Breastfeeding Makes All the Difference

Breastfeeding’s Role in Overcoming Adversity

Kathleen Kendall-Tackett, PhD, IBCLC, FAPA
We do not live in a perfect world.
Mothers are often overwhelmed
Many have a history of trauma or adversity.
Can breastfeeding help?
What is childhood adversity?
Child Maltreatment
*CSA, CPA, CEA, Neglect*

Parental Impairment
*Substance abuse, mental illness, partner violence, criminal activity*

Parental Loss
*Death or divorce*

Low Socioeconomic Status
*Community violence, unsafe housing, food insecurity, medical care*
Prenatal Depression

Survey of Mothers’ Sleep and Fatigue

16% Rape
25% CSA
32% Parental Substance Abuse
34% Physical Abuse
36% Parental Depression

6,410 mothers
Psychoneuroimmunology
Inflammation

Fight-or-flight

Cortisol
Racial/Ethnic Health Disparities
U.S. ranks 41st in the world in infant mortality
Infant Death Rates per 1,000 Live Birth

- White: 5.33
- Black: 12.4

MMWR Feb 8 2013/ 62(5); 90
Percentage of Preterm Births

- White: 11%
- Black: 18%

Data source: [CDC website](http://www.cdc.gov/nchs/data/nvsr/nvsr59/nvsr59_01.pdf)
Study of 1,581 pregnant women

- 25% reported depression, PTSD, or other disorder
- 36% reported interpersonal trauma
- 93% reported at least one traumatic event

Seng et al. 2014, *Psychological Trauma, 6*(1), 41-49
Seng et al. 2011, Arch Womens Ment Health, 14(4), 295-306
16,334 deliveries at VA Hospital 2000-2012

7.4% no PTSD
8% previous PTSD
9.2% current PTSD

Shaw et al. 2014, Obstet Gynecol, 124(6), 1111-1119
Women with PTSD and major depression had 4 times the risk of preterm birth.

2,654 women in U.S.

Yonkers et al. 2014. *JAMA Psychiatry, 71*(8), 897-904.
Inflammation high in stressed and depressed mothers
291 low-income moms

DHA-enriched eggs increased gestation length by 6 days (+2.3 days)

Smuts et al. 2003, *Obstet Gyn, 101, 469-479*
Discrimination as Adversity
Discrimination associated with elevated C-reactive protein levels

Lewis et al. 2010, Brain Behav Immun, 24(3), 438-443
• Perceived discrimination
  – You are treated with less courtesy other people
  – You are treated with less respect than other people
  – You receive poorer service than other people at restaurants and stores
  – People act as if they think you are not smart

• Low social status related to vascular inflammation
  – ET-1, sICAM
• Independent of hypertension status or ethnicity

Hong et al. 2006, *Psychosom Med, 68*, 517-523
Low parental education predicted high school students

- Higher insulin levels
- Higher glucose
- Greater insulin resistance
- Higher-LDL, lower HDL
- Higher waist circumference
- Higher BMI

Study of 187 adults

Sleep Time

Blacks

- 25 min to sleep
- 3.6% SWS

Whites

- 16 min to sleep
- 6.8% SWS

Even short periods of sleep deprivation can elevate cortisol and glucose levels, and increase insulin resistance

Short sleep related to:
Abdominal obesity
Elevated fasting glucose
Hypertriglyceridemia

Hall et al. 2008, *Sleep*, 31(5), 635-643
BMI is related to race/ethnicity
U.S. Obesity Rates by Ethnicity

The same is true in Australia and New Zealand.
BMI >30 Rates for Australian Women

- Indigenous:
  - Age 25-34: 35%
  - Age 35-44: 38%

- Non-Indigenous:
  - Age 25-34: 14%
  - Age 35-44: 16%
New Zealand BMI >30 Rates for Women

- Asian: 12%
- White: 29%
- Maori: 51%
- Pacific Islander: 73%
BMI >30 in the UK
Women’s BMI by Ethnic Group in UK

NHS. 2011, Obesity and ethnicity
NHS. 2011, *Obesity and ethnicity*
The Pima Indians of the Gila River

Taubes, 2008; Good calories, bad calories. Knopf
U.S. Diabetes Prevalence by Ethnic Group

Men and Women, Age 45-74 Years

% with Diabetes

European | Cuban | Japanese | African | Mexican | Puerto | Pima

American | American | American | American | American | Rican | Indian

Trauma and BMI
Physical and sexual abuse as children or teens increased the risk of Type 2 diabetes.

• 50% increase in diabetes risk for severe physical abuse
• 69% increase for repeated forced sex

Physically and sexually abused girls had higher BMIs.

Trajectories grew wider as the girls grew.

Particularly for those who experienced repeated forced sex.

Meta-analysis of 41 studies (N=190, 285) examining the link between CAN and obesity

Danese & Tan, 2014, Molecular Psychia, 19, 544-554
How does breastfeeding protect against the effects of adversity?
It’s more than milk
Oxytocin

Well-being
Affiliation
Bonding

Depression & anxiety
Alienation
Hostility & strife

Stress
Short-term lessening of the stress response
Response to induced stressor
ACTH
Cortisol

Baby at the Breast Lowers Mothers’ Stress

Heinrichs et al. 2001, J Clin Endo Metabol, 86, 4798-4804
Lifetime Protection For Mothers

Attachment is essential to survival above and beyond food and shelter.
Proximity and maternal responsiveness promote secure attachment
Breastfeeding >12 months = Better child mental health

Oddy et al. 2009, J Pediatrics 156, 568-574

14-year longitudinal study in W. Australia of 2900 pregnant women
### Child Behavior Checklist Scores

<table>
<thead>
<tr>
<th>Age</th>
<th>Never BF</th>
<th>BF 12+ Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 2</td>
<td>16.1</td>
<td>9.6</td>
</tr>
<tr>
<td>Age 5</td>
<td>26.3</td>
<td>16.0</td>
</tr>
<tr>
<td>Age 8</td>
<td>19.4</td>
<td>13.5</td>
</tr>
<tr>
<td>Age 10</td>
<td>15.2</td>
<td>12.6</td>
</tr>
<tr>
<td>Age 14</td>
<td>16.7</td>
<td>10.9</td>
</tr>
</tbody>
</table>
Secure Attachments Decrease Adult Health Problems
Insecure attachments at 12-18 months associated with inflammation-based illness at age 32

Breastfeeding lowers risk of intergenerational abuse and trauma
Infant sleep difficulties

Maternal depressed mood

Hairston et al. 2011 *Sleep*, 34(10), 1373-1383
Minutes to Fall Asleep

- Breastfed: 19.61 minutes
- Mixed: 22.36 minutes
- Formula: 27.05 minutes
Breastfeeding: 6.61
Mixed: 6.41
Formula: 6.3

Hours Mothers Sleep

Axis Title
Mothers’ Daily Energy

Breastfeeding: 3.03
Mixed: 2.72
Formula: 2.79
Overall Physical Health

<table>
<thead>
<tr>
<th></th>
<th>Breastfeed</th>
<th>Mixed</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.75</td>
<td>3.31</td>
<td>3.44</td>
</tr>
</tbody>
</table>

Breastfeed: 3.75
Mixed: 3.31
Formula: 3.44
Maternal Mental Health

Groer & Kendall-Tackett (2011) *Breastfeeding protects women’s health throughout the lifespan*. Amarillo, TX: Hale Publishing
Feeling Down, Depressed or Hopeless

Breastfeeding: 0.4
Mixed: 0.49
Formula: 0.59
Anhedonia

Breastfeeding: 0.45
Mixed: 0.55
Formula: 0.69
Does breastfeeding help with child abuse?
Mothers who breastfed for 4 months were 3.8 times less likely to neglect their children.

15-year longitudinal study, 7,223 Australian mother-infant dyads

Strathearn et al. 2009, Pediatrics, 123, 483-493
And 2.6 times less likely to physically abuse them
The Impact of Sexual Assault
Total Sleep Time

- No Sexual Assault: 6.59
- Sexual Assault: 6.44
Minutes to Get to Sleep

- No Sexual Assault: 19.44 minutes
- Sexual Assault: 24.54 minutes
Physical Health

No Sexual Assault: 3.71
Sexual Assault: 2.4
Current Depression

- No Sexual Assault: 0.853
- Sexual Assault: 1.11
Anxiety

0.96

No Sexual Assault

2.4

Sexual Assault
Does breastfeeding help these mothers?
Percentage who are Breastfeeding

N=6,410 new mothers
Hours Mothers Sleep

Breastfeeding
Mixed/Formula

No assault  Sexual assault

6.63  6.52
6.44  6.16

6.1
6.2
6.3
6.4
6.5
6.6
6.7

6

Minutes to Get to Sleep

Breastfeeding
- No assault: 18.73
- Sexual assault: 23.87

Mixed-/Formula
- No assault: 22.07
- Sexual assault: 27.01
Angry or Irritable

- Breastfeeding
  - No Assault: 1.49
  - Sexual Assault: 1.51

- Mixed/Formula
  - No Assault: 1.53
  - Sexual Assault: 1.69
“It is easier to build strong children than repair broken men”
Find Me on Social Media

Kathleen Kendall-Tackett
Kathy Kendall-Tackett
@UptySciChick
Kathleen Kendall-Tackett

Email: kkendalltt@gmail.com