Problems with Preemies: 
Why “catchup” is for french fries 
Or...... What’s the rush?

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Objectives

• Identify the scope of the morbidity problem
• Describe fundamental competency of fullterm infants from birth
• Contrast experience after preterm birth
• Identify environmental and social risk factors which impact development.
Developmental Outcome VLBW

- Motor and mental handicap

- Learning disability (LD) more pervasive
  - Visual perception,
  - Visual motor integration
  - Language
  - Attention/Memory
  - Hyperactivity/self-regulation
  - Social immaturity

- 10%
- 50% (FT = 10%)
Scope of the Problem

• As mortality rate improves,
  – given the same morbidity rate....

• Result: increase in absolute number of children with developmental problems:
  – Controlling the muscles of their body
  – Paying attention to what is important
Factors impacting child development

- Biological Predisposition
- Genetic factors
- Physical environment
- *Relative brain maturity
- *Relative brain damage
- *Social environment
- *Physical environment

child and parent
Early human development at term: Biologically predisposed social beings:

• Recognize/prefer mom’s:
  – scent, taste, voice, language

• Equipped with:
  – “Innate releasers”
    – Root/suck, cling, nestle, cry,
    – Visual regard
    – Empathic distress

Fostered by:
  – Interactional synchrony
Social Predisposition: mirror neurons?
Smile in response to a smile + Mirror parent’s emotion
Object permanence and impossible events...

(a) Object identity

(b) Follow the ball......

(c) to the possible

(d) and impossible....
Social referencing

Looks for information in facial expression on whether to proceed or inhibit
Picture to be a representation

Cookies
Mastery motivation: just because it’s there....
Preterm infant and disruption of parenting experience

• “6 sticks of butter”
• physical separation
• vulnerable appearance
• disruption of biological clock
• change of itinerary
Loss of Identity as Parent

• Nurse...
  Therapist....
  Teacher...

• The feeling of
  – “not good enough”
Problems of prematurity:

1. Feeding issues/mixed signals
2. Controlling the muscles of their body
3. Not paying attention to what is important
Parents model their NICU experience

• NICU parenting is measured by:
  - amount consumed (cc’s)
  - amount gained (grams)

• Post-natal growth by chronological age means parent is - “not good enough”
Corrected age is the “Real Age” for someone not ready to be born.
Corrected age helps ease the tendency to over-feed... to make him “catch up”
Mealtime routines are important moments for social engagement, attention, & self-regulation.
Sensory/Physical Environment gone overboard

OBSERVATION:

• The more anxious the parents are about “catch-up”, the more they seem to “over-do”.

• Terrified they may hold back development if they don’t do everything

• Excess early visual stimulation skips a milestone (hand regard) and delays visually directed reaching
If we do this because they can see it better, it’s equivalent to shouting.
“Pattern” stimulation is equivalent to wallpaper

Non-contingent stimulation impedes development
Let’s Animate!

Musical Crib Puppy

Pull dog tag for lights and music!

Easy-to-activate twinkling crib toy plays 20 fun tunes!
Messing with visually-directed reach
Let’s not forget “Tummy Time”!
Objects should fall when a baby lets go.

(visualize in relative adult size)
Why should a child respond to their name when they “choose” whether or not to attend to TV/video input
Practice increases the relative brain area...

Note the glazed expression.....
Preparing to go for a walk
Importance of mastery motivation and risks of “pushing” to catch up

• Impact of excess reinforcement
  – loss of internal motivation
  – becomes overly dependent on adult
  – Stop repeated to wait for cheering squad rather than focus on the goal
To summarize:
Why “Catch-up” is for french fries, not for preemies!

- Preemies do not need to develop at a faster rate than expected of a FT baby.

- Parental stress of a premature birth is further burdened by the pressure to get the baby to do more than they are ready for.

- Baby becomes overly reliant on adult support for a task that is too complex and skips the underlying skill development which would have led to independence.