

**Good Night,  
Sleep Tight**

*Understanding sleep in the life of a  
new mother*

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**Good Night, Sleep Tight**

- ☞ Sleep disturbance in pregnancy
- ☞ Insomnia
- ☞ Postpartum transitions
- ☞ Sleep and emotional wellness
- ☞ Feeding choices and sleep
- ☞ How you can help

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**Pregnancy & sleep disturbance**

- ☞ Common causes
  - ☞ Breathing-related sleep disorders
  - ☞ Restless Leg Syndrome
  - ☞ Insomnia

Nodine & Matthews, 2013

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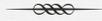
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## Pregnancy & sleep disturbance



- ☞ Sequelae
  - ☞ Cognitive impairment
  - ☞ Diminished daytime functioning
  - ☞ Depression
  - ☞ Hypertension, including possibly preeclampsia
  - ☞ Altered glucose metabolism, including possibly GDM
- ☞ Chicken or egg?

Nodine & Matthews, 2013

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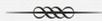
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## Insomnia



- ☞ 80% incidence in pregnancy<sup>1</sup>
  - ☞ Common discomforts
  - ☞ Estrogen & progesterone
  - ☞ Emotional disturbance
- ☞ Inflammatory processes: pro-inflammatory cytokines and C-reactive protein

<sup>1</sup>Nodine & Matthews 2013

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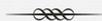
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## Insomnia



- ☞ Beebe & Lee (2007)
  - ☞ Actigraphy in 35 nulliparous women
  - ☞ Total sleep was lower during the 5 days before labor and the night before labor onset
  - ☞ Less sleep the night before was correlated with higher pain perception
- ☞ Lee & Gay (2004)
  - ☞ Women who reported less than 5 hours per night had longer labors and were 4.5 times more likely to have a c-section

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## Bridging pregnancy & postpartum



- ☞ Sleep disturbances in late pregnancy predict emotional maladjustment in postpartum<sup>1,2,3</sup>
- ☞ Women with negative mood across the third trimester to 1 month postpartum slept 80 minutes less<sup>4</sup>

<sup>1</sup>Goyal 2007; <sup>2</sup>Marques 2011, <sup>3</sup>Wolfson 2003, <sup>4</sup>Lee 2000

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## Bridging pregnancy & postpartum



- ☞ Can treating insomnia in pregnancy prevent postpartum depression?
- ☞ Khaszie (2013)
  - ☞ 54 pregnant women with insomnia
  - ☞ Randomized to trazadone, diphenhydramine, or placebo in last trimester of pregnancy
  - ☞ Trazadone and diphenhydramine improved sleep and reduced depression symptoms at 2 and 6 weeks postpartum compared to placebo

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## Postpartum



- ☞ The *perception* of sleep quality and daytime functioning is more important than total sleep amount<sup>1,2</sup>
- ☞ Fatigue compromises both individual functioning and family harmony

<sup>1</sup>Bei 2010 & 2012, <sup>2</sup>Calcigani & Bei 2012

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## Postpartum



- ☞ Parity matters
  - ☞ Primips report more sleep disturbances
  - ☞ Sleep efficiency is decreased in primips
  - ☞ Primips report more fatigue

Tribotti 1998, Walters 1996, Signal 2007, Lee 2000

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## Postpartum



- ☞ Goyal 2009:
  - ☞ Napping at least 1 hour a day was associated with lower depressive symptoms
  - ☞ Spending more than 2 hours awake from midnight to 6 am was associated with higher depressive symptoms (as measured by actigraphy)
  - ☞ Depressive symptoms were more highly correlated with *subjective* reports of poor sleep; delayed sleep onset and perceptions of daytime fatigue were most predictive

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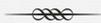
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## Postpartum



- ☞ Bei (2010): During the first week postpartum, more frequent naps were associated with *more* symptoms of anxiety and stress
- ☞ Naps may reflect loss of nighttime sleep and attempts to cope
- ☞ Sleep quality during daytime naps are not as restorative
- ☞ Sleep quality is lower when not aligned with circadian cycles; diminished opportunity for time spent in deeper stages

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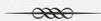
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## Postpartum mood



- ☞ Sleep disturbances are bidirectional to mood disorders in the pregnant, postpartum, and general populations
- ☞ Individuals with mood disorders show alterations in cognitive functioning
- ☞ Possible cues that sleep deprivation precedes mood:
  - ☞ sleep deprivation increases emotional reactivity<sup>1</sup>
  - ☞ REM sleep helps connect memories to emotions<sup>2</sup>
- ☞ Individual variations exist

<sup>1</sup>Yoo 2007, <sup>2</sup>Frank 2013

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## Postpartum mood



- ☞ Women with mood disorders may alter their infants sleep

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## Feeding method & moms



- ☞ Intention is important<sup>1</sup>
- ☞ *Successful* breastfeeding is protective of both sleep and mental health, mostly if exclusive<sup>2,3,6</sup>
- ☞ Breastfeeding may improve the quality of maternal sleep<sup>4,5</sup>

<sup>1</sup>Borra 2014, <sup>2</sup>Kendall-Hackett 2011, <sup>3</sup>Doan 2007  
<sup>4</sup>Blyton 2002, <sup>5</sup>Nishihara 2004, <sup>6</sup>Dorheim 2009

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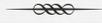
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## Feeding method & babies



- ☞ Breastfed babies display the biological norm of arousability<sup>1</sup>
- ☞ Age matters
- ☞ Infants with reported sleep problems are more likely to be breastfed<sup>2,3,4</sup>
- ☞ Parental presence may be the connection<sup>5,6,7,8</sup>

<sup>1</sup>Hauck 2011, <sup>2</sup>Lam 2003, <sup>3</sup>Touchette 2005, <sup>4</sup>Elias 1986  
<sup>5</sup>Adair 1991, <sup>6</sup>Anders 1992, <sup>7</sup>Burnham 2002, <sup>8</sup>Morrell 2002

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