

Prenatal Care

*“Comenzando Bien
Facilitator Training
Program”*

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Objectives

- Discuss importance of preconceptual care
- Identify benefits of prenatal care
- Describe typical 9 month prenatal care
- List prenatal tests and their purpose
- Discuss serious pregnancy complications
- Identify signs and symptoms of preterm labor
- Review postpartum physical and emotional changes

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PRENATAL CARE BEGINS BEFORE PREGNANCY

FAMILY PLANNING EDUCATION

- Every office visit is an opportunity to prevent an unintended pregnancy.
- Discuss abstinence and STD prevention
- HPV vaccination
- Provide reliable contraception

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PRENATAL CARE BEGINS BEFORE PREGNANCY

- Family Planning in the Teen
 - Provide a safe, non threatening way for the young teen to contact the provider in order to obtain reliable contraception and or STD testing.
 - Provide opportunity to ask questions
 - Never hold a young woman hostage for reliable contraception.
 - Pap smears start at age 21 but chlamydia testing should be done at least annually.
 - PRESERVE future fertility

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PRENATAL CARE BEGINS BEFORE PREGNANCY

- Prevention of STDs and avoiding unnecessary cervical testing and treatment will help reduce the risk of preterm delivery.
- Reducing the amount of abortions will reduce the risk for PTD
- EDUCATION
- RELIABLE CONTRACEPTION!!!

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Preconceptual Care

- Should be addressed at every office GYN or Primary Care visit
- Aimed at identifying behavioral, social, and medical risks
- Identify teratogens-most significant congenital defects occur between weeks 3 and 6, before a woman has even missed a period
- Help formulate a reproductive plan that outlines future goals for pregnancy

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Preconceptual care

- Screen for STDs
 - Chlamydia, Gonorrhea, Syphilis, HIV, Hepatitis
- Screen for Periodontal disease
 - Gum disease linked to preterm delivery
- Update immunizations
 - Hepatitis B, Rubella (MMR), Varicella, Pertussis (TDAP), HPV, and Influenza vaccine

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Preconceptual care

- Assess the risk of chromosomal or genetic disorders based on family history, ethnic background, and age
- Offer cystic fibrosis, sickle cell and other carrier screening as indicated
- BMI screening (healthy 19.8-26.0)
- Anemia
- Hemoglobin A1C or Diabetes screening
- Dietary risks Bulimia, Anorexia, Gastric surgery

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Preconceptual Care

- Folic Acid supplementation 0.4 mg for all women; 4 mg daily in patients with history of NTD
- Tight control of Pre Gestational Diabetes to prevent cardiac and neural tube malformations and reduce risk of miscarriage
- Management of thyroid disease-hypothyroid and hyperthyroid

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Preconceptual Care

- Avoid teratogenic agents
 - Accutane, Coumadin, some Antiseizure medications, Some Antihypertensives, Paxil, alcohol, tobacco, illicit drugs, Category D and X drug
 - Extreme heat-jacuzzis, saunas
 - Known teratogenic chemicals-acetaldehyde, benzenes, etc
- Resource for teratogen information in California
 - <http://ctispregnancy.org/>
 - information of teratogens for both pregnancy and breast feeding and online chat.

Preconceptual Care

- Organogenesis begins early.
- Neural tube closes at 5 weeks
- Cardiac beats at 6 weeks.
- Fetal lip closes at 5 weeks.
- Placenta development begins at 7 days after conception. Poor placental development has been linked to preeclampsia and preterm birth and may play a role in fetal programming of chronic disease later in life.

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Preconceptual care

- Women who enter pregnancy with chronic biological or physical stress are more susceptible to pregnancy complications including preterm birth

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Preconceptual Care

- Quit smoking
 - Associated with Low birth weight, SIDS
- Provide resources
 - <https://www.smokingcessationandpregnancy.org/>
- Promote healthy behaviors such as nutrition, exercise, sufficient sleep, relaxation.

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Barriers to Prenatal Care

- Belief that prenatal care is unnecessary
- Lack of understanding of importance of PNC
- Fear of tests and examinations
- Dislike constant check ups
- Long office visit wait times
- Transportation
- Substance Abuse/In a drug treatment center
- Incarceration of the baby's father

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Barriers to Prenatal Care

- Victim of spouse or partner abuse
- Victim of child abuse
- Fear of being reported as victim of abuse
- Lack of child care
- Lack of insurance
- Work/School conflict with appointment times
- Language barrier
- Fear of deportation

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How can facilitators help participants overcome barriers to care?

- Become familiar with local low cost prenatal care services.
- Identify clinics or hospital programs that provide culturally appropriate care.
- Provide list of resources available to participants



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What is Prenatal Care?

- Organized medical care to screen and identify risk factors during pregnancy
- Address risk factors that are identified
- 80% of all pregnancies are without risk factors
 - Benefit of prenatal care for these women is education

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What is Prenatal Care?

- Every year nearly one million American women deliver babies without receiving adequate medical attention.
- Babies born to mothers who received no prenatal care are three times more likely to be born at low birth weight, and five times more likely to die, than those whose mothers received prenatal care.

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NOW THAT I AM PREGNANT- WHEN DO I GET MY ULTRASOUND?

- Review of several hundred abstracts identified why women seek prenatal care:
 - Improved pregnancy outcome
 - Regular check ups
 - Hearing the heart beat
 - Ultrasound
 - Fetal Gender Identification
 - Education



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NOW THAT I AM PREGNANT- WHEN DO I GET MY ULTRASOUND?

- Review of several hundred abstracts identified why women seek prenatal care:
 - learning good habits
 - prep for labor
 - break from kids
 - reduced stress
 - reduced loneliness



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The First Prenatal Visit

- Review Medical and Family History
- Blood pressure, Height, Weight
- Check urine for glucose and protein ketones
- Order Prenatal labs:
 - Blood type and RH, Complete blood count, RPR, Rubella, Varicella, HIV, Hep B, Thyroid, Urine culture and Urinalysis, If appropriate: Cystic Fibrosis, Ashkenazi Jewish panel, Sickle cell, Hemoglobin electrophoresis, Glucose screening



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The First Prenatal Visit

- Physical exam
 - Mouth-gums, Thyroid, Heart, Lungs,
 - Skin, Rashes, Tattoos
 - Abdomen,
 - Uterine size,
 - listen to heart beat if 10 weeks or greater
 - Pelvic,
 - Screen for STD, Chlamydia, Bacterial Vaginosis, Candida, Pap and HPV testing if appropriate
- Transvaginal ultrasound if 10 weeks and under to confirm pregnancy dating (or abdominal if over 10 weeks)



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The first prenatal visit

- Screen for depression and refer if appropriate
- WIC form
- Review importance of regular prenatal visits and encourage questions
- Provide a means to communicate in between visits

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Special Tests

- California Prenatal Screening Program (CPSP)
- Genetic Counseling Referral
- Nuchal Translucency
- Chorionic Villus Sampling
 - (10-14 weeks)
- Amniocentesis (15-18 weeks)



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What are we screening for?

- **Trisomy 21:** (Down Syndrome) extra chromosome #21. Mental retardation, and other abnormalities such as heart defects
- **Trisomy 18:** most fetuses with T-18 are lost through miscarriage or demise. Babies born with T-18 have mental retardation and physical problems. Most do not survive past one year.
- **Trisomy 13:** Most are lost through miscarriage. Mental retardation and severe birth defects

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What are we screening for?

- **NTD (Neural Tube Defect)** The neural tube extends from the top of the head to the end of the spine. This develops into the brain and spinal cord. The NT is completely formed by 5 weeks.
- **Spina Bifida** (NTD) opening in the spine. Causes paralysis of the legs, loss of bowel and bladder
- **Anencephaly** (NTD) occurs when most of the brain does not develop. Causes death of the fetus or newborn.

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What are we screening for?

- **Abdominal Wall defects** are problems involving the baby's abdomen and intestines. Intestines and other organs are formed outside the body. Surgery after birth in most cases can correct the defect
- **Smith-Lemi-Opitz syndrome (SLOS)** This is a very rare birth defect. Babies can not make cholesterol normally. babies are mentally retarded and may have many physical defects.
- **Screen positive for SLOS** also indicates increased chance for congenital abnormalities and Fetal Death.

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California Prenatal Screening

- Three types of Prenatal Screening Tests
- Quad Marker 15-20 weeks detects
 - 80/100 Down's syndrome
 - 67/100 Trisomy 18
 - 97/100 Anencephaly
 - 80/100 open spina bifida
 - 85/100 abdominal wall defects
 - 60/100 SLOS

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California Prenatal Screening

- Serum Integrated Screening: Combines two blood tests: 1st test between 10 weeks, 0 days and 13 weeks 6 days. 2nd test between 15 and 20 weeks
 - Detects 85/100 Down's syndrome
 - 79/100 Trisomy 18
 - 97/100 Anecephaly
 - other risk detection same as Quad

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California Prenatal Screening

- Serum Integrated Screening:
- Two blood tests plus Nuchal Translucency
- NT is an ultrasound that measures the back of the fetus' neck to screen for Down's syndrome
 - Get a preliminary result at NT measurement day and final result after second lab result complete.
 - 90/100 Down's detection
 - 81/100 T-18
 - other risk detection same as QUAD

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Prenatal Diagnosis

- Diagnostic vs Screening
- Invasive
- CVS (Chorionic Villus Sampling) 10-14 weeks 3% loss rate (3:100 tests)
- Amniocentesis offered if CPSP screening is abnormal 0.5% loss rate (1:200 tests)
- Amniocentesis offered if second trimester ultrasound is abnormal

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Prenatal Care

- So what do we DO at the visits if we aren't going to always do an ultrasound?
- WE TALK ALOT!
- We answer a lot of questions
- We screen for medical complications

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Pregnancy isn't a license to eat

- Eat right: Pregnancy caloric requirements are 200-400 more per day! (or 2200 cal)
- Not eating for two!
- Calcium 1200 mg per day
- Iron 30-60 mg per day
- Folate 0.4 mg per day
- Eat 3 meals and 3 snacks



Grilled cheese sandwich 290 calories

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Avoid certain foods

- Raw or undercooked meat, chicken, fish.
- Pate, meat spreads, smoked seafood
- Eat Tuna in moderation (no more than 2 servings per week) Eat light tuna, not albacore
- No sushi/sashimi (raw fish)
- No shark, swordfish, king mackerel and tile fish due to mercury content
 - Safe to eat 12 ounces per week cooked fish such as shellfish, small ocean fish or farm raised fish

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Avoid Certain foods-ARE YOU NEUROTIC YET?

- Avoid raw, unpasteurized milk, cheeses
 - No raw eggs or foods with raw eggs such as Caesar dressing, mayonnaise, or Hollandaise sauces
 - No soft, unpasteurized cheeses. Cottage cheese and cream cheese are safe.
- Avoid raw sprouts especially alfalfa
- Fast food has little, if any nutritional value.
- “If it doesn’t spoil or sprout, throw it out!”
- Avoid “white foods” rice, pasta, bread, potatoes: simple carbs

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How to calculate BMI



http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/english_bmi_calculator/bmi_calculator.html



Pregnancy Weight Gain Guidelines by Institute of Medicine 2009

Calculations assume a 0.5–2 kg (1.1–4.4 lbs) weight gain in the first trimester
(based on Siega-Riz et al., 1994; Abrams et al., 1995; Carmichael et al., 1997)

Prepregnancy BMI	BMI(kg/m ²) (WHO)	Total Weight Gain Range (lbs)	Rates of Weight Gain* 2nd and 3rd Trimester (Mean Range in lbs/wk)
Underweight	<18.5	28-40lbs	1 (1-1.3) lbs/wk
Normal Weight	18.5-24.9	25-35lbs	1 (0.8-1)lb/wk
Overweight	25.0-29.9	15-25lbs	0.6 (0.5-0.7)lb/wk
Obese (includes all classes)	≥30.0	11-20lbs	0.5 (0.4-0.6) lb/wk

Above all, stay hydrated!

- Drink about 64-80 ounces of fluid each day
 - Milk, soups, caffeine-free, non alcoholic drinks
 - Fruits and vegetables rich in water
 - Grapes, watermelon, apples
- Urine is a good guideline, should be nearly colorless, if dark yellow, need more fluid intake

Can I drink my coffee?

- Limit Caffeine to 200 mg per day
- One cup of coffee (not a vente from Starbucks)
- Or three cups of tea or decaf coffee
- Decaf is not caffeine free
- Diet soda/ice tea/hot chocolate all contain Caffeine

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Does SEX cause PRETERM LABOR???

- **NO**
- Sex is okay as long as the placenta is not over the cervix.
- **AND** your partner can not hurt the baby.

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CAN I GET IN THE HOT TUB?

- **NO.** We don't advise cooking the baby.
- High core temperatures may harm the developing baby

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CAN I KEEP MY CAT???

- Don't kick your poor cat out! Yes, you can snuggle with him.
- Have someone else change the Kitty Litter while you are pregnant.
- When you are gardening, remember even if your cat is indoors, the neighbors cats have discovered your garden. Wear gloves.
- Make sure fruits and veges from your garden are cooked, peeled, or washed very well.

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Will you give me a note to quit my gym membership?

- NO! If you are physically active on most days-GREAT! If not, this is a good time to begin to move in that direction.
- Benefits: feel better, less constipation, less fluid retention, better labors.
- 30 minutes per day on most days of the week recommended. This can be accomplished by a brisk walk for 15 minutes after lunch and 15 minutes after dinner.
- Pregnancy Yoga is WONDERFUL

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Will you give me a note to quit my gym membership?

- NO! But do listen to your body
 - If you need to stop to take a “breather”
 - If you need to stop to drink water
 - Exercise as long as you have a health pregnancy, no bleeding or spotting complications

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GIVE ME A HANDICAP PLACARD SO I DON'T HAVE TO WALK SO FAR?

- NO!
- Unless you are on bedrest for your Triplets or you have a medical condition that requires you that you don't walk.
- Pregnancy is not a disease!

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FINALLY-IT IS ULTRASOUND TIME

- Survey ultrasound done between 18-20 weeks.
- Purpose is to look at the baby's anatomy and screen for any defects, confirm normal growth, normal amniotic fluid, and normal placenta location.
- IF THE BABY WILL COOPERATE, YOU CAN FIND OUT THE GENDER.

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20 weeks

- Recommend registering for prenatal classes
- About the time Mom feels the baby move for the first time.
- Review CPSP results and Survey Ultrasound results.
- Review preterm labor signs and symptoms
- Discuss breast feeding benefits

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Third trimester labs at 26-28 weeks

- Screen for Anemia
- Screen for Gestational Diabetes
- Screen for Antibodies and administer Rhogam for RH negative women.
- Discuss monitoring the baby's movement starting around 28 weeks. Kick counts
- Review preterm labor signs and symptoms
- Encourage breast feeding

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32 weeks

- Review preterm labor signs and symptoms
- Recommend finding a Pediatrician and meeting with him or her.
- Review Pregnancy Induced Hypertension signs and symptoms.
- Discuss postpartum care and encourage formulation of a plan for help after the baby is born.
- Review benefits of breast feeding.

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Warning Signs of Potentially Serious Problems During Pregnancy

- Severe headaches and blurred vision
- Persisting Vomiting
- Painful urination
- Severe upper back pain and fever, malaise
- Fever
- Vaginal Bleeding
- Sudden swelling of hands and feet
- Decreased baby movements after 26 weeks
- Dull backache
- Pelvic pressure
- Cramping
- Leaking fluid
- More than five contractions in one hour.

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Things that can increase Braxton Hicks Contractions and Mimic PTL

- Dehydration
- Constipation
- Prolonged standing
- Not enough rest
- Poor diet
- Poor muscle tone

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Who is at Risk of Preterm Labor

- Women younger than 17 and older than 35.
- Previous preterm delivery
- Multiple gestation-twins/triplets
- Uterine abnormalities
- Multiple abortions
- LEEP/CRYO for abnormal pap smear
- Late prenatal care
- Smoking, alcohol and use of illegal drugs
- Having high levels of stress
- Domestic violence

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Conditions that Increase the Risks of Preterm Labor

- Premature Preterm Rupture of Membranes
- Urinary Tract Infections (UTI)
- Pyelonephritis (Kidney Infections)
- High Blood Pressure
- Diabetes
- Being underweight
- Being obese
- Short time between pregnancies (less than 1 year)
- Bleeding
- Poor dental hygiene



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How to Reduce the Risk of PTL

- Get early and regular prenatal care
- Prior history of preterm delivery
 - See a Specialist before conception
- Become aware of the signs and symptoms
- Learn steps for easing preterm contractions
- Understand which activities might contribute to preterm labor
- Alert health care provider as soon as possible



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34 weeks

- Review signs and symptoms of Preeclampsia
- Review birthing plan
- Encourage reviewing postpartum information
- Reinforce fetal kick count importance
- Benefits of breast feeding

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36 weeks

- Screen for Group Beta Streptococcus
- Confirm vertex presentation
- Discuss signs and symptoms of labor
- Discuss risks of early induction
 - Neurologic development is important for breast feeding
 - 36 week baby is considered PRETERM
- Review importance of breast feeding
 - Term babies breast feed better!

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Preeclampsia

- High Blood Pressure
- Sudden swelling of fingers, legs, toes and face (also called edema)
- Severe headaches
- Nausea and vomiting
- Blurred vision and dizziness
- Sudden weight gain

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Who is at Risk of Preeclampsia

- Women who are pregnant for first time
- Women younger than 20 and older than 35
- Women pregnant with twins or multiples
- Obese women
- Women who have high blood pressure before pregnancy
- Women who have gestational diabetes



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37, 38, 39, 40, 41 weeks

- Empathize with this most uncomfortable mom
- Induction for medical indications only
- The last four weeks of pregnancy are longer than the first 9 months.
- The baby **NEEDS** to continue neurologic development in the uterus.
- Induction of labor is discouraged until after 40 weeks due to risk of cesarean delivery, fetal distress, prematurity due to poor pregnancy dating, and unfavorable cervix.

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BUT MY BABY IS SO *BIG!!!*

- ACOG and ACNM recommend **AGAINST** induction of labor for Macrosomia or Impending Macrosomia.
- Ultrasound can be off by 2 lbs in predicting the weight of the baby
- Induction of labor for Macrosomia or Impending Macrosomia increases the risk for labor and delivery complications including cesarean sections; and has not been statistically shown to improve any outcome

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41-42 weeks

- Assess for favorable cervical change indicating induction of labor is appropriate
- Monitor fetus in antenatal testing unit to assess fetal well being
- patience, patience, patience.
- Induce at 42 weeks regardless of cervical ripening Bishop score.

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Postpartum Physical Changes

- Exhaustion
- After birth pain
- Bleeding
- Perineal pain or incisional pain
- Nipple pain
- Breast engorgement

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Postpartum Physical Changes

- Swelling and fluid retention
- Sweating
- Hemorrhoids
- Urinary retention/difficulty urinating
- Fear of first bowel movement
- Urinary leakage and Pelvic organ prolapse
- Telogen phase of hair loss

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Postpartum Emotional Changes

- Mood swings
- Depression
- Stress
- Loss of control
- Change in daily activities/routine

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Postpartum Strategies

- Accept offers for help and support
- Don't let anyone in the house without a casserole or dinner
- Rest-nap when the baby is napping
- Take pain medication if needed
- Never, ever, NEVER wake a sleeping baby at night! (unless the Pediatrician says so)
- When all else fails, lower your standards!

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Postpartum 6 week check up

- Review their birth experience
- Physical exam
- Screen for depression
- Encourage breast feeding for at least a year.
- Prenatal vitamins and folic acid during entire childbearing years
- ***Provide/Discuss contraception***
- PRECONCEPTUAL COUNSELLING
- Pregnancy spacing: wait a year
 - reduces risk of preterm delivery

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Back to “Normal”

- Resume sexual activity
- Keep your relationship with your partner alive
- Resume exercise
- Healthy diet
- Return to work
- Stress reduction
- Join a new mom’s support group or play group
- Ask for help when needed

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Questions?



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