1 The Importance of prenatal Attachment
   • An In Depth Look at the MotherBaby Bond

2 Handouts

   www.motherjourney.com
   resources/Presentations

3

4
   • Let’s take a moment to become mindful.
   • Connect to body.
   • Make eye contact.

5

6

7 When do Most women Make the Connection?

8

9 What the Research says...
   • Younger women feel attachment sooner (Damato)
   • Older women has a deeper sense of the changes a baby will bring
   • Increased with low risk pregnancies (Canella)
   • Decreased with high risk pregnancies
   • Previous miscarriage increases attachment (Turriff)
   • High level of fetal locus of control increases attachment (Reading, Turiff, Kornfield)

10 What the Research says...
   • Women who undergo invasive prenatal tests have higher anxiety and less MFA
   • Partners less so
12 **Bowlby/Ainsworth**

**Theory of Attachment**
- Babies needed to maintain proximity and attachment for survival
- Mother’s degree of sensitivity indicated her engagement
- Lumley – prenatal attachment “established relationship with the fetus in imagination” became a “real person”

13 **Lumley’s Attachment**

**Results**
- 30% of her subjects in the first trimester
- 63% in the second trimester
- 36 weeks gestation, 92%
- Lack of attachment
  - Unpleasant pregnancy symptoms
  - Unsupportive/uninterested partner

14 **Maternal Fetal Attachment – MFA**

MFA affects:
- Maternal feelings of attachment 24 hours after delivery (Reading)
- Postnatal maternal interaction (Fuller)
- Maternal competence (Mercer)
- Infant mood (White)

15 **Having a Strong MFA**

- Strong MFA
  - Abstinence from alcohol, drugs, smoking
  - Getting prenatal care
  - Healthy diet and sleep
  - Getting exercise
  - Using seat belts
  - Getting educated

16 **Having a Weak MFA**

- Weak MFA
  - Anxiety, mood disturbance, depression (Pollack)
  - Depression during pregnancy and postpartum (Brandon)
  - Abuse and neglect
17 A Pregnant woman is two people. It is now important to think of everything in terms of not only the mother but the baby.

21 Molecules of Emotion
- Neuropeptides
  - Thoughts language of brain, feels language of body
- The Emotional Quotient
  - EQ
- Lifelong happiness and health
- Develop relationships

22 Placenta As Communication Hub
- Acts as a brain
- Produces Serotonin
- Affects mood, sleep, cognition and develops pancreas, heart and brain (O'Donnell, 2009)
- Organs we associate with emotions
- Development of hindbrain, emotional brain (Tryptophan)
- Produces enzyme to break down cortisol (Mairesse, 2007)

23 Placenta As Microbiome
- Study released May 2014 (Aagaard)
- The Placenta Harbors a Unique Microbiome
  - Compared with microbiome of human body site niches, including the oral, skin, airway (nasal), vaginal, and gut microbiomes
  - Had a unique placental microbiome niche, composed of nonpathogenic commensal microbiota from the Firmicutes, Tenericutes, Proteobacteria, Bacteroidetes, and Fusobacteria phyla
  - First layer of microbiome for babies
  - Could be why UTI and dental infection can lead to preterm birth

24 Motherbaby Attachment and Biome
- Starts with connection in utero
• Continues with “normal physiological” birth
• Colonized by vaginal bacteria
• Then by perineal bacteria
• Followed by skin to skin
• Followed by colostrum – probiotics

25 Attachment is about Whole health – Mind Body, Spirit
26 Magnetic Resonance of the heart
27 Heart to Head Communication
28 Entrainment and
   Synchronicity
29 Intrauterine Heart brain Development
30 Prenatal Stress and Brain Development
31 Baby’s brain and
   memory
   • First developing implicit memory through 18 months
     • Cellular/emotional memory
     • Unconscious recall
     • Habitual memory
   • Then develop explicit memory from 18 months on
     • Cognitive/intellectual memory
     • Phone numbers, names etc.

32 Brain and Memory
33 Brain and Memory
34 UNhealthy “Attachment” and brain development
35 What Fires Together wires together!
36 Attachment changes mom’s brain, too
37 When two minds merge in the heart, thought and feelings co-mingle. Two minds forming the warp and woof of a whole new fabric. We weave and dance, dance and weave and somewhere near the heart, thought surrenders to intuition as levels of connectedness and interconnectedness present themselves spontaneously. ~Levine
The mother is the baby’s entire World.

A mother’s emotional state and connection to the baby direct his development

Bonding Hormones

Babies are Learning from the BOND
- Remember songs, voices
- Mother’s relationships
- Develop an accent
- Develop their palate (Menella, 2010)
- Fetal homologue of infant crying

Babies even learn from their father
- Mice inherit memory of smell from father!
- Animal studies support that fear memories are passed from generation to generation
- Spiders and crickets

Attached mothers are more vested to reduce stress
- WHY????
- What behaviors do they engage in more often?
Why Care About Stress prenatally?

- Stress changes your hormone production
- Reduction of oxytocin
- Tend or Befriend
- DHEA or Cortisol

Increases ego “me centered” behavior
- Inability to feel gratitude, joy
- Body holds on to fat cells, even in baby
- Changes vaginal bacteria – reduced lactobacillus (Univ of Penn)
- “the expression of 20 genes was affected by the decrease in Lactobacillus, including genes related to the production of new neurons and the growth of synaptic connections in the brain.”

Moderate stress is good
- Stress hardiness
- Prepares babies for experience of birth
- Matures lungs
- Accelerated brain development at 2 weeks
- Better motor and developmental skills at two
Shake it off baby

Stress Reduction

- Talk to the baby!!!!
- Be real
- The KNOW what you are feeling
- Explain your experience

Honger Winter

- 1944–45
- Cardiac Illness
- Bipolar Disorder
- Schizophrenia
- Poor weight gain/starvation metabolism

Just ONE Generation

What do we do to promote attachment?

Conscious Agreement

Conscious Attachment

- It is the act of consciously and directly communicating and connecting to your baby.
- Get quiet and pause
- Get in touch
- Communicate
- Promise

Pay attention to our own “stuff”

- We are all touching her, we all making imprints on the motherbaby mind body and spirit.
Questions/Handouts

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