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

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

-Oliver Wendell Holmes
New Baby Ideas

- The 4\textsuperscript{th} Trimester
- The Calming Reflex
- The 5 S’s
The 5 S’s...In Action!
The 5 S’s...In Action!
The 5 S’s...In Action!
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.4)
Figure 1
Total number of hours mothers sleep

Kendall-Tackett, K Clin Lactation 2011
14 days at < 6 hours $\rightarrow$ cognitive impairment

= 2 days total sleep loss

Van Dongen HPA, SLEEP. 2003
Dangerous and expensive

- Marital stress
- Depression – anxiety
- SIDS/Suffocation deaths
- Child abuse/neglect
- Breastfeeding failure
- Car accidents
- Obesity
Hospitalized SBS in CA, 1996-2000


![Graph showing the number of cases of SBS cases by age (weeks). The graph peaks at around 16 weeks and shows a decline thereafter. The x-axis represents age in weeks, and the y-axis represents the number of cases.]
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

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Number of Studies</th>
<th>Original Meta-Analysis</th>
<th>Updated Meta-Analysis&lt;sup&gt;b&lt;/sup&gt;</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean r Effect Size</td>
</tr>
<tr>
<td>Prenatal depression</td>
<td>21</td>
<td></td>
<td>.44-.45</td>
</tr>
<tr>
<td>Child care stress</td>
<td>7</td>
<td></td>
<td>.45-.46</td>
</tr>
<tr>
<td>Infant temperament</td>
<td>10</td>
<td></td>
<td>.33-.34</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>6</td>
<td></td>
<td>.45-.47</td>
</tr>
</tbody>
</table>

Beck JOGNN, 2002
PPD/Anxiety

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


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 4th Trimester
Video
What’s It Like In There?
The Calming Reflex
Neonatal Reflex - Traits

1. Exact input → Exact Output
2. Threshold
3. Obligatory in 1st 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!
1st 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!
2nd S: Side/Stomach

- Back triggers Moro
- Not for sleeping
3rd S: Shushing

- Womb noise = vacuum
- As key as swaddle
- High vs low pitch
4th S: Swinging

Jiggle

- fast/tiny
- support neck

May need for hours
5th S: Sucking

- Skin-to-skin
- Feed first
Dads are super baby calmers
6th S: Sleep

Wake them up!
Wrap for 4-9 min
Right sound for >12 min
Sound and Sleep

![Graph showing the effect of stimulus intensity on three states: quiet sleep, active sleep, and awake.](image-url)

**Fig. 1.**—Effect of stimulus intensity on three states

Brackbill Y, Child Dev 1975; 46: 364-369
FIGURE 3
Percent of participants crying over time by intervention.

n=230
Harrington, et al Pediatrics 2012
## THB & Cry Reduction: Holland

### Daily Crying

<table>
<thead>
<tr>
<th></th>
<th>Baseline (mean)</th>
<th>THB (mean)</th>
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<tbody>
<tr>
<td>#1</td>
<td>3 hr 0 min</td>
<td>0 hr 47 min</td>
</tr>
<tr>
<td>#2</td>
<td>3 hr 3 min</td>
<td>1 hr 7 min*</td>
</tr>
<tr>
<td>#3</td>
<td>3 hr 40 min</td>
<td>1 hr 0 min**</td>
</tr>
</tbody>
</table>

### Daily Sleeping

<table>
<thead>
<tr>
<th></th>
<th>Baseline (mean)</th>
<th>TBH (mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>14 hr 21 min</td>
<td>14 hr 12 min</td>
</tr>
<tr>
<td>#2</td>
<td>12 hr 15 min</td>
<td>14 hr 56 min</td>
</tr>
<tr>
<td>#3</td>
<td>12 hr 2 min</td>
<td>14 hr 51 min</td>
</tr>
</tbody>
</table>

* $p < .05$  ** $p < .01$
NIH-Penn State THB RCT

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

- RCT
- n=160

Paul et al, Obesity 2011

* p<.1, ** p<.05
Intervention Effect on Weight-for-Length Percentile at 1 Year

No = No intervention
Feed = Introduction to Solids
Sleep = Soothe/Calm
Both = Both Interventions
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.