

# Happiest Baby

A Novel Way to  
↓ Baby Crying ↑ Baby Sleep  
&  
Perhaps ↓ PPD, SBS, SUID  
For the cost of dinner

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“There is a reason  
behind everything in  
Nature”

Aristotle

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## Change Happens!

Sometimes it's simple:  
Car seats - ↓ Car deaths

Sometimes it's a total 180° !  
Back sleeping - ↓ SIDS deaths

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“Everything should be made as simple as possible...

but no simpler.”

Albert Einstein

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*What if...?*

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## *New Ideas*

- 4<sup>th</sup> Trimester
- Calming Reflex
- 5S's
- PPD, SBS, SUID, BF failure may be preventable

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# The 5 S's...in action!

3 Videos

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### 3 Jobs: Feed, Calm, Sleep

Lots of help to feed  
...but little for cry or sleep

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### Even Experts Baffled

- Brazelton – Put in a dark room
- PURPLE crying - May cry up to 5 hrs

Opium used, 1972!  
!Kung san

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### Colic: Rule of 3

~50% > 2h

~15% > 3h

?% > 5-6h

Brazelton, Peds 1962  
Barr, J Peds 2009

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## Parents Exhausted

Kendall-Tackett, K Clin Lactation 2011

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## 6h/Nite = Drunk Tired

10 d @ 6h → same mental decline as 2d total sleep loss

Van Dongen HPA, SLEEP. 2003

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## Dangerous and \$\$\$\$\$

- SBS
  - Poor bonding
  - Breastfeeding failure
  - Marital stress
  - Car accidents
  - SIDS/suffocation
  - Maternal/infant obesity
  - Cigarette smoking
  - Extra MD/ER visits
  - Missed work/accidents/lo productivity/ ins costs
- + PPD

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But, if you could  
soothe the cries...  
  
it would be fun!!  
  
(Turn vicious cycle...into virtuous cycle)

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*Modern Myth*  
  
Babies cry from  
gas  
bad bacteria  
acid pain  
  
Rarely!

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*Gas Theory = 97% Hot Air*

- Stops after 3 months
- Delayed in premies
- Babies calm with vacuum or car

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## Gastro-Colic Reflex

⇒ cry and arch after eating

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*To Stop Crying  
You Need to Know...*

*Why is the Baby Crying?*

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2 videos compare baby horse  
To newborn

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*Our babies are “evicted”  
3 months  
before they’re ready*

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*What’s it like in there?*

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*Parents mimic womb*

But why does it work?

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*The Calming Reflex*

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*Neonatal Reflex – Traits*

- 1 - Exact input → Exact output
- 2 - Threshold
- 3 - Present at birth
- 4 - Obligatory, but wanes > 4 mo

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## The 5 S's

- 1<sup>st</sup> S - Swaddle
- 2<sup>nd</sup> S - Side/Stomach
- 3<sup>rd</sup> S - Shushing
- 4<sup>th</sup> S - Swinging
- 5<sup>th</sup> S - Sucking

Like any reflex it must be done exactly right!

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## 1st S - Swaddle

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

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## Few US Swaddle Deaths (2004-12)

Millions wrapped over these 8 yrs

12 deaths – swaddled  
(92% prone or with bulky bedding)

McDonnell and Moon, J Peds 2014

2004-12, over 1000 sofa-related deaths!

Rechtman, Peds 2014

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### Correct vs Wrong Swaddle

- Don't overheat
- Let hips flex
- Not prone...don't stop 2 mo!
- Just for cry and sleep

Proper swaddle = Car seat safety

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### 2nd S – Side/Stomach

- Back triggers Moro
- Not for sleeping

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### 3rd S - Shushing

- Womb noise = hair drier
- Hi vs lo pitch

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## 4th S - Swinging

- Jiggle - fast/tiny & support neck

Not in anger!  
Never shake!  
Tell others!

- May need for hours

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2 videos demonstrating motion

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## 5th S - Sucking

- Nurse 50-100 times/day
- Feed first
- OSU: no pacifiers  
→ 2x more bottles



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## New Colic Theory

$$\text{Colic} = \frac{(\text{Chaos} + \text{Too Still}) - \text{Rhythm}}{\text{Temperament} + \text{State Control}}$$

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## 6th S - Sleep

- Always wake a sleeping baby!
- Use swaddle ~4m  
Use sound 12+ m



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***If 5S's Fail***

- Check technique (re-watch DVD)
- If still fails...call doctor

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***Evidence of 5 S's Benefit***

- Many studies of *S's*  
(swaddle, sound, swinging, sucking)
- 5 *S's* research

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***Boulder, CO DPH***

**Subjects:** 42 at-risk families + fussy babies

**Study:** home visit + HB (DVD + CD + blanket)

**Results:** 41/42 calmed fast...many ↑ sleep

CDC-CityMatCh Conference, 2007

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***NIH-Penn State HB RCT*** *n=160*

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

Paul et al, Obesity 2011

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Brackbill Y, Child Dev 1975; 46: 364-369

**Paul et al Obesity 2011**

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## 5 S's & Satisfaction

*RCT n=160*

Prev Sci (2014) 15:643-653

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## 5 S's & Weight Gain

*RCT n=160*

Prev Sci (2014) 15:643-653

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## 5 S's and Vaccines *RCT n=230*

Harrington, et al Pediatrics 2012

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## HB & Cry Reduction: Holland

	Baseline (mean)	HB (mean)
<u>Daily crying</u>		
#1	3h 0m	0h 47m
2	3h 3m	1h 7m *
3	3h 40m	1h 0m **
<u>Daily sleeping</u>		
#1	14h 21m	14h 12m
2	12h 15m	14h 56m
3	12h 2m	14h 51m

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

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## University of Arizona

Subjects: 225 Parents-to-be

Study: Happiest Baby class

Results:

Pre-class:  
~40% mod-very worried

Post-class:  
0.5% mod-very worried



Southeast Arizona Behavioral Health Services

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## Satisfaction Teaching HB

Univ of Chicago, 2013

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## Current *HB* Studies

- 1) NIH - Boston Medical Center: *HB* & NAS
- 2) NIH - UT/Houston: *HB* & colic
- 3) NIH - Penn State: *HB* sleep & obesity
- 4) Univ Amsterdam: *HB* to reduce crying
- 5) UCLA: *HB* sound to boost sleep in NICU

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## Happiest Baby Educator Certification

(DVD-based training)

3000 educators in 25 nations

Recommended in AAP books/website

Over 1000 trained by Health Depts:  
CA, CO, CT, MA, MN, OK, PA, WY, etc

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