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“Parents who are addicted to drugs have a primary commitment to chemicals, not to their children.”

Beckwith, 1989
How Does Meth Impact Brain Function in Adults?

- Immediately begins to change brain chemistry
- Damages neurons more severely in ways that other drugs do not
- Not all areas of the brain affected: centers for reward, memory, and judgment are most heavily impacted
- Profound changes in dopamine and serotonin systems
- PET scans resemble Parkinson’s patients
- Brain chemistry resembles paranoid schizophrenics
- In children, integration of sensory-based functions is most vulnerable
How Does Meth Hurt Children?
Double Jeopardy for Children

- Children are at risk due to prenatal exposure and postnatal environmental effects
  - Poverty
  - Chaotic and dangerous lifestyles
  - Symptoms of psychopathology (personality disorders, depressive symptoms)
  - History of sexual abuse
  - Domestic violence
  - Developmental delays
Removing Children from Meth Homes

Thank you for making my home safe.

from: kassy
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Developmental Vulnerabilities

- Immature organ systems, faster metabolic rates, weaker immune systems
- Eat more food, drink more fluids, and breathe more air per pound of body weight
- Typical behaviors expose them to more hazards
- Increased potential for cerebral damage (strokes, brain lesions)
- Maternal depression leads to a higher incidence of behavioral issues
Digestive Difficulties

- Permanent brain damage causes difficulty in glucose metabolism (12-17 mo. to repair some)
- Stomach lining is weakened by high levels of acidity, leading to gastritis
- H pylori bacterial infection ensues
- Symptoms may include an aversion to food, acid reflux-like symptoms, abdominal cramps, ulcer-like symptoms
Treatment for H. pylori

- No safe protocol documented for children
- For adults a three-pronged approach:
  - Amoxicillin or other antibiotic
  - Bismuth (i.e., Pepto: some risk of Reye syndrome)
  - Metronidazole (i.e., Pepcid)

Hypersensitive to taste and smell: go for bland
Lactose intolerance: try soy-based or lactose-free products
The IDEAL Study

- Infant Development, Environment and Lifestyle Study
- Brown University, Dr. Barry Lester, began in 2002
- Longitudinal study of 408 children who experienced prenatal exposure to meth into school to age 7
- Data collection in Iowa, Oklahoma, California, and Hawaii (and New Zealand, n=240)
The IDEAL Study Process

- Examination of:
  - Neurobehavior at birth, 1 month, 12 months, 24 months, and 36 months
  - Comparison of exposed vs. non-exposed infants
  - Neural network development related to executive functioning: motivation, attention, memory, inhibitory control, visual motor integration, and motor control memory.
IDEAL Study

Clinical outcomes:
- smaller head size
- evidence of feeding difficulties
- sleep disturbances
- delays in development domains
- ADD
- early and multiple interventions produce positive outcomes (healthcare, mental health, social services)
Pre-Natal Meth Exposure

- Easily crosses the placenta
- Constricts blood flow, restricting oxygen and slowing growth
- Linked to a greater incidence of multiple births, prematurity, and low birth-weight, brain lesions
- Meth moms are less likely to seek help than other addicted women
- A clean 3rd trimester reduces fetal involvement significantly
Risk Concerns for Infants

- Withdrawal: vomiting, watery stools, fever, sleeplessness, tremors, poor feeding, high-pitched cry, seizures, lethargy, intolerance to light or touch, general irritability

- Special needs: cardiac defects, sleep apnea, visual or hearing handicaps, seizure disorders, neurological disorders/delays, gastroschisis, club foot
Minimizing Infant Stress

- quiet, calm environment with minimal noise & bright lights
- Ensure warmth and comfort by bundling
- Encourage habituation by providing sucking opportunity with a pacifier
- Initiate gentle rocking or soothing motions to help achieve neurobehavioral organization
- Limit exposure to odors and touch
Young Children up to 2+ Years

- 6-18 months of age is referred to as a “honeymoon” period of development for drug-exposed children.
- All external measures may well indicate the child is symptom-free.
- Toward the end of this period (18-24 months), speech and language difficulties may appear.
Interventions: Infants and Toddlers

- Design quiet environments; limited sensory stimulation
- Implementation of an emotionally centered, attachment focused program (Circle of Security; Promoting First Relationships)
- Consistency in schedule, adult contacts, physical stimulation
- Use of sign language
- Referrals for sensory integration therapy; sensory screening
Children 3+ Years

- Attention deficit may become more pronounced; anxiety
- Social-emotional regulation may become more challenging
- Problems adjusting to a changing environment
- Spatial learning and memory (object recognition) are deficient
- Tendencies toward aggressive behavior, hypervigilance, and parentification
- Type II diabetes and high blood pressure are common
- Unstable family units exacerbate problems
Common Psychosocial Problems

- Low self-esteem
- Core boundary issues
- Regressive behaviors
- Fear and anxiety
- Food and object hoarding
- Grief and loss behaviors
- Influence of family disruption
  - Initiative (guilt): Preschool
  - Industry (inferiority): School age
Guiding Principles for Parenting

- Develop a team of helping professionals
- Develop a support system
- Avoid negative stereotypes
- Respect the child’s privacy
- Establish predictable routines
- Find acceptable ways to initiate affection
- Advocate for medical/educational needs
- Help the child be successful with something
- Maintain a realistic yet positive attitude; develop a tolerance for the unknown
- Take care of yourself!
References

- The Brown Center for the Study of Children At Risk, brown.edu/Departments/Children_at_Risk/prenatal%20Substance.htm
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