



**SCHOOL OF PUBLIC HEALTH**  
UNIVERSITY AT ALBANY State University of New York

## **Maternal Depression and Breastfeeding**

**August 2, 2007  
7:30am - 9:30am (EDT)**

## **Maternal Depression and Breastfeeding**

**Moderator:**

**Mary Applegate, MD, MPH**

**Speakers:**

**Ruth Lawrence, MD**

**Renee Samelson, MD, MPH**

**Margaret Spinelli, MD**

### **Sponsored By**

- School of Public Health,  
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- Funded in part by:  
USDHHS Maternal and Child Health Bureau

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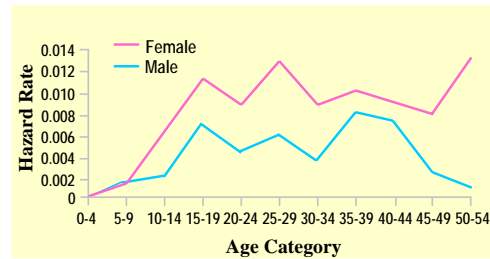
**coned@albany.edu**

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### Key Points: Breastfeeding and Depression

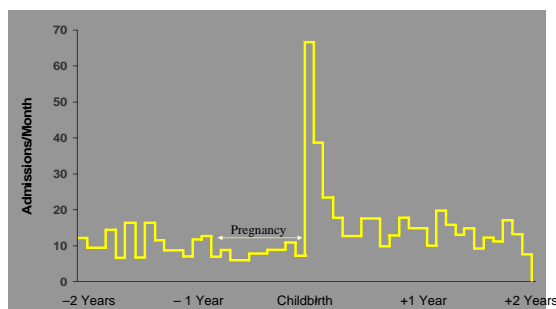
- Depression is a common and treatable condition.
- Women with depression can breastfeed their children effectively and safely.
- Breastfeeding is the best nutrition for babies in almost all situations.

### Epidemiology of Mood Disorders



Kessler R. *J Affect Disord.* 1993;29:85-96.

### Epidemiology of Postpartum Disorder



Kendell RE et al.1987.

### Postpartum Blues

#### “Baby blues”

- Prevalence 50-80%
  - Self-limited period of mood liability
  - Duration: 10-14 days
- “Blues” > 2 weeks = postpartum depression
- Caution: PPD may also begin in first postpartum days

### Risk Factors for Postpartum Depression

Prevalence: 15% - 20% in the U.S.

#### Risk Factors:

- Personal and family history
- Depression during pregnancy
- Change in hormone levels
- Difficult pregnancy
- Medical problems
- Previous postpartum depression
- Sometimes there are no risk factors

(DOH;OMH 2005; Flynn, 2005)

### Symptoms of Postpartum Depression

- Anxiety with bizarre thoughts and fears
  - Could include thoughts of harming the baby
- Inability to sleep when infant sleeps
- Poor bonding, feel “detached” or “numb”
- Irritability
- Lack of interest in baby
- Feelings of guilt or worthlessness - “bad mother”
- Increased or decreased appetite
- Low libido
- Poor concentration, low energy
- Thoughts of death or suicide

(DOH;OMH 2005; Flynn, 2005)

## Depressed Mother Depressed Child

- **Poor response to infant cues/Lack of warmth**
- **Insecure attachment, irritability**  
(Biringen and Robinson, 1991; Zuckerman et al, 1990)
- **Behavior problems, delayed language**
- **Easily angered**  
(Murray, 1991; Biringen and Robinson, 1991)
- **Intellectual deficits, predisposition to depression**  
(Cogill et al, 1986; Weissman et al, 1987)

## Remissions in Maternal Depression and Child Psychopathology

- **N=151 mother - child pairs**
  - **Remission of depression in treated mothers**
    - **11% decrease in rates of children's diagnoses**
  - **Mothers whose depression did not remit**
    - **8% increase in rates of children's diagnoses**
- (Weissman et al JAMA, 2006)

## Impact of Untreated Depression on Maternal Health

- **Diminished quality of life**
- **Personal suffering**
- **Somatic manifestations**
- **Increased morbidity**
- **Suicide**

Barson R. 2006 and Hendrick V. 2006

## Edinburgh Postnatal Depression Scale

1. I have been able to laugh and see the funny side of things.
2. I have looked forward with enjoyment to things.
3. I have blamed myself unnecessarily when things went wrong.
4. I have been anxious or worried for no good reason.
5. I have felt scared or panicky for no good reason.
6. Things have been getting on top of me.
7. I have been so unhappy that I have had difficulty sleeping.
8. I have felt sad or miserable.
9. I have been so unhappy that I have been crying.
10. The thought of harming myself has occurred to me.

(Cox JL et al *Br J Psychiatry* 1987)

## The EPDS Scoring

"I have been able to laugh and see the funny side of things."

0 = As much as I could

1 = Not quite so much now

2 = Definitely not so much now

3 = Not at all

An EPDS score of

≥10 identifies 100% of women who are depressed  
≥14 can be used to identify 92% true positives and  
24% false positives.

## Referral to a Mental Health Provider

- **EPDS Score ≥14**
- **Inability to function**
- **Thoughts of harming self**
  - (endorses #10 on EPDS)
- **Infanticidal ideation**

### **Screening for Depression Postpartum**

- In hospital
- Well child visits
- Postpartum visit at 6 weeks
- Legislation – IL, NJ
- The Mothers Act

### **Breastfeeding Mothers and Depression**

- Incidence
- Role of lactation consultants:
  - Access to new mothers
  - Support physician-patient relationships

### **Effect of Breastfeeding on Maternal Depression**

- Overall positive effect on mother
  - Positive impact of oxytocin and prolactin hormones
  - Sense of accomplishment, bonding
- Sleep interruption
- Impact of weaning

### **Optimal Therapy for Postpartum Depression**

- Medication
  - In addition to psychotherapy
- Psychotherapy
  - Interpersonal Psychotherapy
  - Cognitive Behavior Therapy
- Importance of face-to-face contact

### **Supporting Maternal Wellness**

- Assure adequate sleep for the new mother
- Assure adequate exercise; yoga; walking outside
- Assure proper eating
- Assure support from family and friends
- Assure time alone for the new mother to rest or do something fun and/or creative
- Avoid isolation; use post-partum support groups
- Cultivate activities & attitudes that bring joy
- Support breastfeeding!

### **Medications – SSRI +**

- Celexa Citalopram
- Lexapro Escitalopram
- Paxil Paroxetine
- Prozac Fluoxetine
- Zoloft Sertraline
  
- Cymbalta Duloxetine
- Effexor Venlafaxine

### Medications – non SSRI

- Norpramin                      Desipramine
- Pamelor                         Nortriptyline
  
- Remeron                         Mirtazapine
- Wellbutrin, Zyban            Bupropion

### Maternal Factors

- History of depression
- Most effective drug for treating particular patient

### Child Related Factors

- Age of the infant
- Gestational status
- General health
- Nursing frequency
- Nursing schedule



### Factors Predicting the Distribution of Drugs into Breast Milk

- The number of days post partum
- The drug concentration in the mother's plasma
- Acid-base characteristics of the drug
- Ionization of the drug
- Protein binding of the drug
- Lipid solubility of the drug
- Use of facilitated transfer (i.e. iodine)
- Drug's elimination by dialysis

### Relative Infant Dose of a Drug

Mother dose mg/kg/day compared to  
Infant dose mg/kg/day



RID of many drugs is less than 1%

### Fluoxetine-Prozac

- Long half life
- Active metabolite
- Alternatives:
  - Sertraline – Zoloft
  - Paroxetine – Paxil

### General Recommendations

- Avoid using medications when possible
- Use drugs with published data and a track record on the market
- Use more caution with premature infants, neonates, and compromised infants
- Be cautious of drugs shown to accumulate in neonates

### General Recommendations

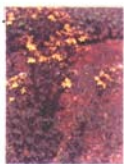
- Choose drugs with high protein binding or low bioavailability in the presence of food or calcium
- Choose drugs with high molecular weights
- Attempt to modify schedules to continue breastfeeding
- Be cautious with herbals

### Maternal Use of Herbal Substances

**70% of patients taking alternative medications do not tell their health care professional.**

### Herbs for the Mind

1. St. John's Wort: The herb of Light
2. Kava: Tranquility from paradise
3. Ginko: Fountain of Youth and Vitality
4. Valerian: Nature's Sandman



### St. John's Wort

*Hypericum perforatum* L.  
Amber Touch-and-heal, Goatweed  
Klamath Weed, Rosin Rose  
ST. JOHN'S WORT FAMILY  
Hypericaceae



### St. John's Wort

- Antidepressant – mild to moderate depression
- Causes:
  - MAO Inhibition
  - Serotonin re-uptake inhibition
  - Norepinephrine re-uptake inhibition
- Dosing range: 200-1000µ/day (100-500 mg/day extract)
- Antiretroviral - Synergistic to AZT

### Side Effects Seen with St. John's Wort

- Potency of extracts vary
- Because of stimulation of cytochrome P450, it causes reduction in plasma levels of:
  - Oral contraceptives
  - Cyclosporine
  - Midazolam
  - Indinavir
  - Some anticonvulsants
- Photosensitivity
- May prolong narcotic induced sedation



### Maternal Use of Lithium & Breastfeeding

- Postpartum prophylaxis reduces relapse from 50% to 10%
- AAP: "Should be given to nursing mothers with caution"

Yonkers KA (2004); Hendrick V (2006)

### Prevention of Postpartum Depression

- Treat existing antepartum depression
- Monitor (or begin medication in) women who have had a previous PPD
- Engage family and other supports
- Limit activities to baby care only
- Sleep when baby sleeps

### Antepartum Depression

- 10 - 13%
  - (O'Hara, 1990; Gotlib et al, 1989; Kumar 1984, Evans et al 2001)
- Low SES and psychosocial stressors: 2X
  - (Hopfer et al 1995)

### Early Diagnosis and Prevention

- Screen during pregnancy
- Educate /empower women
- Collaborate with mental health provider
- Re-visit every trimester and in hospital

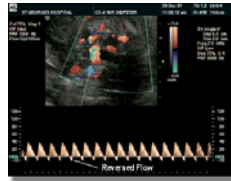
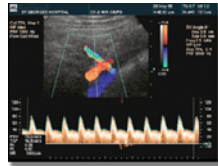
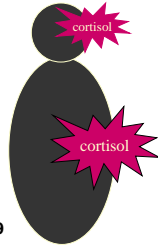
### SSRIs Effect on Fetus

- Not a major teratogen
- Small absolute risk of malformations
- Persistence pulmonary hypertension – rare
- Neonatal behavioral syndromes – self limited

Alwan et al: NEJM; June 2007  
Louik et al: NEJM; June 2007

Normal resistance

Abnormal resistance



Teixeira 1999

### Websites for Providers

- Clinical practice guidelines of APA – <http://www.psych.org>
- UIC Perinatal Depression Project: <http://www.psych.uic.edu/clinical/HRSA/>
- Perinatal Depression (VA DOH): <http://www.perinataldepression.org/>
- Mother Risk: [www.motherisk.com](http://www.motherisk.com)
- Otis pregnancy registry: [www.otispregnancy.com](http://www.otispregnancy.com)

### Websites for Clients

- National women's Health Information center: [http:// www.4woman.gov](http://www.4woman.gov)
- Postpartum support International: <http://www.chss.iup.edu/postpartum>
- Postpartum depression foundation: <http://www.ppdchicago.org>
- Medical education postpartum depression from NIH: [www.medEdPPD.org](http://www.medEdPPD.org)

### Telephone Hotlines

- Growing Up Healthy:  
1-800-522-5006 (TTY:1-800-655-1789)
- National Suicide Prevention:  
1-800-273-TALK
- Speak Up When you are Down – NJDOH:  
1-800-328-3838  
[www.njspeakup.gov](http://www.njspeakup.gov)
- Office of Mental Health NYS  
[www.omh.state.ny.us](http://www.omh.state.ny.us)

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### Case Study – Danielle

- Mother: 21 years old, single, P1011
- Infant: healthy full-term boy
  
- Wants to breastfeed
- Orphaned as child; mother died of drug overdose
- History of suicide attempt at age 18
- No psychiatric treatment x 2 years

### Case Study – Jenna

- Mother: 28 years old, married, P1001
- Infant: healthy girl, 7 pounds, 0 ounces
  
- One week postpartum, following normal vaginal delivery
- Mother sobs each time baby cries and wants to breastfeed
- Can't sleep; hasn't showered in 2 days

### Case Study – Maya

- Mother: 42 years old, married, P0212
- Infants: 35-week twins, S/P IVF
  
- Expected to love breastfeeding
- Almost too weak to get out of bed
- Refuses to eat, "appalled" by how she looks
- Yells at husband to bottle-feed babies

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