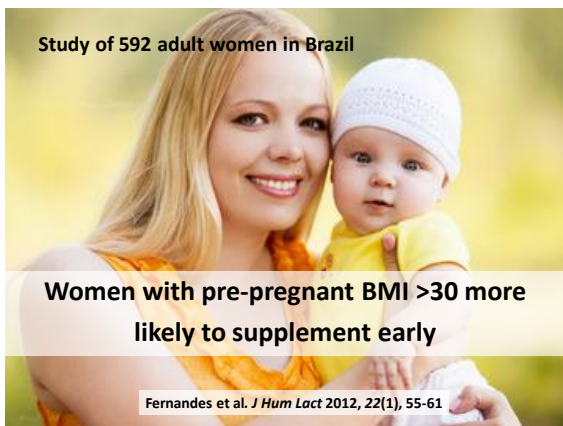
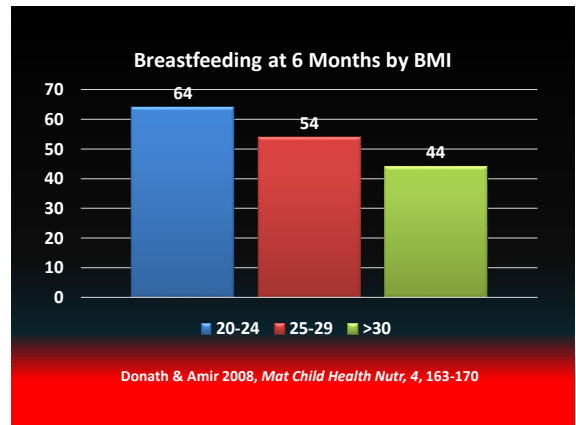
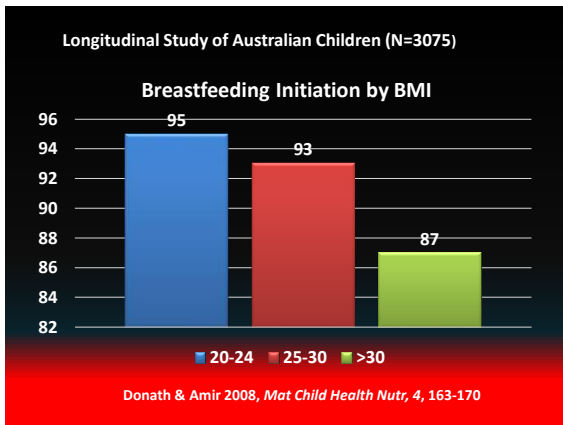


Weighing in on Obesity and Breastfeeding

Kathleen Kendall-Tackett, PhD, IBCLC, FAPA



Breastfeeding in women with higher BMIs



Study of 592 adult women in Brazil

Women with pre-pregnant BMI >30 more likely to supplement early

Fernandes et al. *J Hum Lact* 2012, 22(1), 55-61



Birth cohort study of 1,803 mothers in Perth, Australia

Mothers >BMI 25 lower rates of breastfeeding at all time points

More c-sections, pregnancy complications, preeclampsia, baby blues

Oddy et al. 2006, *J Pediatrics*, 149, 185-191



- Our efforts to address this problem have largely failed



Obesity as a medical, cultural, and social construct



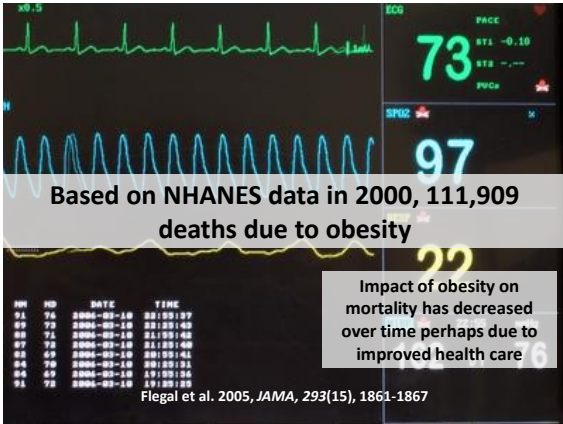
- Obesity
 - Obesus
 - Having eaten until fat



- Pejorative
- Imprecise
- Inaccurate



- Earlier report claimed 400,000 deaths per year due to obesity



What symptoms really count?

- Metabolic syndrome
 - Insulin resistance
 - High LDL and VLDL cholesterol
 - High triglycerides
 - Visceral obesity

Haffner & Taegtmeier, *Circulation* 2003; 108: 1541-1545

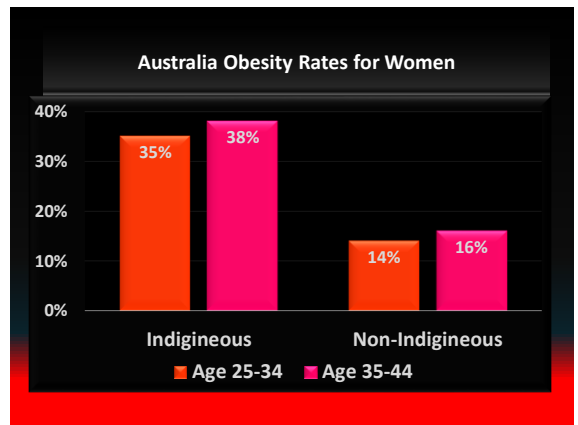
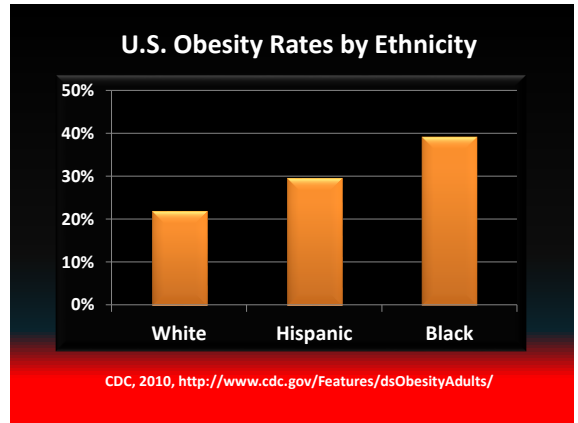
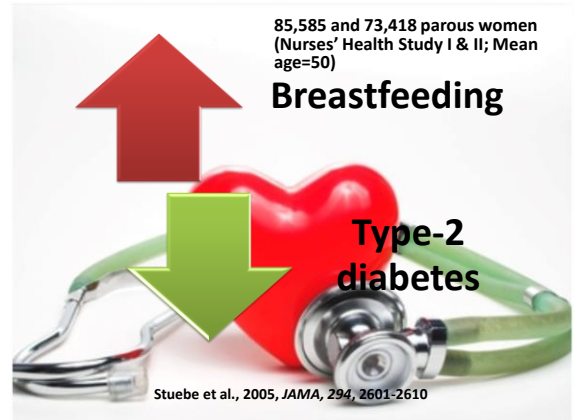
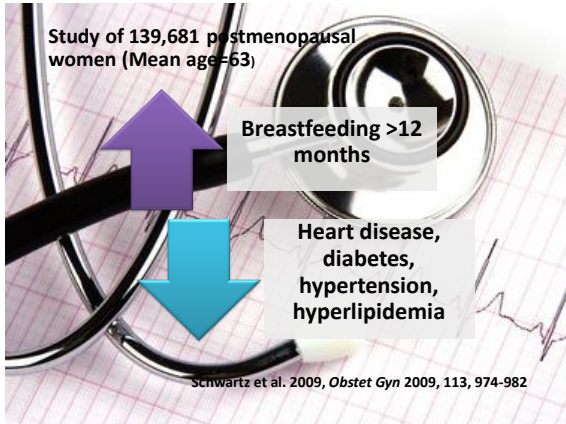
Reset Hypothesis

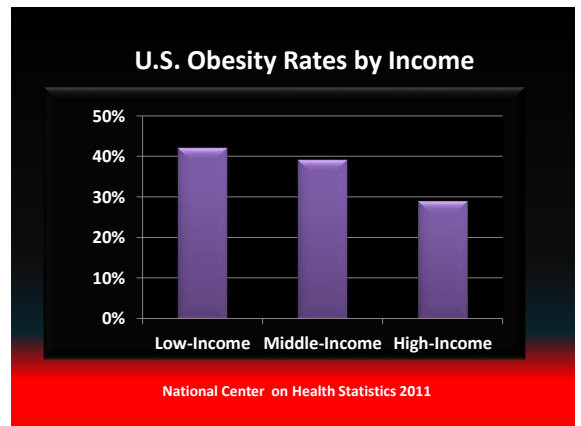
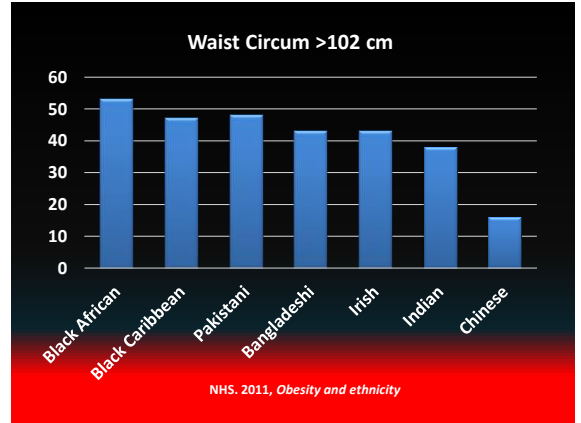
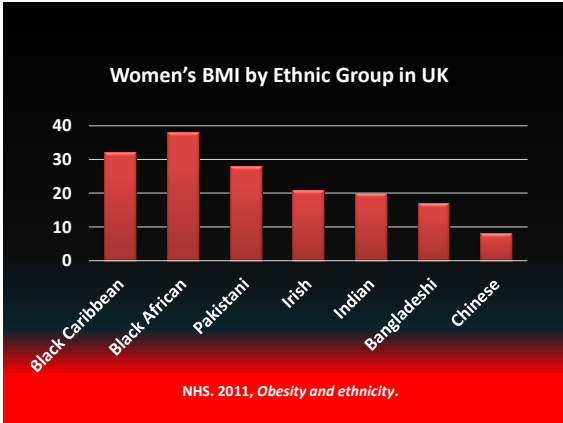
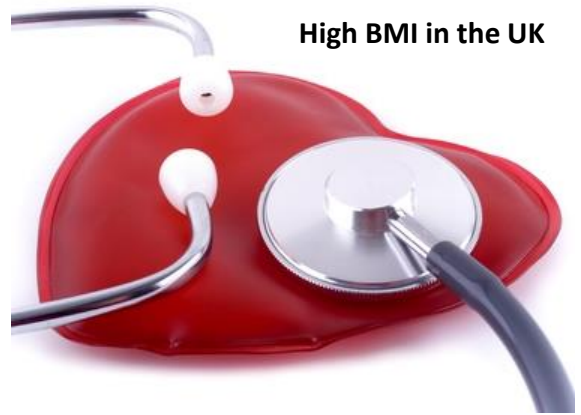
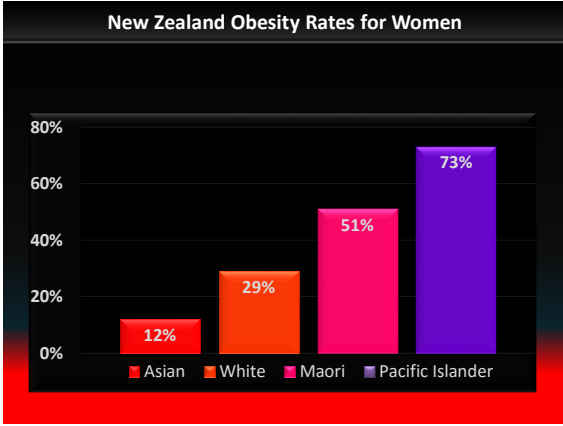
Stuebe & Rich-Edwards 2009, *Am J Perinatol*, 26, 81-88

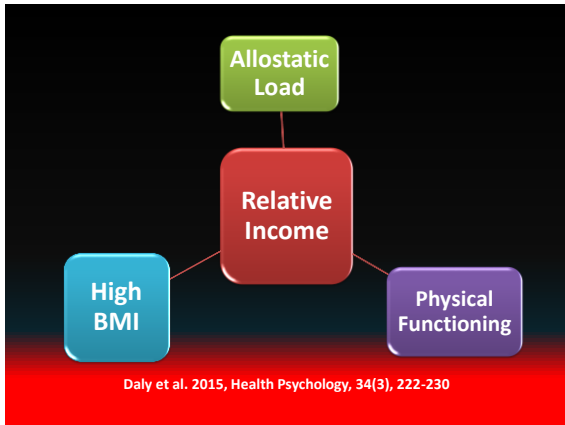
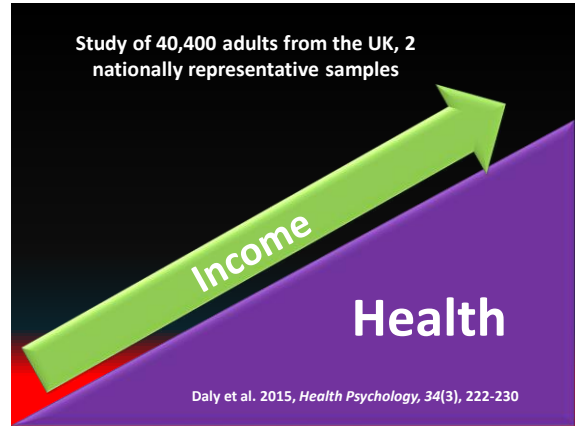
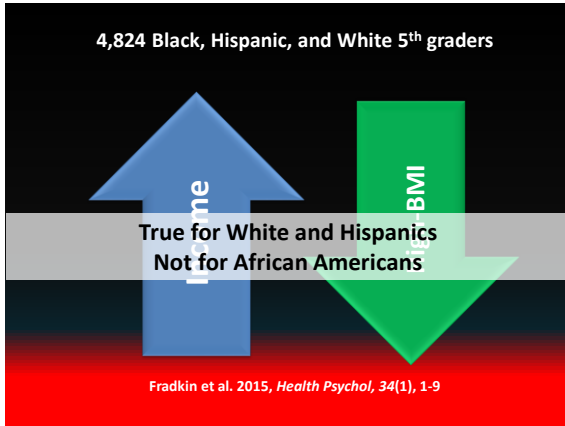
Temporary metabolic syndrome during pregnancy

Increases in:
Visceral fat
Insulin resistance
Lipids and triglycerides

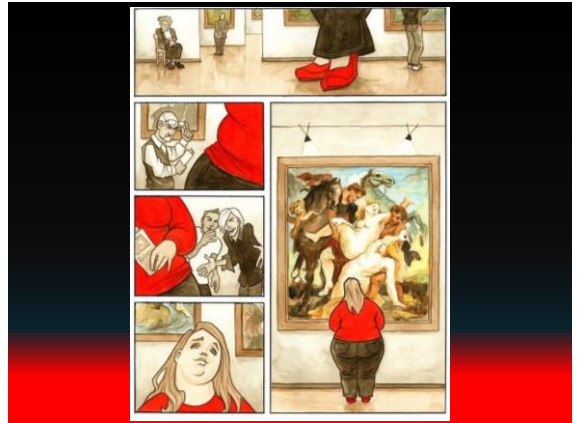
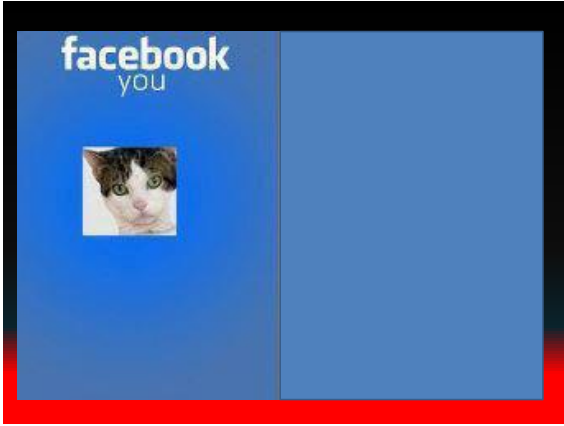
- Breastfeeding helps reverse, or reset, these changes
- For maternal metabolism, pregnancy ends with weaning, not birth













“Health practitioners are among the most insidious players in this fat-hating drama as they have legitimized the cultural mandate for thinness by reframing it as a health concern”

Bacon 2008, Health at Every Size. BenBella Books.



The Neuroscience of Social Rejection

**To your brain
Social Pain=Physical Pain**

Jenson-Campbell & MacDonald, 2011 *Social pain* (p. 3-8). Amer Psychological Assn.

Anterior Cingulate Cortex

- The separation-distress system similar across all mammals

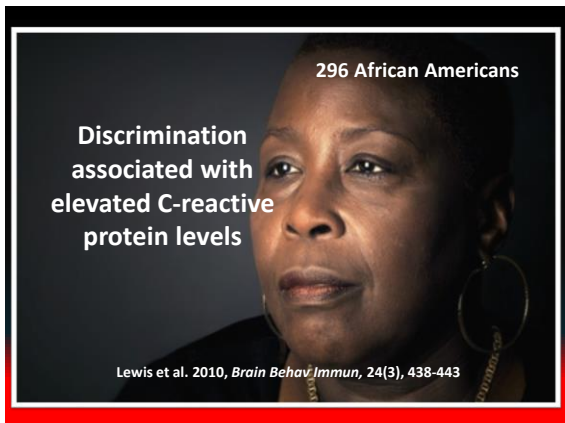


We physically experience threats to our relationships as threats to our survival



Social rejection in childhood can sensitize people for the rest of their lives

Eisenberger, 2011 *Social pain* (53-78); Panksepp, 2011 *Social pain* (11-51), Amer Psycholog Assn.



296 African Americans

Discrimination associated with elevated C-reactive protein levels

Lewis et al. 2010, *Brain Behav Immun*, 24(3), 438-443

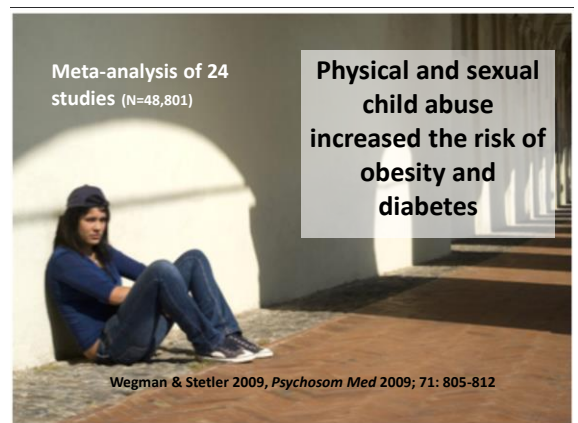


- Perceived discrimination
 - You are treated with less courtesy other people
 - You are treated with less respect than other people
 - You receive poorer service than other people at restaurants and stores
 - People act as if they think you are not smart

Lewis et al. 2010, *Brain Behav Immun*, 24(3), 438-443



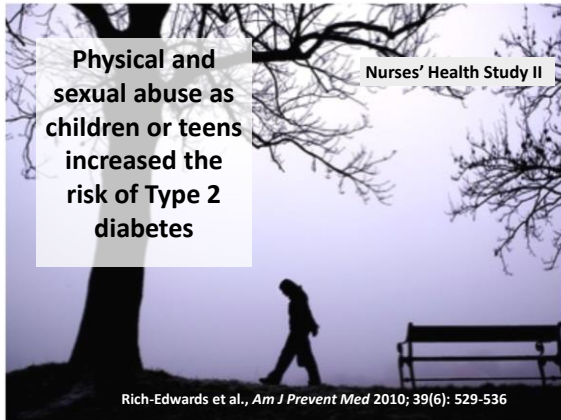
Trauma and BMI



Meta-analysis of 24 studies (N=48,801)

Physical and sexual child abuse increased the risk of obesity and diabetes

Wegman & Stetler 2009, *Psychosom Med* 2009; 71: 805-812



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

Nurses' Health Study II

Rich-Edwards et al., *Am J Prevent Med* 2010; 39(6): 529-536



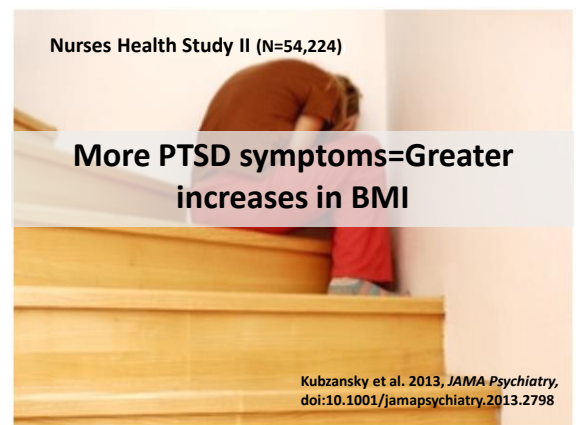
- 50% increase in diabetes risk for severe physical abuse
- 69% increase for repeated forced sex

Rich-Edwards et al. 2010, *Am J Prevent Med*, 39(6), 529-536



- Physically and sexually abuse girls had higher BMIs
- Trajectories grew wider as the girls grew
- Particularly for those who experienced repeated forced sex

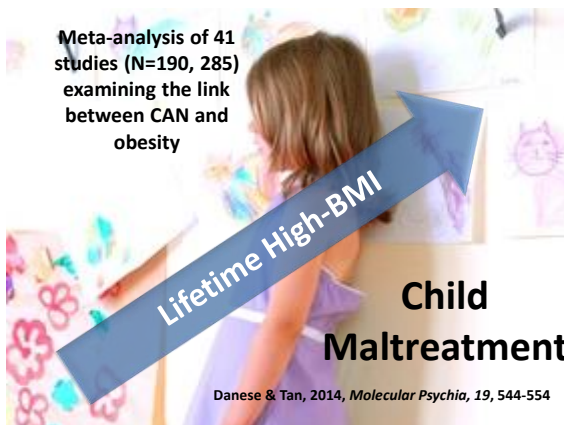
Rich-Edwards et al. 2010, *Am J Prevent Med*, 39(6), 529-536



Nurses Health Study II (N=54,224)

More PTSD symptoms=Greater increases in BMI

Kubzansky et al. 2013, *JAMA Psychiatry*, doi:10.1001/jamapsychiatry.2013.2798

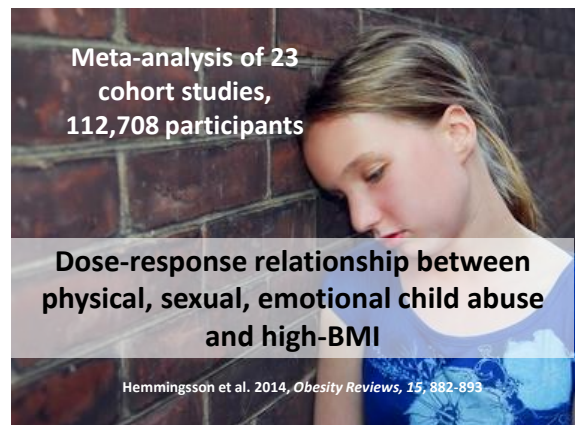


Meta-analysis of 41 studies (N=190, 285) examining the link between CAN and obesity

Lifetime High-BMI

Child Maltreatment

Danese & Tan, 2014, *Molecular Psychia*, 19, 544-554



Meta-analysis of 23 cohort studies, 112,708 participants

Dose-response relationship between physical, sexual, emotional child abuse and high-BMI

Hemmingsson et al. 2014, *Obesity Reviews*, 15, 882-893



Severe abuse significantly more associated with high-BMI compared with light/moderate abuse

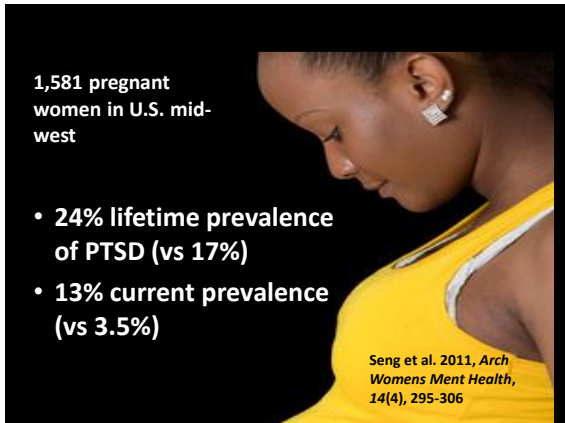
Hemmingsson et al. 2014, *Obesity Reviews*, 15, 882-893



838 mother-infant dyads

- Prenatal depression= smaller size and central adiposity at 3 years
- Postpartum depression=higher overall adiposity

Ertel et al. 2010, *Paediatr Perinat Epidemiol*, 24(2), 179-189



1,581 pregnant women in U.S. mid-west

- 24% lifetime prevalence of PTSD (vs 17%)
- 13% current prevalence (vs 3.5%)

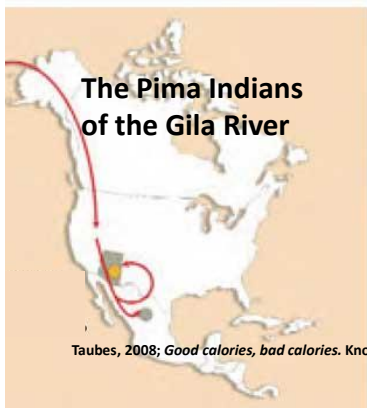
Seng et al. 2011, *Arch Womens Ment Health*, 14(4), 295-306



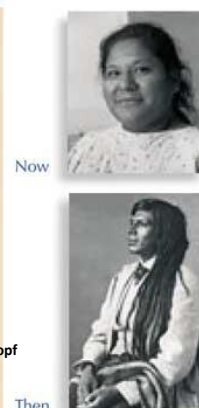
177 Blacks and 822 whites, ages 35-86

Early-life adversity predicted more inflammation for blacks than whites

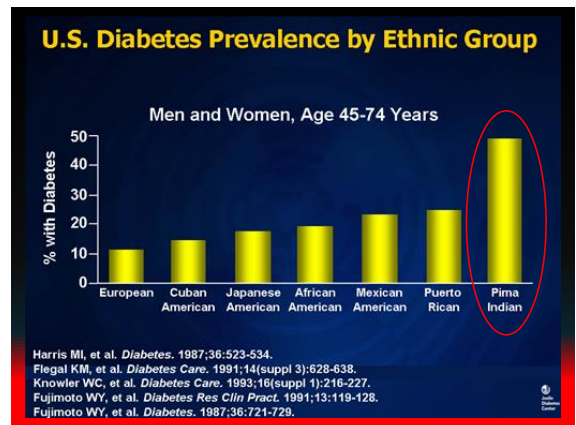
Slopen et al. 2010, *Psychosom Med*, 72, 694-701



The Pima Indians of the Gila River



Taubes, 2008; *Good calories, bad calories*. Knopf





Why is breastfeeding initiation and duration lower in high-BMI mothers?

