Sleep, Decrease Cry, and Decrease Abuse-PPD- SIDS for the Cost of Breakfast?



Harvey Karp, MD, FAAP  
USC School of Medicine

[Dr.Karp@TheHappiestBaby.com](mailto:Dr.Karp@TheHappiestBaby.com)

“A mind once stretched to a new idea, *never* returns to its original size.”

-Oliver Wendell Holmes



# New Baby Ideas

- The 4<sup>th</sup> Trimester
- The Calming Reflex
- The 5 S's

# The 5 S's...In Action!



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# Top Tasks: Feed, Calm, Sleep

Lots of help for feeding, but not for cry/sleep.



# Colic

15% cry >3 hours (50% > 2 hours)

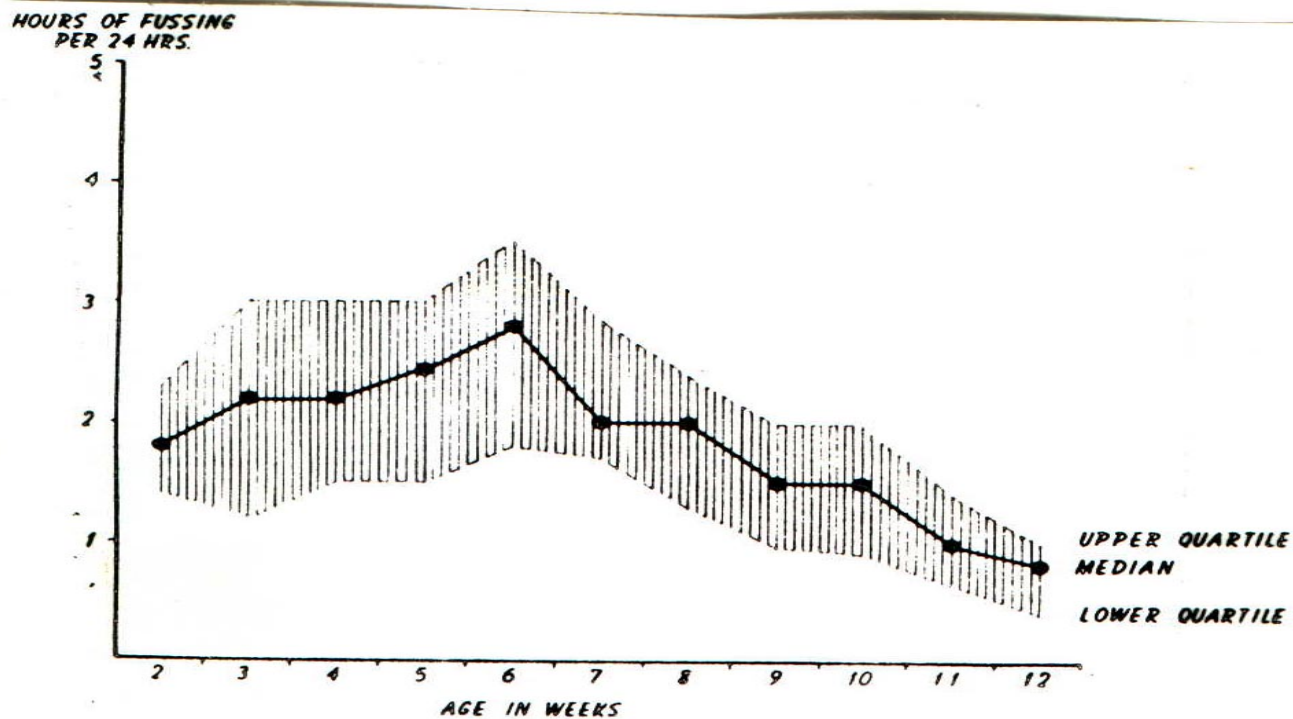
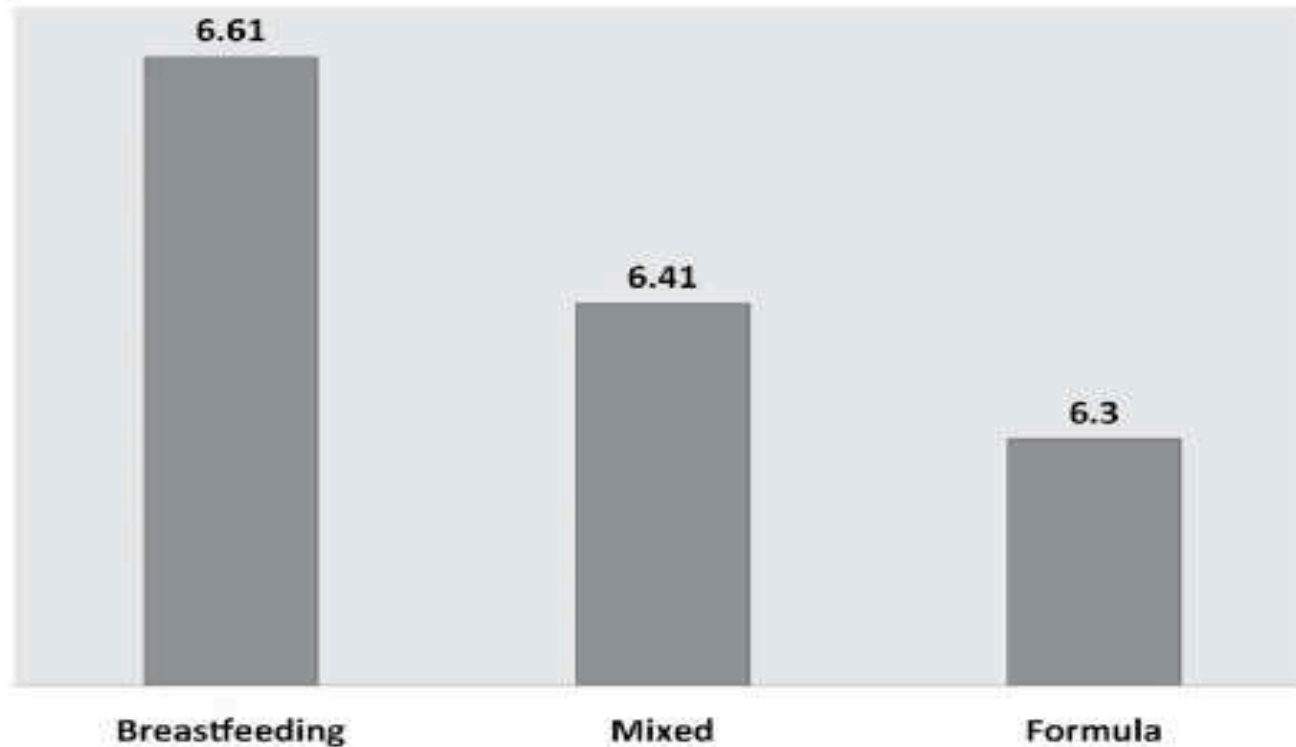


FIG. 3. Summary of the total crying time of 80 infants. (Reprinted with permission from Brazelton.<sup>4</sup>)



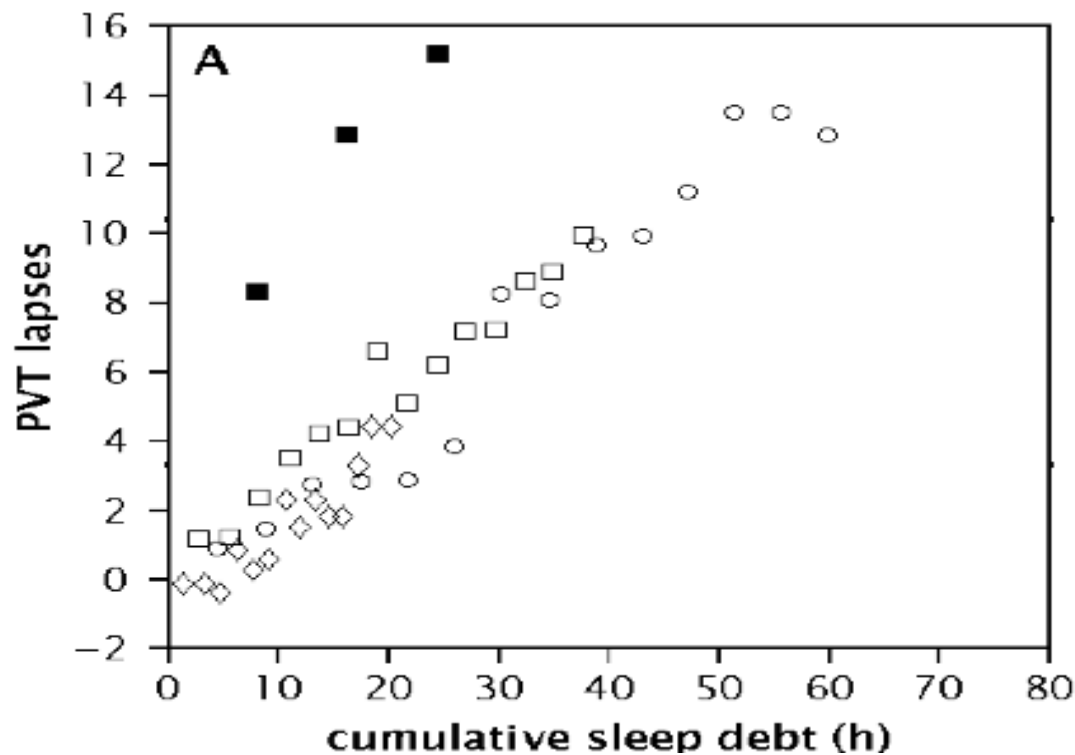
# Moms Tired...Drunk Tired



**Figure 1**  
Total number of hours mothers sleep

# 6 Hours/Night = Drunk Tired

14 days at < 6 hours → cognitive impairment  
= 2 days total sleep loss



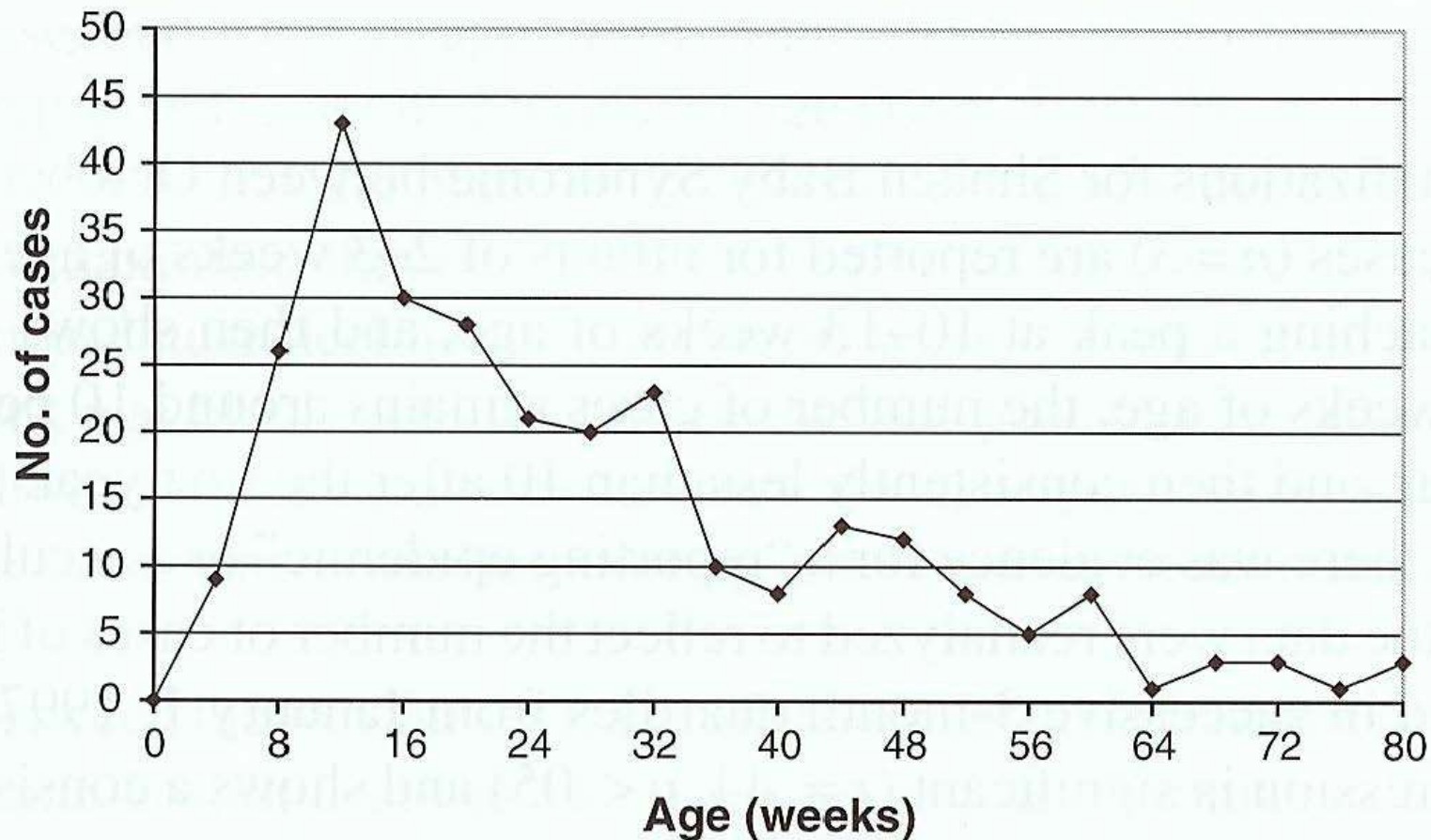
# Cry/Fatigue

## Dangerous and expensive

- Marital stress
- Depression – anxiety
- SIDS/Suffocation deaths
- Child abuse/neglect
- Breastfeeding failure
- Car accidents
- Obesity

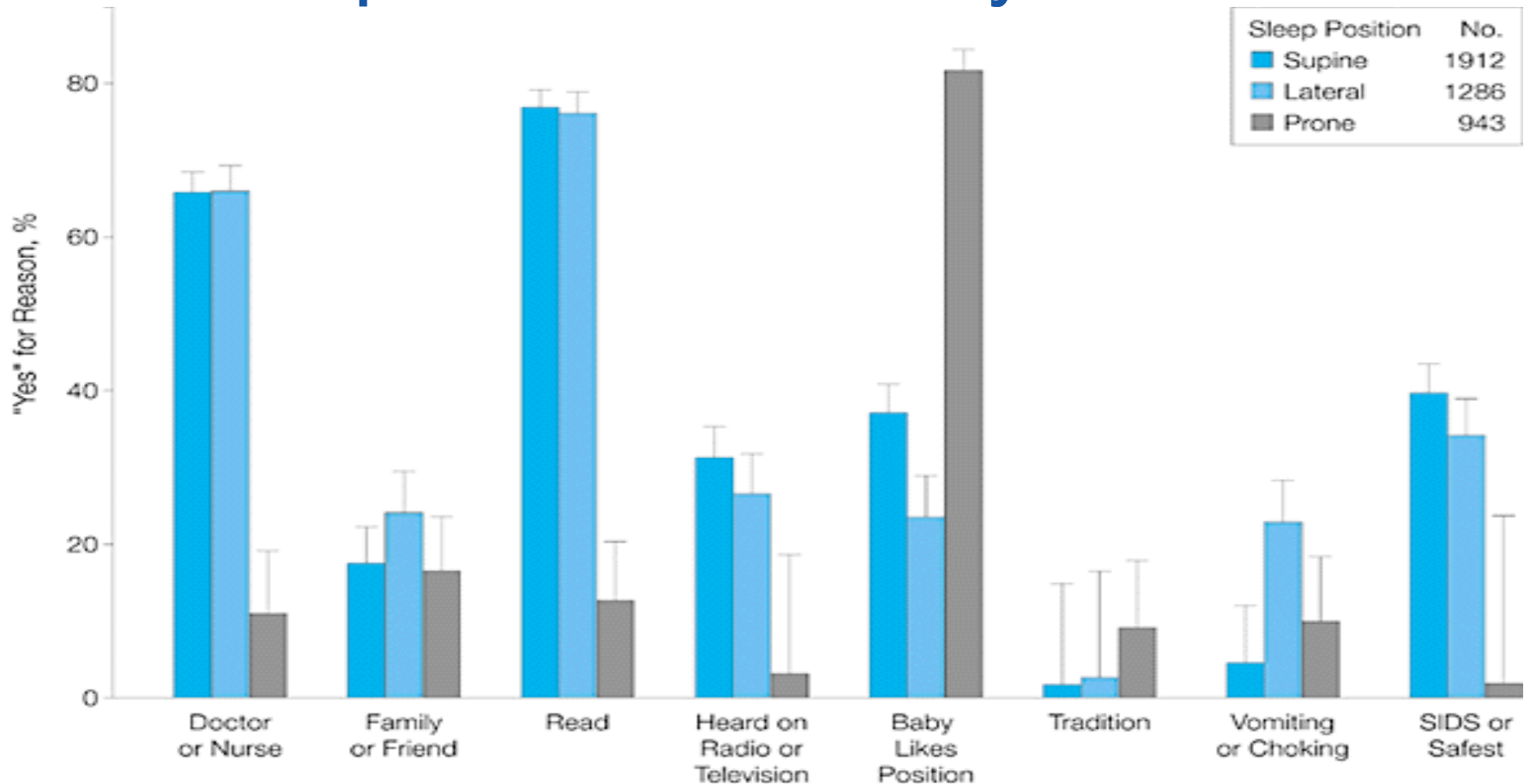
# Hospitalized SBS in CA, 1996-2000

*R.G. Barr et al. / Child Abuse & Neglect 30 (2006) 7-16*



# SIDS/Suffocation

82% used prone because...baby “fussed less”



# Reducing PPD Triggers

“Once the *modifiable* risks are found, clinicians can target interventions to ↓ a woman’s risk of mood disorder.”

**TABLE 1**  
*Comparison of Predictors in the Original and Updated Meta-Analyses*

Predictor	Number of Studies	Updated Meta-Analysis <sup>b</sup>	
		Mean	r Effect Size
Original			
Prenatal depression	21	.44	.45
Child care stress	7	.45	.46
Updated			
Infant temperament	10	.33	.34
Self-esteem	6	.45	.47

# PPD/Anxiety

4x PPD if > 20 min inconsolable cry (EPDS > 9)

Radesky, et al. Pediatrics 2013

**Brown Colic Clinic: 45% PPD**

(avg. 2 min pp.....30% mod; 15% severe) (n= 93)

Maxted, et al. Inf Ment Health J. 2005



# The Missing 4<sup>th</sup> Trimester



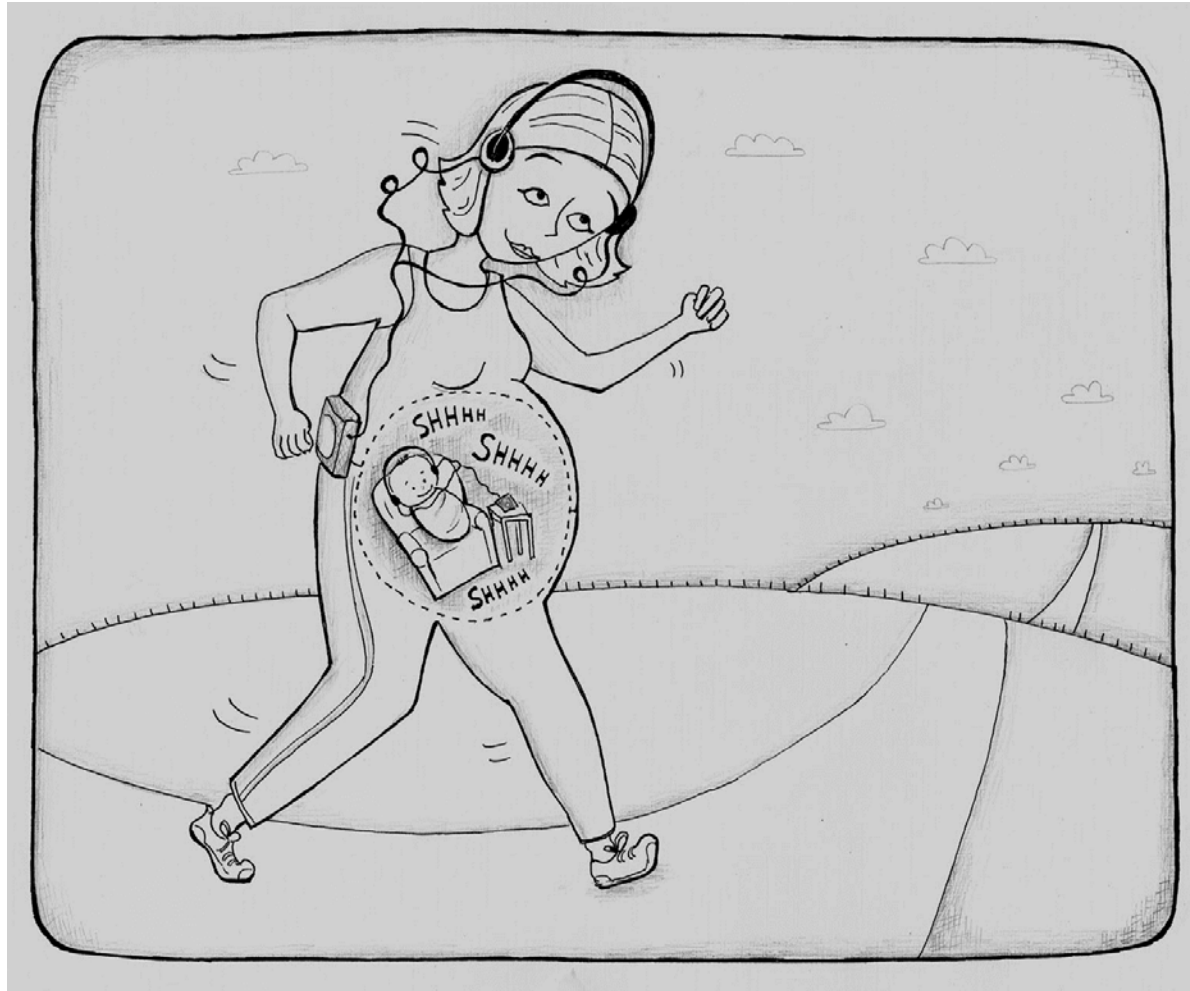




# What's It Like In There?



# The Calming Reflex



# Neonatal Reflex - Traits

1. Exact input → Exact Output
2. Threshold
3. Obligatory in 1<sup>st</sup> months
4. Wanes after 4 months

# 5 S's Turn on CR

- 1st S: Swaddle
- 2nd S: Side/Stomach
- 3rd S: Shush
- 4th S: Swinging
- 5th S: Suck

**But, like any reflex, it must be done exactly right!**

# 1<sup>st</sup> S: Swaddle

- Cornerstone of calm
- Often ↑ cry at first
- Snug, arms ↓



# Few US Swaddle Deaths (2004-12)

**10 deaths - sleep sack + wings**

**12 deaths – swaddled**

- 92% prone or with bulky bedding

McDonnell & Moon, J Peds 2014

**Over 1000 sofa-related deaths!**

Rechtman, Peds 2014

**Millions babies swaddled over those 8 years!**



# 2<sup>nd</sup> S: Side/Stomach

- Back triggers Moro
- Not for sleeping



# 3<sup>rd</sup> S: Shushing

- Womb noise = vacuum
- As key as swaddle
- High vs low pitch



# 4<sup>th</sup> S: Swinging

## Jiggle

- fast/tiny
- support neck

May need for hours

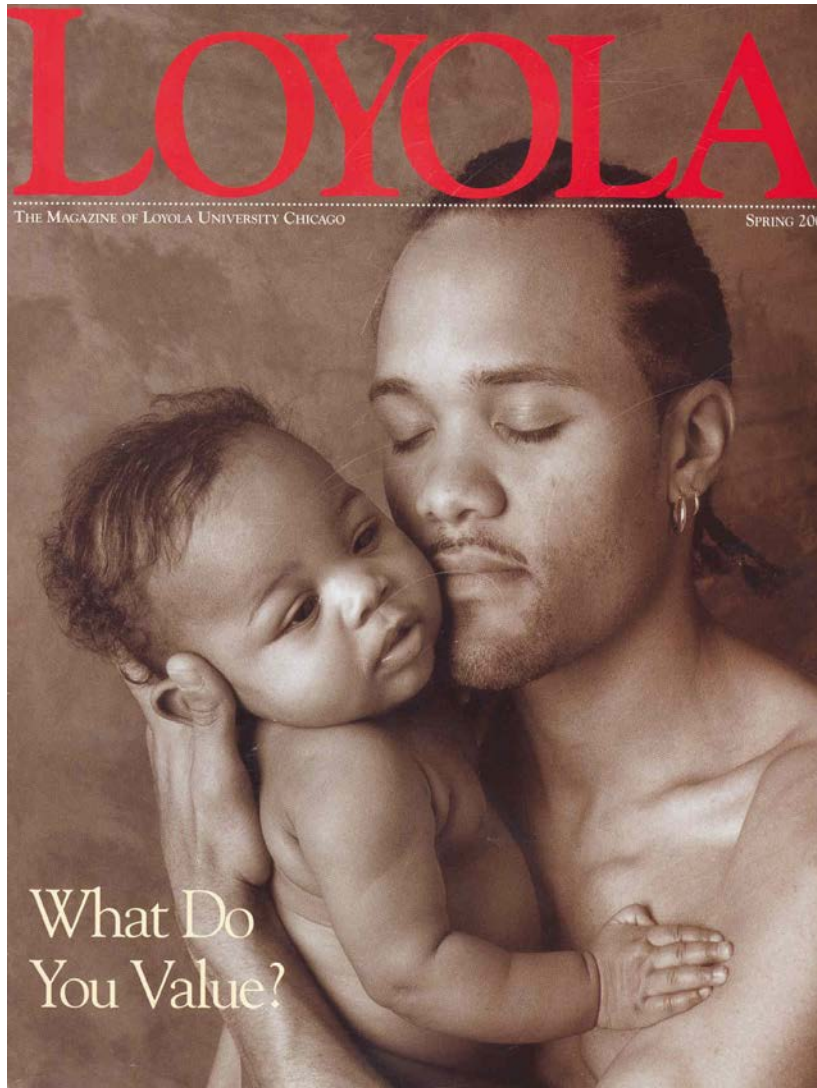


# 5<sup>th</sup> S: Sucking

- Skin-to-skin
- Feed first



# Fatherhood



Dads are *super* baby calmers

# 6<sup>th</sup> S: Sleep

Wake them up!

Wrap for 4-9 min

Right sound for >12 min



# Sound and Sleep

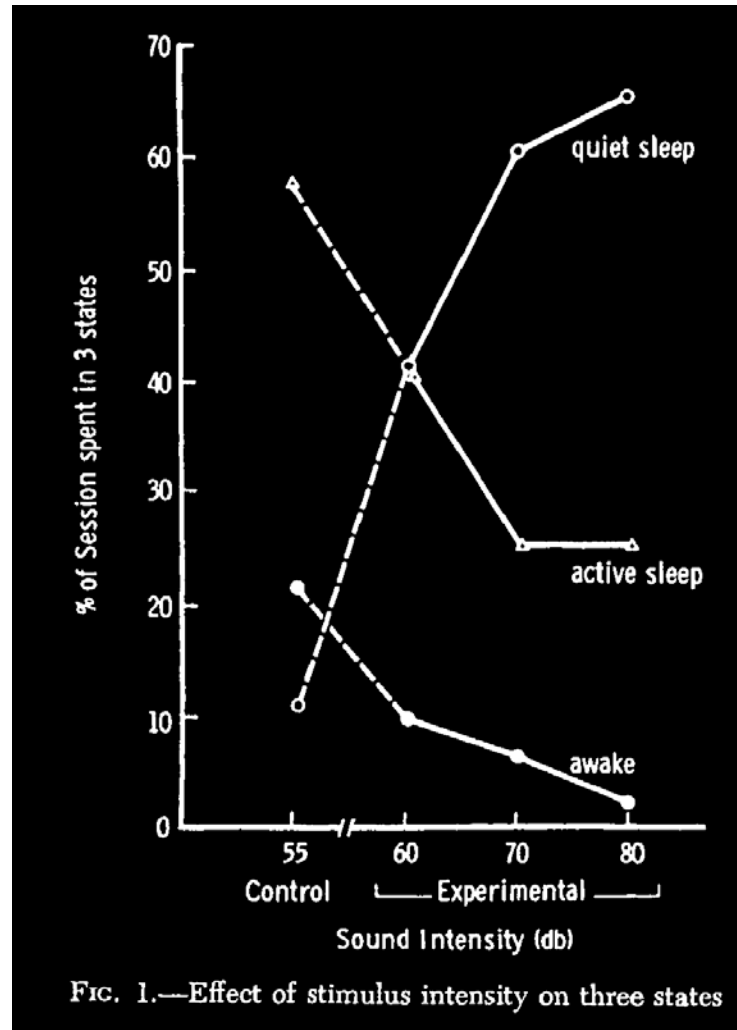
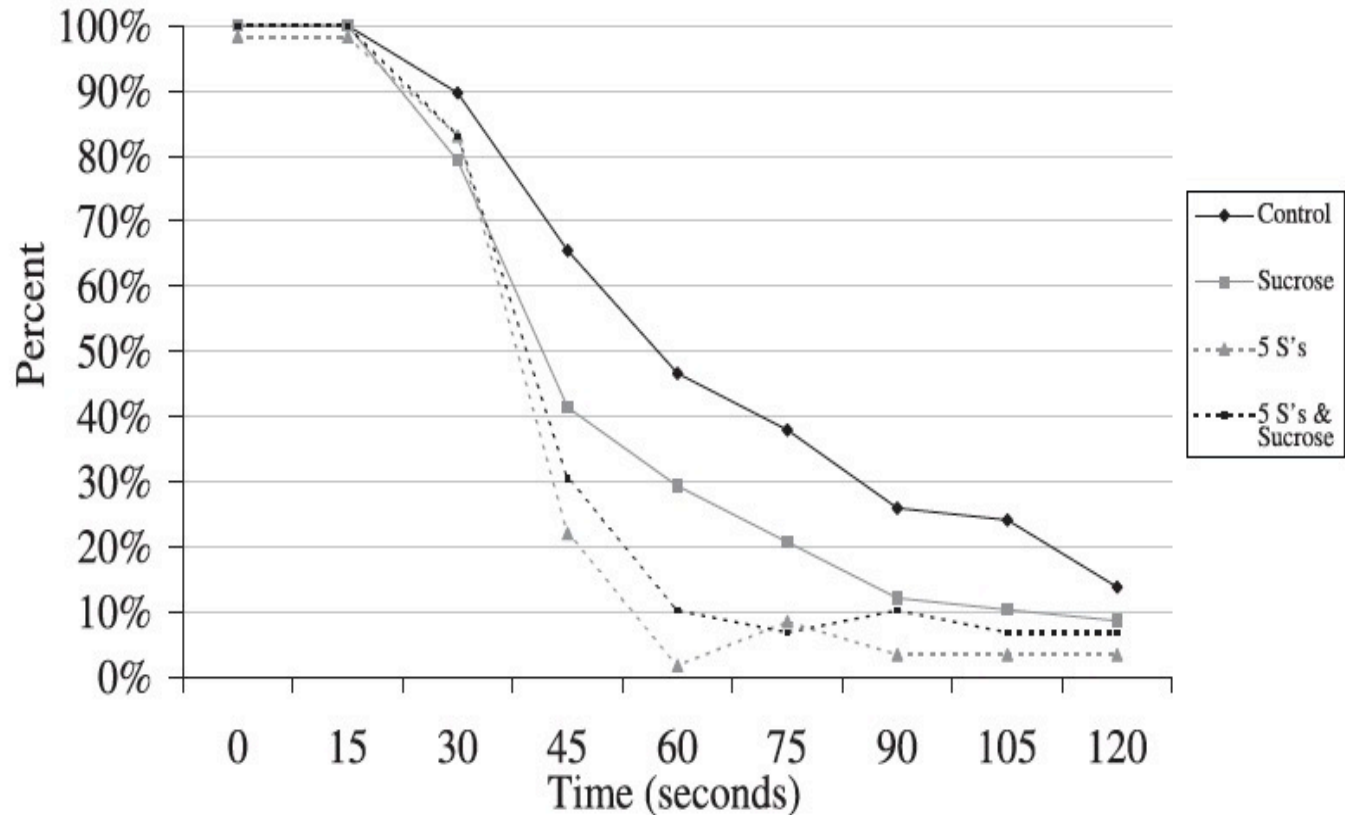


FIG. 1.—Effect of stimulus intensity on three states

# 5 S's and Vaccines



**FIGURE 3**  
Percent of participants crying over time by intervention.

n=230

Harrington, et al Pediatrics 2012





# THB & Cry Reduction: Holland

## Daily Crying

	Baseline (mean)	THB (mean)
#1	3 hr 0 min	0 hr 47 min
#2	3 hr 3 min	1 hr 7 min*
#3	3 hr 40 min	1 hr 0 min**

## Daily Sleeping

	Baseline (mean)	TBH (mean)
#1	14 hr 21 min	14 hr 12 min
#2	12 hr 15 min	14 hr 56 min
#3	12 hr 2 min	14 hr 51 min

\* $p < .05$  \*\* $p < .01$

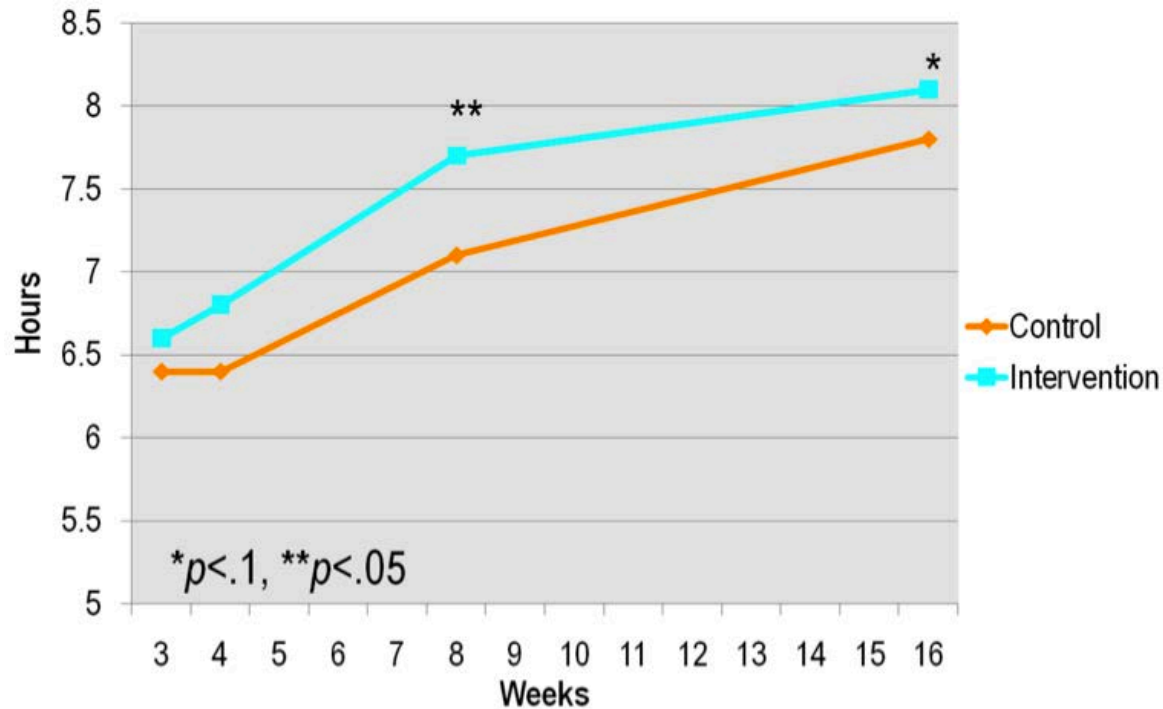


# NIH-Penn State THB RCT

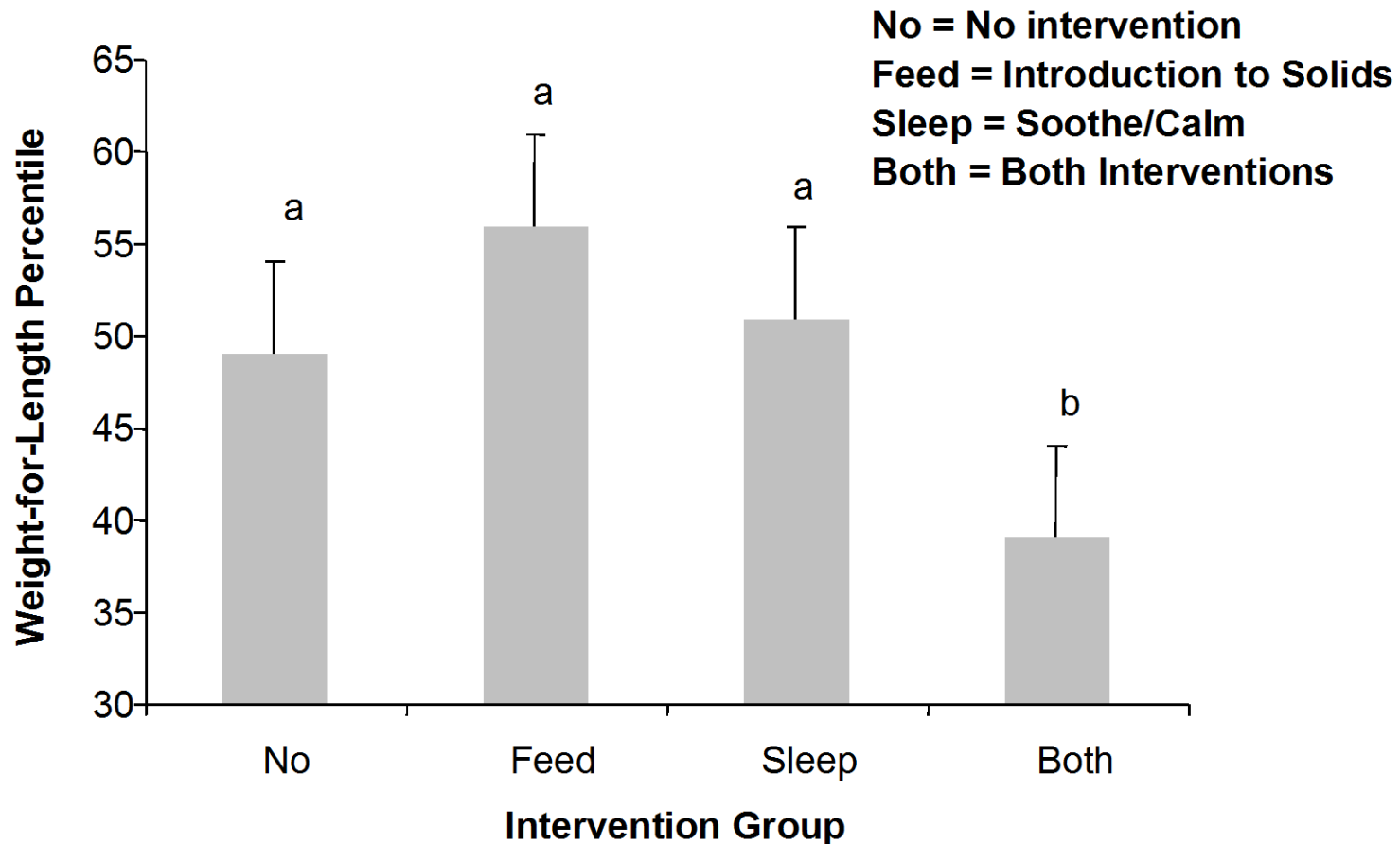
Study: THB  
(DVD/CD/wrap) +  
feeding advice

- RCT
- n=160

Paul et al, Obesity  
2011



# Intervention Effect on Weight-for-Length Percentile at 1 Year



# Parent Confidence

**Subjects:** 225 parents-to-be

## Results:

- Pre-class: ~40% mod-very worried
- Post-class: ~1% mod-very worried

Southeast Arizona Behavioral Health Services



# Current THB Studies

1. NIH - Boston Medical Center: THB & NAS
2. NIH – University of Texas/Houston: THB & colic
3. NIH - Pennsylvania State University: THB sleep & obesity
4. Kansas University: THB & PICU sleep/pain
5. University of Amsterdam: THB to reduce crying

# Happiest Baby Educator Certification

*DVD*-based training

3000 educators in 25 nations

Recommended in AAP publications

Over *1000* THB educators trained by Welfare and Health Departments: CO, CT, MA, MN, OK, PA, WY, etc.

