

A New Paradigm for Depression in New Mothers

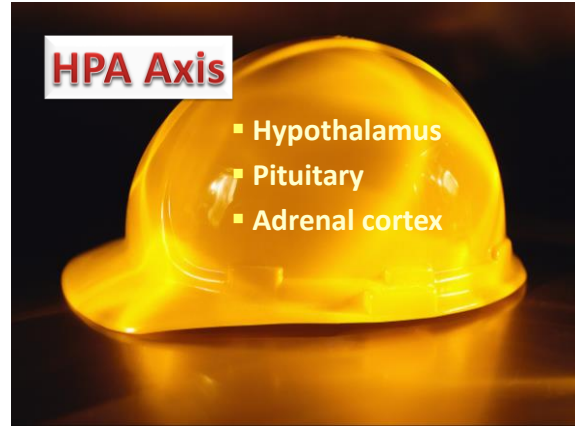
Kathleen Kendall-Tackett,
PhD, IBCLC, FAPA





- Epinephrine
- Norepinephrine
- Dopamine

Catacholamine



HPA Axis

- Hypothalamus
- Pituitary
- Adrenal cortex

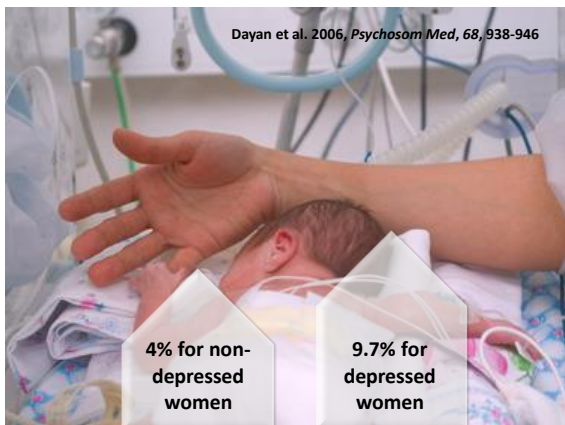


Proinflammatory Cytokines

- IL-1 β
- IL-6
- TNF- α



Depression increases the risk for preterm birth



Dayan et al., 2006, *Psychosom Med*, 68, 938-946

4% for non-depressed women

9.7% for depressed women



Goldenberg et al., 2008. *The Lancet*, 371(9606), 75-84

Inflammation Identified as a risk factor for preterm birth

IL-6 and TNF- α high in stressed and depressed mothers

IL-6 and TNF- α ripen the cervix

Coussons-Read et al. 2005, *Psychosom Med*, 67, 625-631

Smuts et al. 2003, *Obstet Gyn*, 101, 469-479

291 low-income moms

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

Pain

2,586 women in U.S.

Pain at Day 1, Week 1, Week 2

Depression at 2 months postpartum

Breastfeeding help protected mental health for women with moderate or severe pain

Watkins et al. 2011, *Ob Gyn*, 118(2), 214-221

50% had nipple pain at 5 weeks

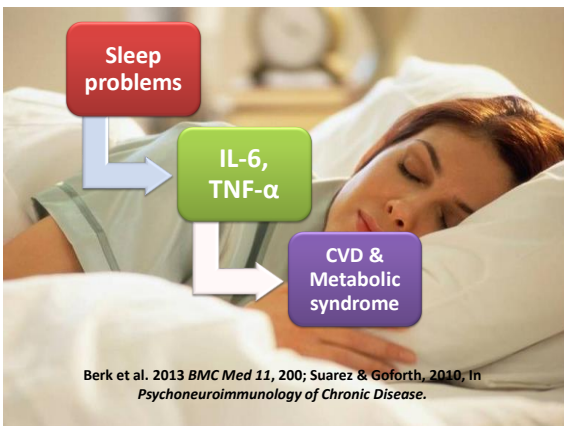
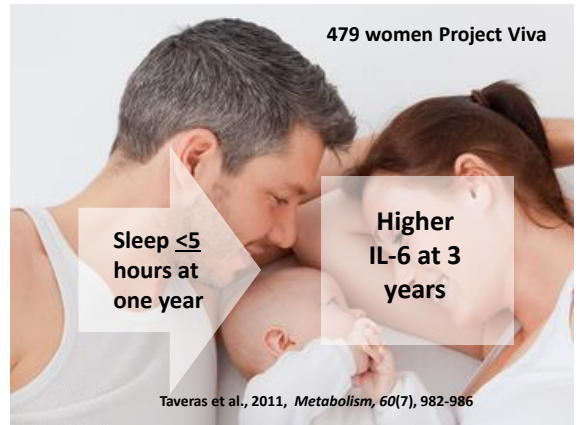
52% had sore or cracked nipples at 2 months

Mc Govern et al. 2006, *Ann Fam Med*, 4, 159-167; Ansara et al. 2005 *J Psychosom Ob Gyn*, 26, 115-125

Prospective study of 1,288 women

Severe postpartum pain increased risk of PPD by 3 times

Eisenach et al. 2008, *Pain*, 140, 87-94





Dunedin Multidisciplinary Health and Development (N=1,037)

Adverse childhood experiences increased rates of major depression, systemic inflammation, and metabolic risk factors at age 32

Danese et al. 2009 *Arch Ped Adolesc Med*, 163, 1135-1143

Prenatal and Childhood Adversity

C-Reactive Protein

Collaborative Perinatal Project (1959-1972), 355 offspring (M age=42)

Slopen et al. 2015, *Psychoneuroendocrinology*, 51, 403-413

Prenatal adversity increased inflammation for the baby in adulthood by 3 times

Slopen et al. 2015, *Psychoneuroendocrinology*, 51, 403-413

Up to 9% of mothers in the U.S. had birth-related PTSD

46% described their births as traumatic

Alcorn et al. 2010 *Psychological Med*, 40, 1849-1859;
Beck et al. 2011, *Birth*, 38(3), 216-227



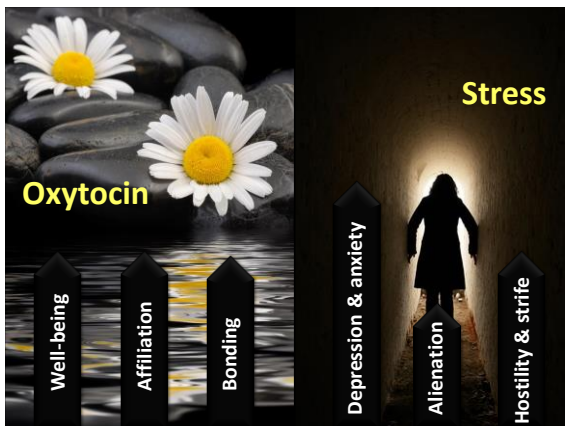
- Lower maternal stress
- Lower inflammation

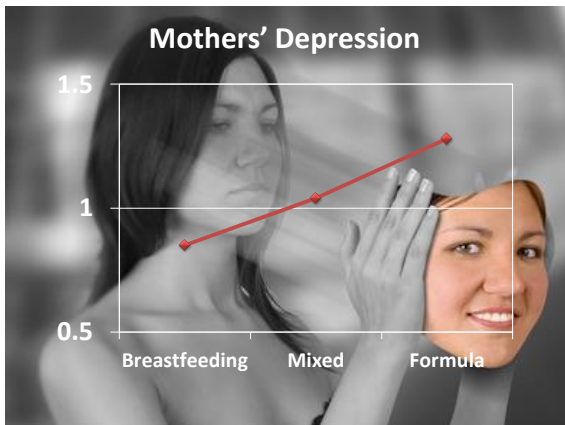
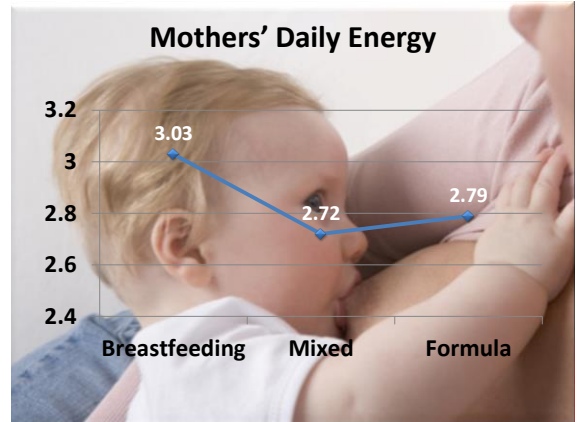
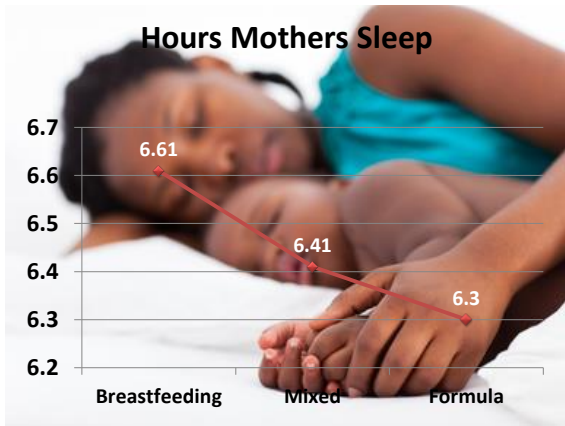


- Lowers stress
- Lowers inflammation



**Good for both
mother and baby**





Breastfeeding protects babies from the effects maternal depression

Depressed-BF moms touched, stroked and looked at babies more

Jones et al. 2004, *Biol Psychology*, 67, 103-124

Breastfeeding >12 months = Better child mental health

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

■ **Child Behavior Checklist Scores**

	Never BF	BF 12+ Months
Age 2	16.1	9.6
Age 5	26.3	16.0
Age 8	19.4	13.5
Age 10	15.2	12.6
Age 14	16.7	10.9



Shorter duration was associated with a fear bias

Neurocortical study revealed that longer duration of exclusive breastfeeding gave infants a "happy bias"

Krol et al. 2015, *Frontier Behav Neurosci*, 8, 485



Mothers who breastfed for 4 months were 3.8 times less likely to neglect their children

Strathearn et al. 2009, *Pediatrics*, 123, 483-493



And 2.6 times less likely to physically abuse them

Strathearn et al. 2009, *Pediatrics*, 123, 483-493

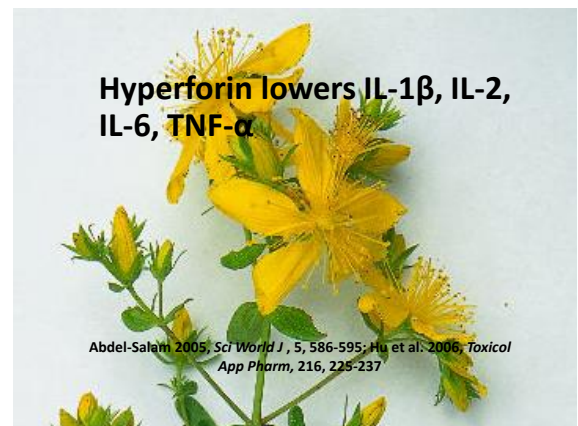
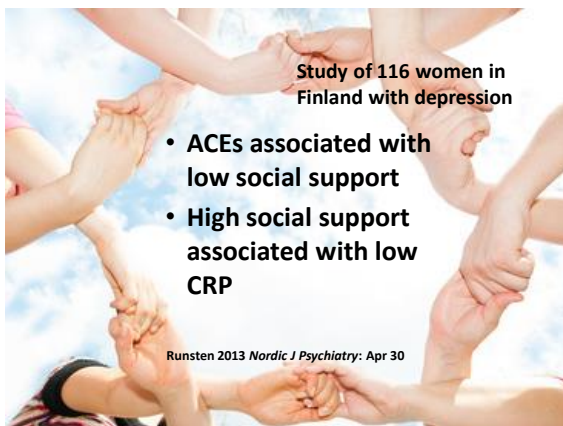
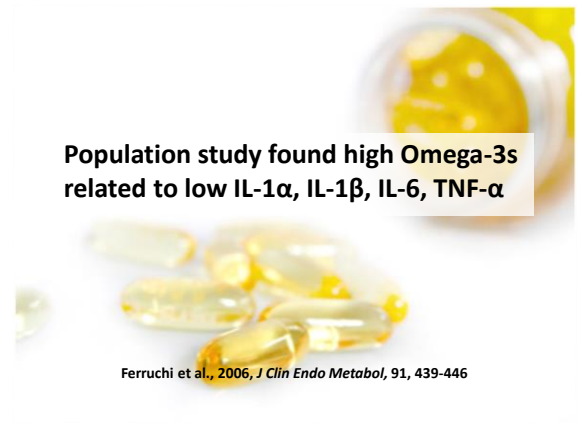
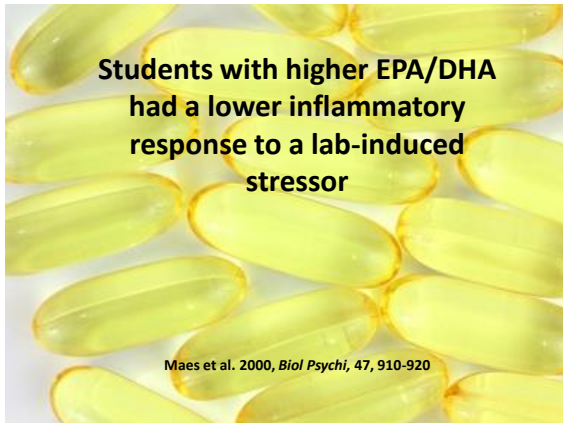
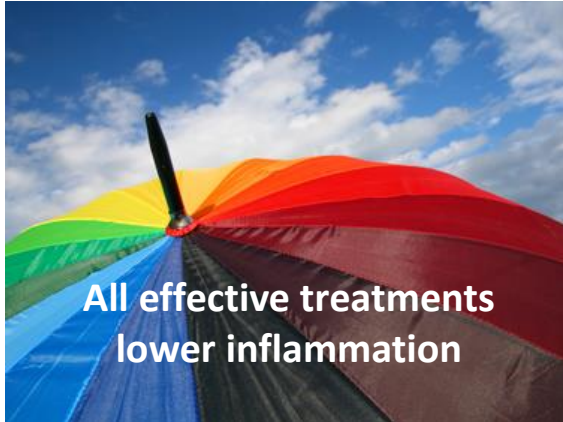


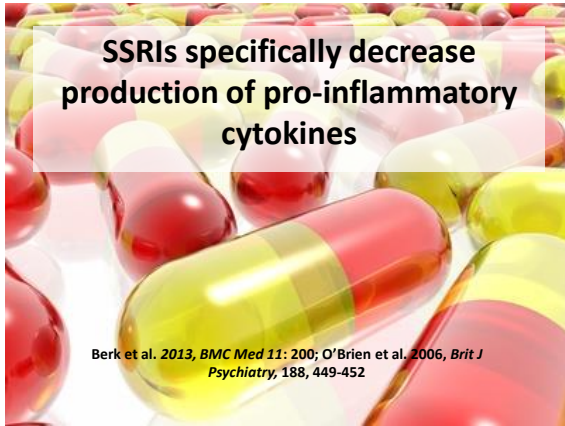
Secure Attachments Decrease Adult Health Problems



Insecure attachments at 12-18 months associated with inflammation-based illness at age 32

Puig et al. 2013, *Health Psychology*, 32(4), 409-417






SSRIs specifically decrease production of pro-inflammatory cytokines

Berk et al. 2013, *BMC Med* 11: 200; O'Brien et al. 2006, *Brit J Psychiatry*, 188, 449-452

Inflammation is an important contributor to the onset and severity of depression



Breastfeeding attenuates stress and protects maternal mood



www.PraeclarusPress.com
www.UppityScienceChick.com
www.BreastfeedingMadeSimple.com
www.KathleenKendall-Tackett.com

