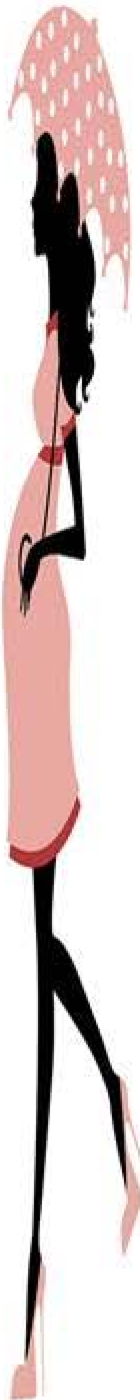
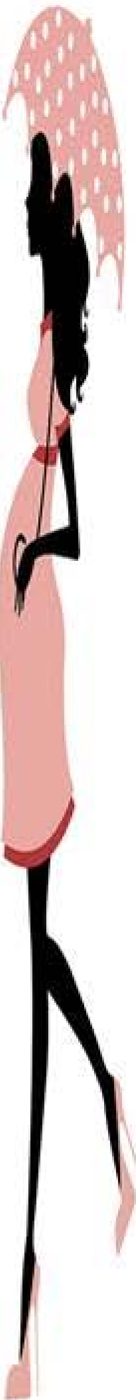
Prenatal and Post Partum Depression is Not Just a Mood. This is Serious Stuff.

Deborah McMahan, MD
Health Commissioner
Prenatal and Infant Care Network
November 28, 2016



Agenda

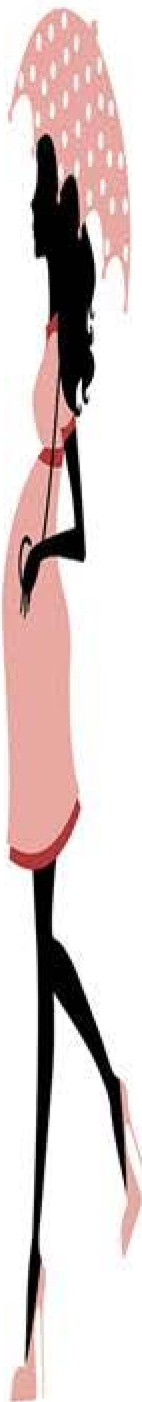
- Prevalence of mental illness during and after pregnancy
- Impact of maternal mental illness on outcomes



Prevalence of Mental Illness

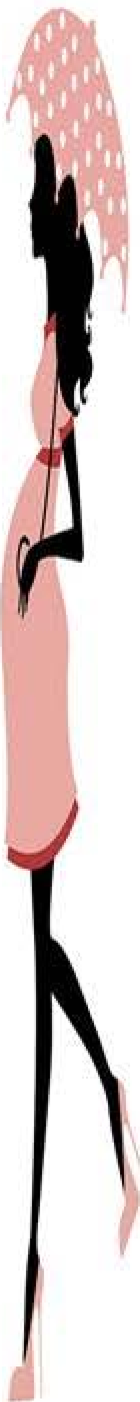
- At least half of Americans will have a mental illness in their lifetime, and one out of four experiences a psychiatric disorder in any given year.
- Average age of onset is 14 years
- Clearly many pregnant women will have significant psychiatric morbidity.

http://www.medscape.com/viewarticle/573947

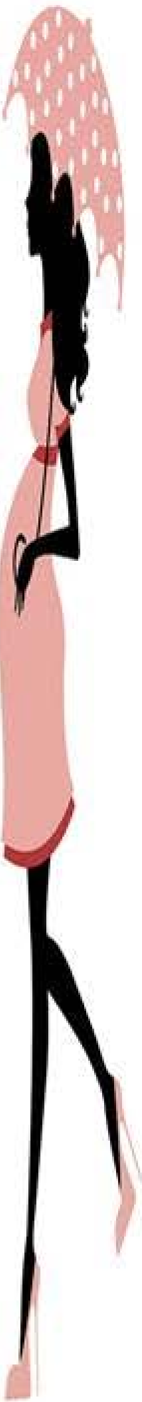


Prenatal Period

- The prenatal period is a critical time for neurodevelopment
- It is also a period of vulnerability during which a range of exposures can exert long-term changes on brain development and behavior.
- Impacts both structure and connectivity

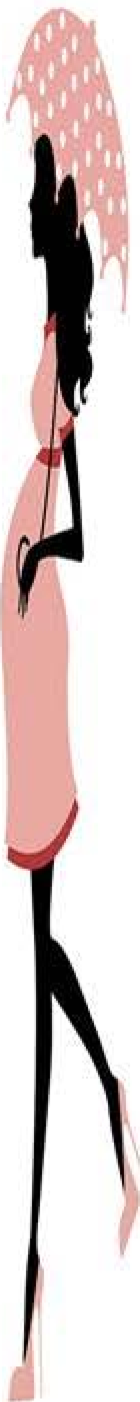


Prenatal Mental Illness



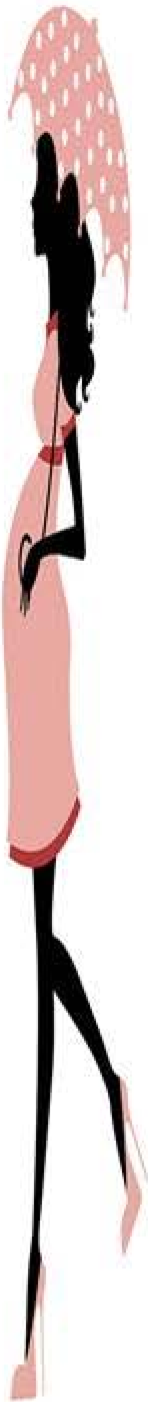
Prevalence of Mental Illness during Pregnancy

- In developing countries about 16% of pregnant women and 20% of women who have just given birth experience a mental disorder, primarily depression.
- In severe cases mothers' suffering might be so severe that they may even commit suicide.



Most Common Types of Mental Illness during Pregnancy

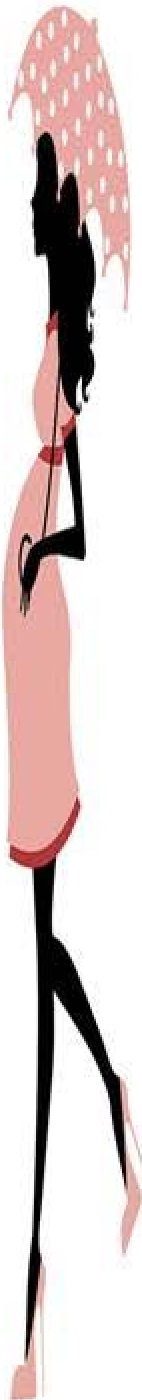
- Major Depression (13% to 20%)
- General Anxiety Disorder (9%)
- Post-traumatic stress disorder (4%)
- Personality Disorders (6%)



Depressive Disorders

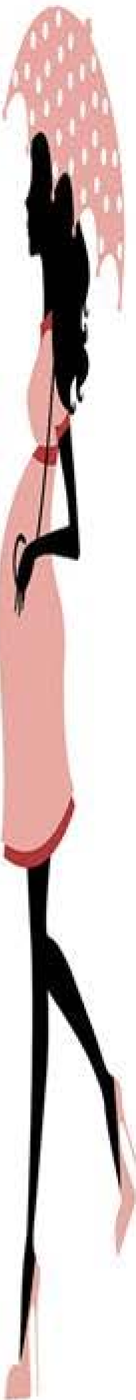
- Depression is a mood disorder that affects how you feel, think and behave and can lead to a variety of emotional and physical problems.
- A large meta-analysis reported that up to 18% of women experience depressed mood during pregnancy with nearly 13% having an episode that would meet DSM-IV diagnostic criteria for a major depressive disorder.

http://www.medscape.com/viewarticle/573947_3



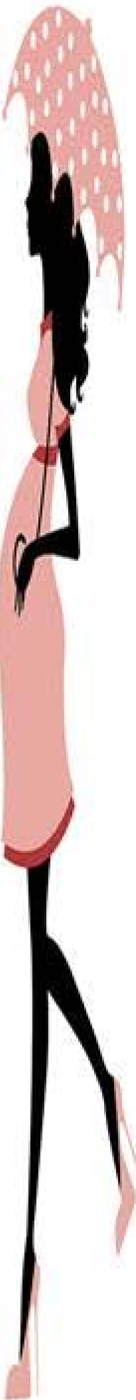
Symptoms of Prenatal Depression

- Losing interest in daily activities, or having a sense that nothing is enjoyable or fun anymore
- Feeling "blue," sad, or "empty" for most of the day, every day
- Crying all the time
- Feeling extremely irritated or agitated
- Feeling anxious



Symptoms of Prenatal Depression

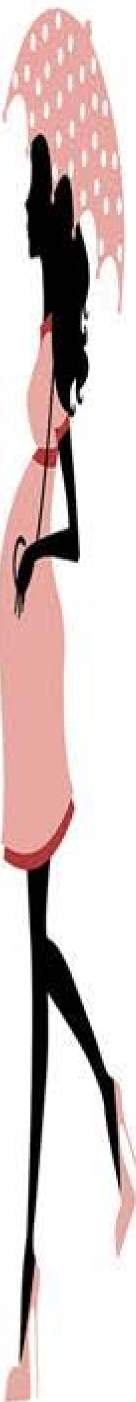
- Finding it hard to concentrate
- Having low energy or extreme fatigue that doesn't improve with rest
- Experiencing changes in your patterns of eating or sleeping, such as wanting to eat or sleep all the time or not being able to eat or sleep at all
- Having overwhelming feelings of guilt, worthlessness, or hopelessness
- Feeling that life isn't worth living



Impact of Depressive Disorders

- Prenatal depression has been highly correlated with preterm delivery (PTD).
- For adults, the risk of poor outcomes rose by 5% to 7% for each point increase in their depression scale (the Beck).
- Effect may be less pronounced for adolescents.

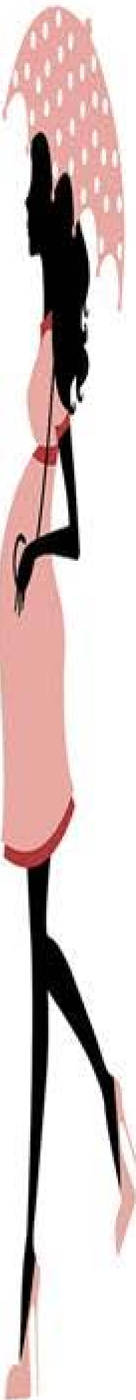
http://www.medscape.com/viewarticle/573947_3



Impact of Depressive Disorders

- Depression also is a significant risk factor for low birth weight (LBW).
- The risk for both LBW and PTD are more pronounced in women in deprived social groups.
- Depression also has significant associations with miscarriage, bleeding during pregnancy, higher uterine artery resistance and higher risk of operative deliveries.

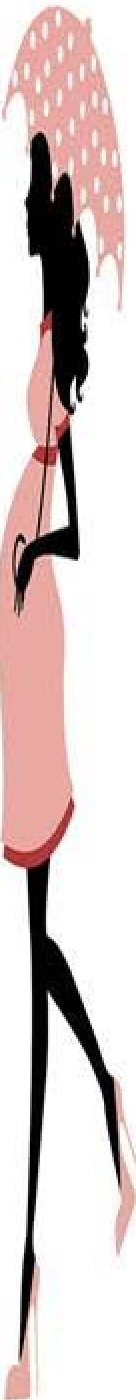
http://www.medscape.com/viewarticle/573947_3



Impact of Prenatal Depression

- Infants born to mothers with depression during pregnancy have lower scores on motor behavior and more crying and irritability.
- Children of women who experience depression during pregnancy are 1.5 times more likely to be depressed themselves as teens.

http://www.healthline.com/health-news/women-depression-during-pregnancy-increases-childs-risk-of-mood-disorders-100913

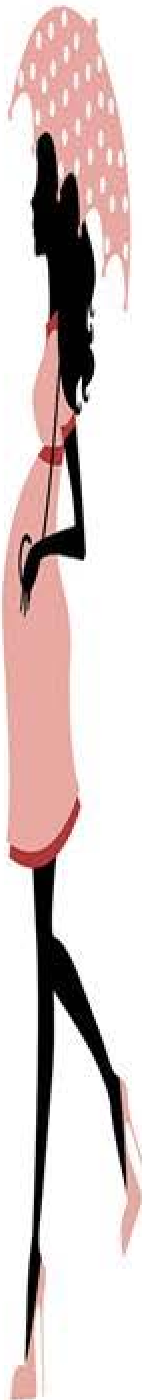


Bipolar Disorder

- Less common and less well studied.
- Bipolar disorder, however, can worsen during pregnancy.
- Pregnant women or new mothers with bipolar disorder have seven times the risk of hospital admissions compared to pregnant women who do not have bipolar disorder.

http://www.webmd.com/bipolar-disorder/guide/bipolar-disorder-in-pregnancy#1

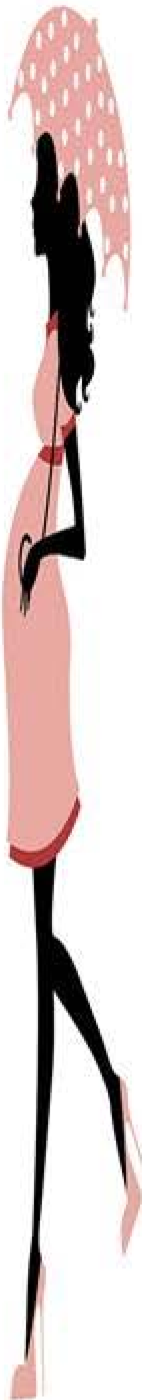
http://www.medscape.com/viewarticle/573947_3



Symptoms of Bipolar Disorder

- **Bipolar I disorder.** You've had at least one manic episode. The manic episode may be preceded by or followed by hypomanic or major depressive episodes. Mania symptoms cause significant impairment in your life and may require hospitalization or trigger a break from reality (psychosis).
- **Bipolar II disorder.** You've had at least one major depressive episode lasting at least two weeks and at least one hypomanic episode lasting at least four days, but you've never had a manic episode. Major depressive episodes or the unpredictable changes in mood and behavior can cause distress or difficulty in areas of your life.

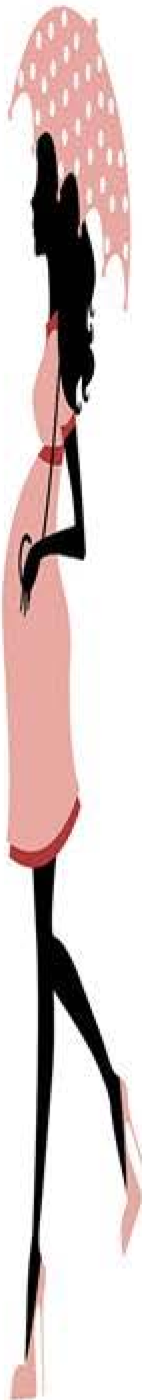
http://www.mayoclinic.org/diseases-conditions/bipolar-disorder/basics/symptoms/con-20027544



Impact of Bipolar Disorder

- Bipolar disorder has been associated with placental abnormalities and antepartum hemorrhages **but not** stillbirths, fetal anomalies, birthweight or gestational age.
- Manic episodes may be associated with increased risky behaviors such as sexual activity or substance use but this has not been well documented.
- Patients with bipolar disorder have a very high risk of comorbid alcohol or substance abuse disorders - up to 60% in some studies.

http://www.medscape.com/viewarticle/573947_3

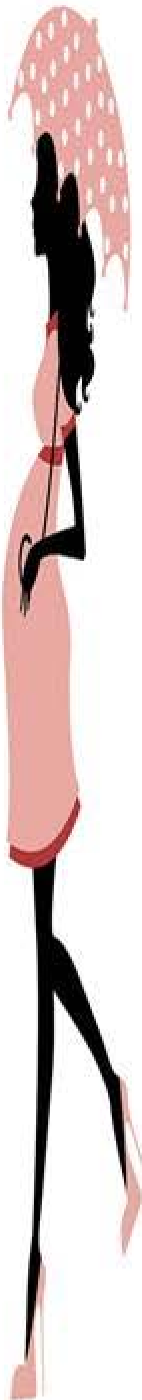


Bipolar Disease and Treatment

When stopping bipolar medications for the period from six months before conception to 12 weeks after, the women had:

- Twice the risk of relapse
- A 50% risk of recurrence within just two weeks, if they stopped suddenly
- Bipolar symptoms throughout 40% of the pregnancy -- or more than four times that of women who continued their bipolar medications

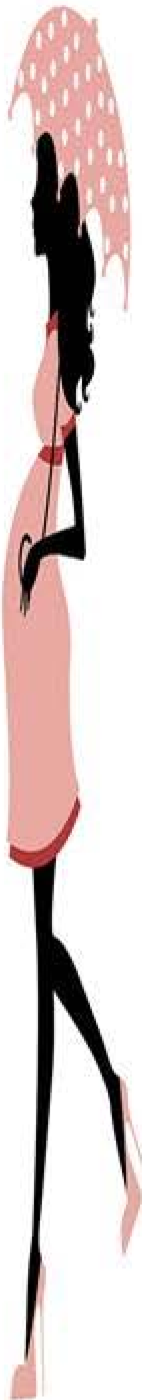
http://www.webmd.com/bipolar-disorder/guide/bipolar-disorder-in-pregnancy#1



Impact of Anxiety Disorders

- Prevalence of general anxiety disorder has been estimated at 8.5% in pregnancy, but there is little research on the impact on pregnancy outcomes.

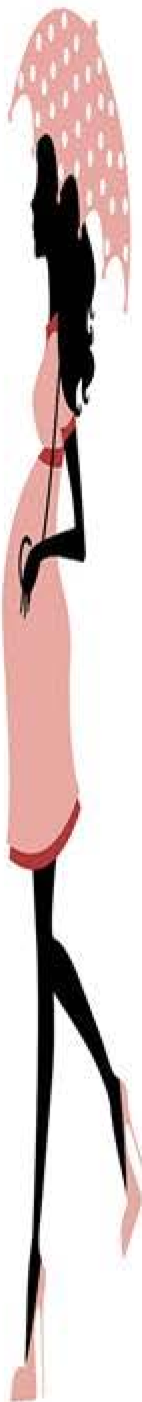
http://www.medscape.com/viewarticle/573947_4



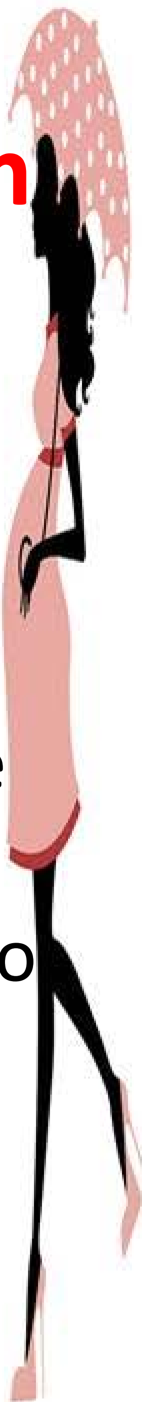
Symptoms of Anxiety Disorder

- Excessive worry that's difficult to control
- Irritability
- Tension/muscle aches
- Disrupted sleep patterns
- Feeling restless inside
- Fatigue
- Poor concentration

http://www.parents.com/pregnancy/my-life/emotions/depressed/



Prenatal Anxiety and Immune System



- Babies whose mothers experienced high anxiety while pregnant had stifled immune responses to vaccinations at 6 months old
- The results showed a “dose-response” pattern, O’Connor said, so the more anxiety a pregnant mom experienced, the greater the effects on the child’s immune system.
- Maternal prenatal anxiety and stress are linked to more infant illnesses and antibiotic use during the first year of life.

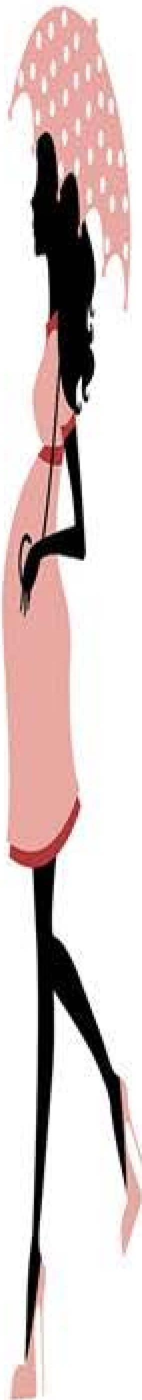
http://pediatrics.aappublications.org/content/126/2/e401

http://psychcentral.com/news/2013/04/27/prenatal-anxiety-affects-babys-immune-system/54185.html

Impact of Anxiety

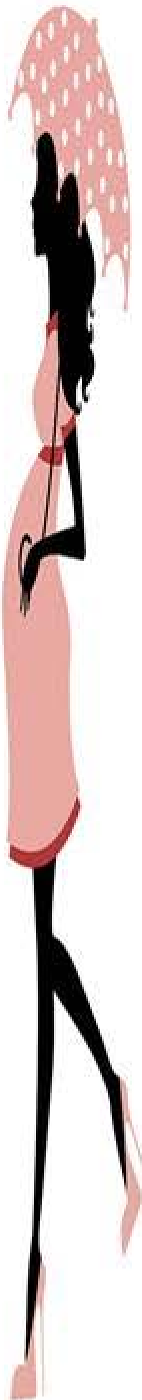
- Researchers have observed high levels of anxiety at 19 weeks of pregnancy were correlated with volume reductions in several regions of the brain, including the prefrontal, lateral temporal and premotor cortex, medial temporal lobe and cerebellum.

https://womensmentalhealth.org/posts/anxiety-during-pregnancy-how-does-it-affect-the-developing-fetal-brain/?doing_wp_cron=1480292854.8015260696411132812500



Impact of Anxiety

- The regions most affected by high levels of anxiety are important for **cognitive performance, social and emotional processing and auditory language processing.**
- These findings are consistent with literature which demonstrates that prenatal stress and associated anxiety may lead to delays in infant development, lower academic achievement, greater emotional reactivity and emotional/behavioral problems persisting through the adolescence.

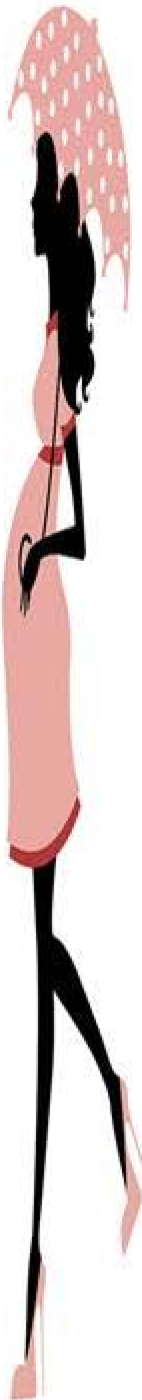


https://womensmentalhealth.org/posts/anxiety-during-pregnancy-how-does-it-affect-the-developing-fetal-brain/?doing_wp_cron=1480292854.8015260696411132812500

Prevalence of PTSD

- Prevalence of PTSD has been estimated at 3.5% in pregnancy (10% in women in general).
- Pregnant women with PTSD often have other associated psychiatric problems, such as substance use, panic disorder, eating disorders and depression, which may also play a role in fetal outcomes.
  - One study found women with PTSD were five times more likely to have a major depressive episode during pregnancy compared with women without PTSD.

http://www.medscape.com/viewarticle/573947_4

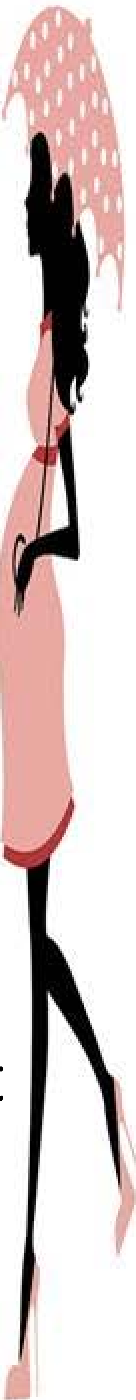


Impact of PTSD

- One study evaluated a large number of women with public insurance; even after controlling for sociodemographic and economic factors, there was a significantly higher odds of:
  - Ectopic pregnancy
  - Miscarriage
  - hyperemesis
  - Preterm labor

- Women with PTSD tend toward a higher rate of preterm delivery although the association does not quite reach significance.

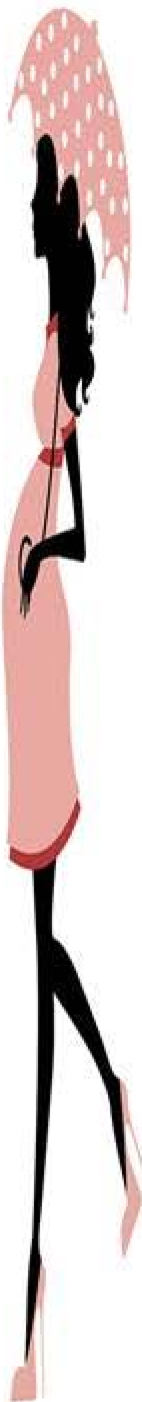
http://www.medscape.com/viewarticle/573947_4



Impact of Psychotic Disorders

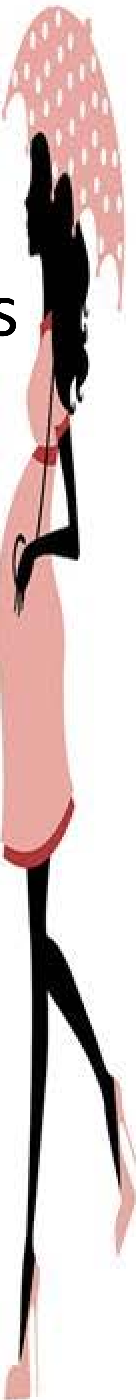
- The prevalence of psychotic symptoms during pregnancy is unknown.
- Women with schizophrenia report fewer total lifetime pregnancies, a lower rate of live births and a high rate of losing the pregnancy.
- In terms of birth outcomes, women with schizophrenia may be at increased risk for PTD, being small for gestational age, LBW and stillbirth.

http://www.medscape.com/viewarticle/573947_5



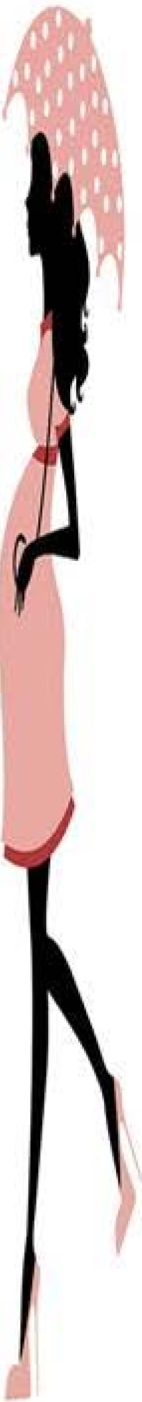
Maternal Stress

- Maternal stress and anxiety during pregnancy has been associated with:
  - shorter gestation
  - higher incidence of preterm birth
  - smaller birth weight and length
  - increased risk of miscarriage
  - infant outcomes such as:
    - temperamental problems and increased fussiness
    - problems with attention
    - lower scores on measures of mental development



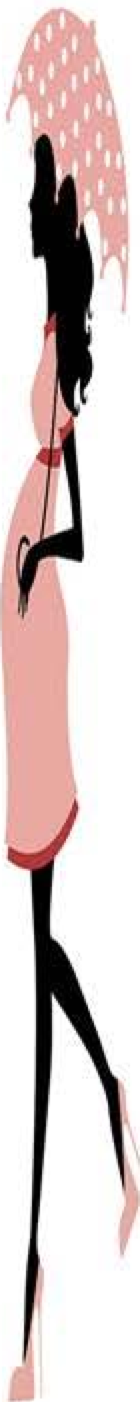
http://www.psychiatry.emory.edu/PROGRAMS/GADrug/Feature%20Articles/Mothers/The%20effects%20of%20maternal%20stress%20and%20anxiety%20during%20pregnancy%20(mot07).pdf

Treatment



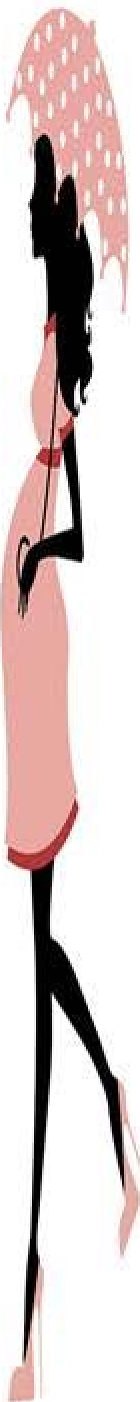
Treatment Considerations

- Treatment must consider the severity and course of the disorder as well as individual patient risks.
- Some patients and even some providers only look at the fetal risk of medication, without factoring in risks to both the patient and fetus of an untreated psychiatric disorder, which can be significant.



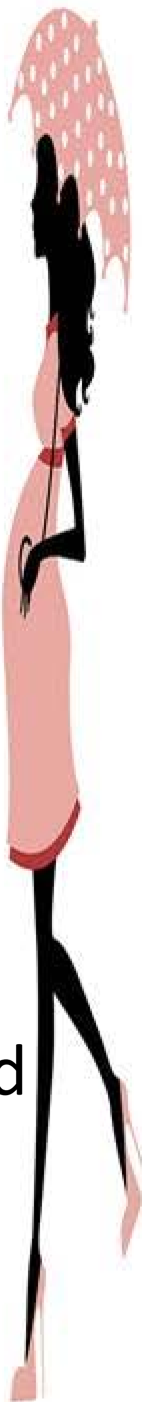
Treatment Considerations

- Fetal risks may vary depending on timing of exposure
- Drugs linked to miscarriage or birth defects may be more risky in the first trimester.
- Drugs that affect growth or neonatal behavior may be more problematic with third trimester use.



Treatment Considerations

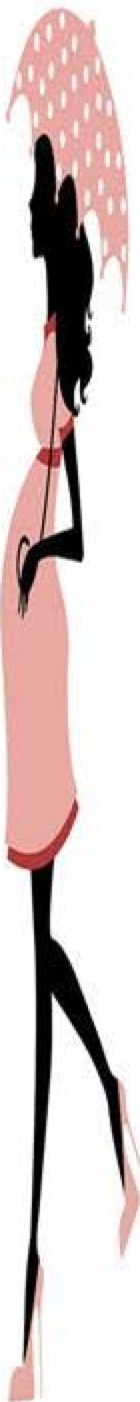
- In general, discontinuing psychotropic medications during pregnancy may be a risky strategy for many women.
- There is a high risk of relapse among depressed women who discontinue maintenance medications during the antenatal period.
  - In one study 68% of women who discontinued medication during pregnancy had a relapse of major depression during the pregnancy, compared with just 26% of women who continued their medication during pregnancy



Treatment Considerations

- The American College of Obstetricians and Gynecologists (ACOG) suggests using a **single medication at higher dose** over multiple medications when possible, in order to limit the number of drug exposures to the fetus.
- Medications such as SSRIs and serotonin norepinephrine reuptake inhibitors (SNRIs) are commonly used during pregnancy and are effective at treating maternal depression.

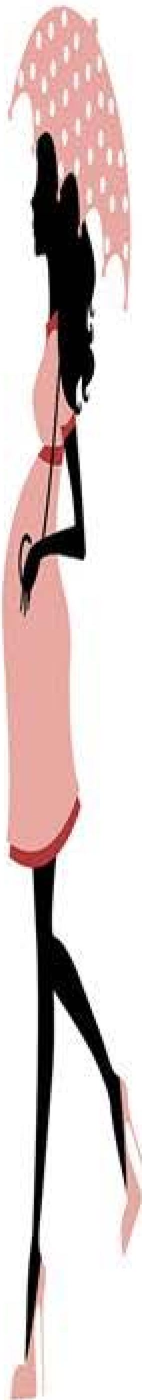
http://www.medscape.com/viewarticle/573947_6



Treatment Considerations

- While these medications do not increase the risk of major fetal anomalies, they may slightly increase short-term fetal risks, such as respiratory distress and neonatal drug withdrawal.
- Some studies suggest that first trimester exposure to SSRIs may increase PTD and restrict fetal growth.
- One antidepressant - **paroxetine** - is not recommended during pregnancy as its use in the first trimester has been associated with a higher risk of major anomalies, including cardiovascular malformations.

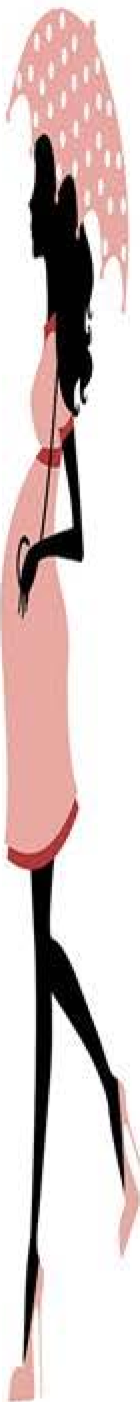
http://www.medscape.com/viewarticle/573947_6



Treatment Considerations

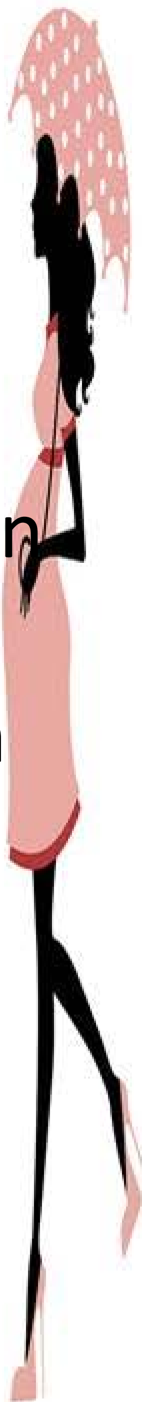
- Long-term effects of SSRIs and SNRIs are limited
- One study that examined neurodevelopmental effects of the SSRIs in children exposed during pregnancy and lactation found that children exposed to fluoxetine or tricyclic agents **appeared similar** to their non-exposed siblings in measurement of IQ and rates of learning disorders.

http://www.medscape.com/viewarticle/573947_6



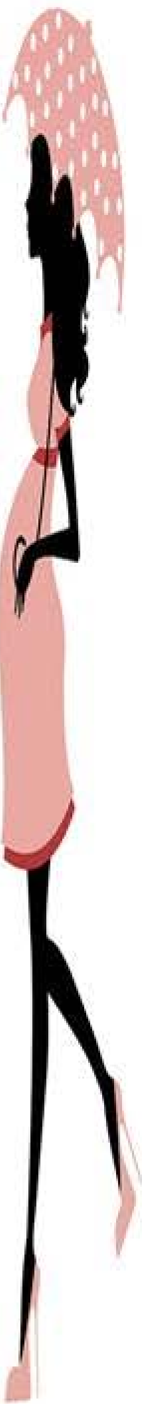
Treatment Considerations

- Decisions regarding how to manage patients with recurrent bipolar or manic episodes and those at high risk of relapse should be made in consultation with experienced specialists, as medication discontinuation is associated with high rates of relapse in women with bipolar illness.



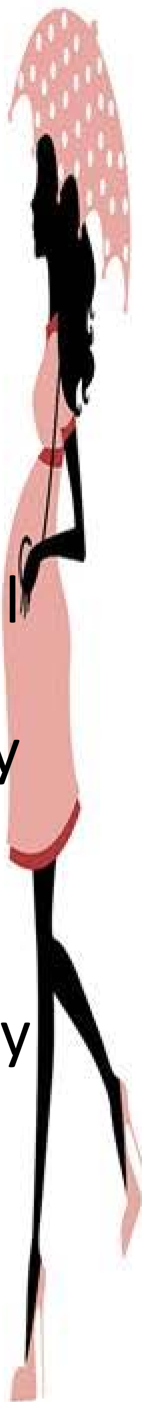
http://www.medscape.com/viewarticle/573947_6

Post Partum Depression



Post Partum Depression

- In US, the 12 month prevalence of post partum depression is about 10% to 16%.
- Most common in the first few months after delivery.
- Risk factors include:
  - History of depression doubles risk of pre or post natal depression
  - Postnatal major depression was five times more likely in women who were depressed during their pregnancy, compared with women who were not depressed during their pregnancy
  - Stressful life events during pregnancy or after delivery
  - Poor social and financial support

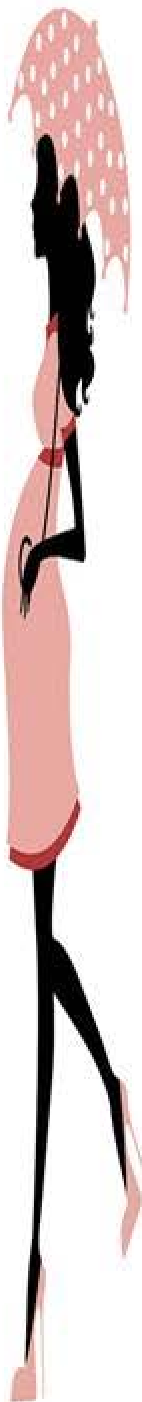


https://www.uptodate.com/contents/postpartum-unipolar-major-depression-epidemiology-clinical-features-assessment-and-diagnosis?source=search_result&search=post%20partum%20depression&selectedTitle=1~112

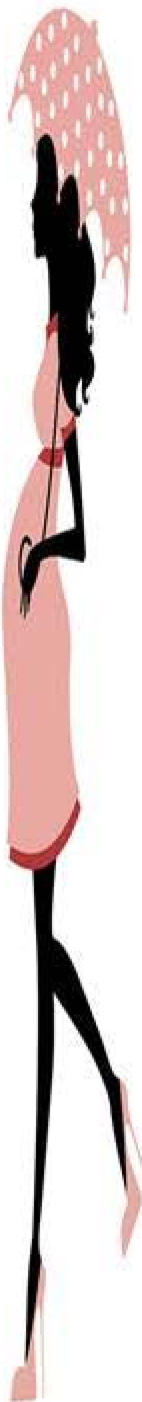
Post Partum Depression

- Possible risk factors include:
  - Age less than 25 years
  - Single
  - Multiparity
  - Family history of postpartum depression or psychiatric illness
  - Intimate partner violence and lifetime history of physical and/or sexual abuse
  - Poor perinatal physical health (eg, obesity at the time of conception, pregestational or gestational diabetes, antenatal or postnatal hypertension, or infection following delivery)
  - Unintended/unwanted pregnancy
  - History of premenstrual syndrome or premenstrual dysphoric disorder
  - Season of delivery (eg, postpartum depression may increase during the time of year when daylight is diminished)
  - Childcare stress such as inconsolable infant crying, difficult infant temperament, or infant sleep disturbance

https://www.uptodate.com/contents/postpartum-unipolar-major-depression-epidemiology-clinical-features-assessment-and-diagnosis?source=search_result&search=post%20partum%20depression&selectedTitle=1~112



Symptoms of Post Partum Depression

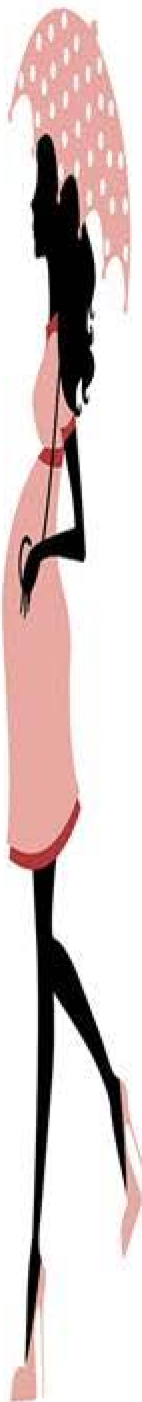


- Anxiety about the health of the infant
- Concern about one's ability to care for the infant
- Negative perception of infant temperament and behavior
- Despondency for at least two weeks
- Lack of interest in the infant's activities
- Lack of response to support and reassurance
- Using alcohol, illicit drugs, or tobacco
- Nonadherence to postnatal care
- Frequent non-routine visits with or telephone calls to the obstetrician or pediatrician

https://www.uptodate.com/contents/postpartum-unipolar-major-depression-epidemiology-clinical-features-assessment-and-diagnosis?source=search_result&search=post%20partum%20depression&selectedTitle=1~112

Course of Illness

- Untreated postpartum depression may resolve spontaneously or with treatment, or develop into a persistent (chronic) depressive disorder.
- Studies indicate that episodes of postpartum major depression last at least one year in 30 to 50 percent of patients.
- Reviews estimate that among women with postnatal depression, recurrence of postpartum and/or non-postpartum depression occurs in approximately 40 to 50 percent.



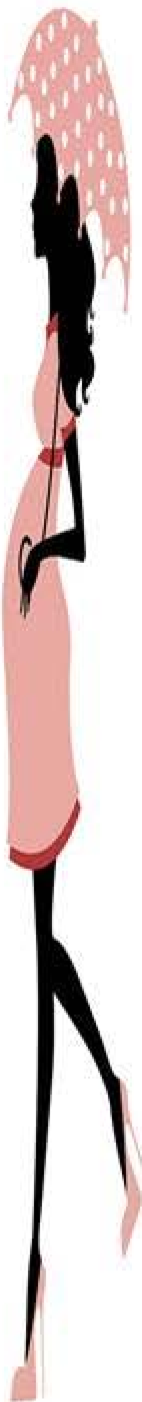
https://www.uptodate.com/contents/postpartum-unipolar-major-depression-epidemiology-clinical-features-assessment-and-diagnosis?source=search_result&search=post%20partum%20depression&selectedTitle=1~112

Adverse Consequences

Postpartum depression:

- Can impair maternal functioning
- Is associated with poor nutrition and health in the baby
- Can interfere with breastfeeding, maternal-infant bonding, care of the infant and other children, and the woman's relationship with her partner.

In addition, postpartum depression is associated with ***abnormal development, cognitive impairment, and psychopathology in the children***

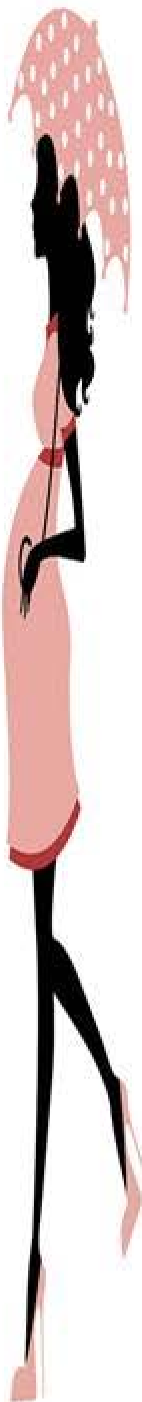


https://www.uptodate.com/contents/postpartum-unipolar-major-depression-epidemiology-clinical-features-assessment-and-diagnosis?source=search_result&search=post%20partum%20depression&selectedTitle=1~112

Adverse Consequences

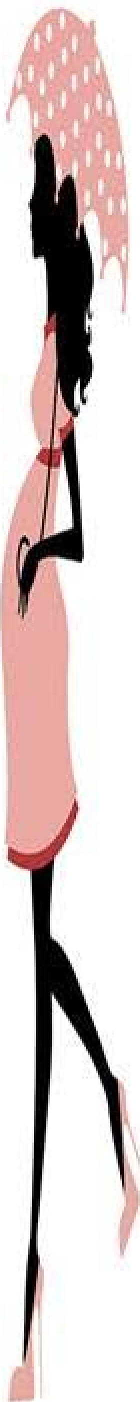
- Children of depressed mothers may be less likely to receive vaccinations or use care seats.
- Mothers with postnatal depression may be less likely to properly position their infants for sleep.
  - A prospective study of postpartum mothers (n >5000) found that after controlling for potential confounding factors (eg, maternal education, household income, and number of children in household), women with ***depressive symptoms were less likely to put their babies to sleep on their backs***, compared with non-depressed women.

https://www.uptodate.com/contents/postpartum-unipolar-major-depression-epidemiology-clinical-features-assessment-and-diagnosis?source=search_result&search=post%20partum%20depression&selectedTitle=1~112



Adverse Consequences

- A prospective study enrolled pregnant women and followed them for up to five years after birth.
- The analyses suggested that postnatal maternal depressive symptoms were associated with offspring physical health problems (eg, asthma, colic, diabetes and/or diarrhea).
- Postnatal depression may be associated with impaired motor functioning, including fine motor skills.

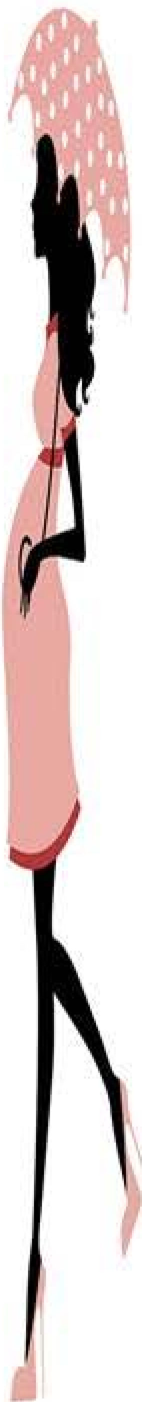


https://www.uptodate.com/contents/postpartum-unipolar-major-depression-epidemiology-clinical-features-assessment-and-diagnosis?source=search_result&search=post%20partum%20depression&selectedTitle=1~112

Adverse Consequences

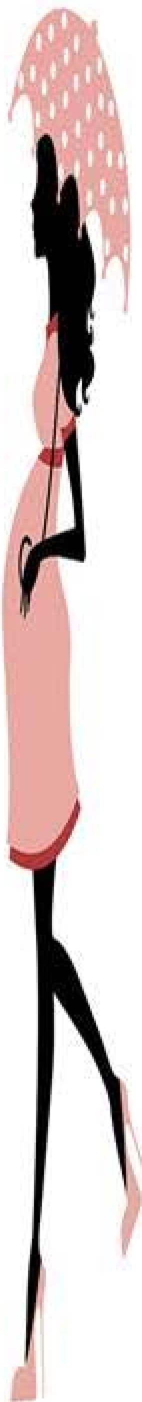
- A retrospective study including mothers who had suffered postnatal depression but not prenatal depression; the children were followed from the time of delivery to the child's fifth birthday.
- After adjusting for potential confounds (eg, maternal age at delivery, socioeconomic status, and number of children in the household), the analyses found that the *risk of poisonings and burns were each elevated in children of mothers who had postnatal depression*.

https://www.uptodate.com/contents/postpartum-unipolar-major-depression-epidemiology-clinical-features-assessment-and-diagnosis?source=search_result&search=post%20partum%20depression&selectedTitle=1~112



Adverse Consequences

- Postnatal depression may be associated with structural brain abnormalities
- In one study, women were assessed for depressive symptoms both during pregnancy and the postpartum period, and the children from these pregnancies underwent structural magnetic resonance imaging of the brain at a mean age of approximately 3.5 years.

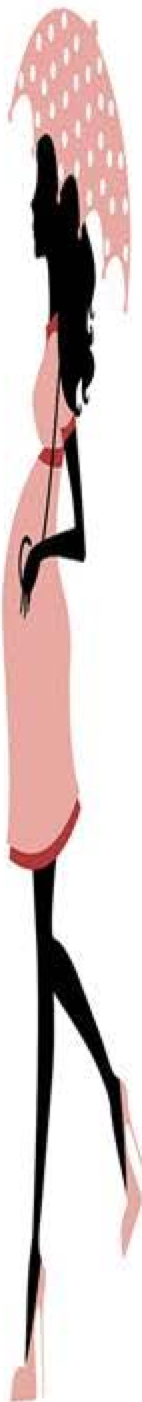


https://www.uptodate.com/contents/postpartum-unipolar-major-depression-epidemiology-clinical-features-assessment-and-diagnosis?source=search_result&search=post%20partum%20depression&selectedTitle=1~112

Adverse Consequences

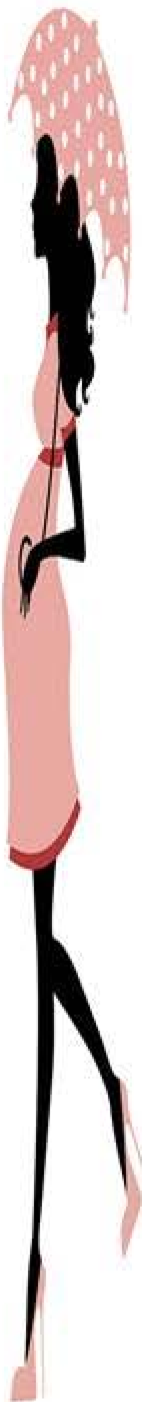
- After controlling for potential confounding factors, increased postpartum depressive symptoms were associated with reduced brain plasticity in the offspring of mothers with postnatal depression.

https://www.uptodate.com/contents/postpartum-unipolar-major-depression-epidemiology-clinical-features-assessment-and-diagnosis?source=search_result&search=post%20partum%20depression&selectedTitle=1~112



Adverse Consequences

- Postnatal depression appears to be associated with difficult infant temperament.
- Postnatal maternal depression is associated with an increased risk of problems with emotional regulation and social behavior/competence in the baby.
- A study of children evaluated at age three and a half years found that emotional and behavioral problems were twice as likely to occur in children whose mothers suffered postpartum depression, compared with children whose mothers had not.

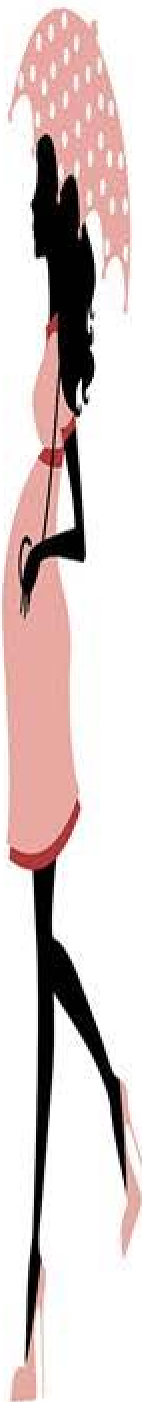


https://www.uptodate.com/contents/postpartum-unipolar-major-depression-epidemiology-clinical-features-assessment-and-diagnosis?source=search_result&search=post%20partum%20depression&selectedTitle=1~112

Adverse Consequences

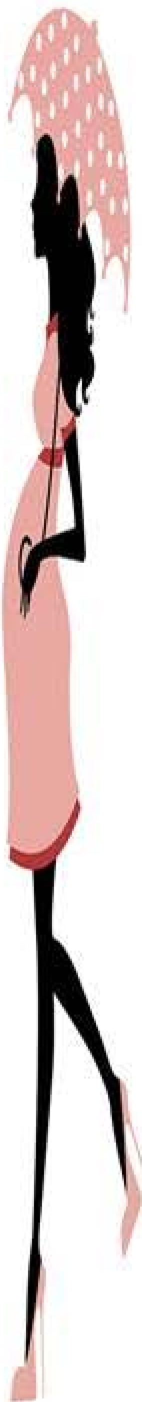
- A cross-sectional study of mothers and their one-year-old infants found that maternal depressive symptoms were associated with poorer development of expressive language.
- Multiple reviews suggest that postnatal depression has an adverse effect upon intelligence in the baby, however, the effect appears to be small.

https://www.uptodate.com/contents/postpartum-unipolar-major-depression-epidemiology-clinical-features-assessment-and-diagnosis?source=search_result&search=post%20partum%20depression&selectedTitle=1~112



Adverse Consequences

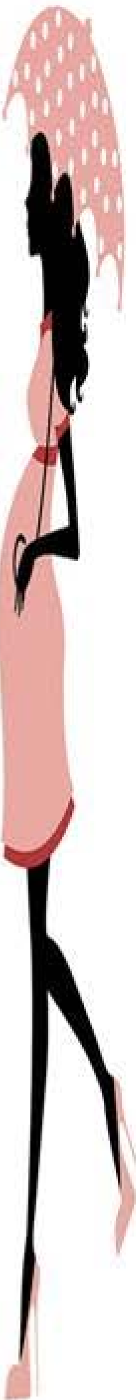
- Studies reveal that postnatal maternal depression is often associated with psychopathology in children including:
  - Symptoms of conduct disorder, oppositional defiant disorder, and/or attention deficit hyperactivity disorder.
  - Symptoms of anxiety disorders (twice as prevalent) and depressive disorders (roughly 45 percent of the children suffer at least one depressive episode by age 16 years.
  - One study revealed the prevalence of psychiatric disorders at age 11 years was four times greater in children of depressed mothers than controls.



https://www.uptodate.com/contents/postpartum-unipolar-major-depression-epidemiology-clinical-features-assessment-and-diagnosis?source=search_result&search=post%20partum%20depression&selectedTitle=1~112

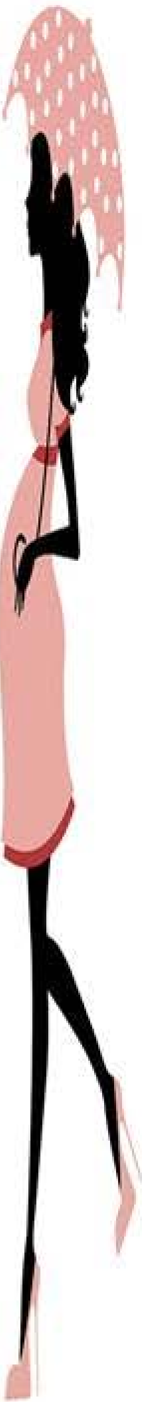
Screening for Post Partum Depression

- All primary care clinicians (including obstetricians, gynecologists, or pediatricians) should screen all postpartum women for depression.
- Edinburgh Postnatal Depression Scale or PHQ



https://www.uptodate.com/contents/postpartum-unipolar-major-depression-epidemiology-clinical-features-assessment-and-diagnosis?source=search_result&search=post%20partum%20depression&selectedTitle=1~112

Summary



Summary

- While gestational diabetes is far less common than depression during pregnancy, women are routinely screened for this disorder, but not for depression, any psychiatric illness, nor even experiences of life stress.
- We can't change SES, Education or other factors but we can provide medical treatment for mental illness
- Let's start screening …