

Preconception Counseling: What Is Supported by Evidence?

Heather Paladine, MD, MEd, FAAFP
Tenessa MacKenzie, MD, FAAFP



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Heather Paladine, MD, MEd, FAAFP

Residency Director/Director of Women's Health, New York-Presbyterian/Columbia University Medical Center Family Medicine Residency Program, New York, New York; Assistant Professor of Medicine, Center for Family and Community Medicine, Columbia University Medical Center, New York, New York

Dr. Paladine is a family physician who lives and practices in Manhattan, New York, where she supervises residents and medical students, and treats a predominantly Latino, low-income patient population. She focuses on women's health, including maternity care and reproductive health. In addition to her work as a physician, Dr. Paladine mentors residents and medical students as a preceptor in clinic and hospital environments. She is a member of the board of directors of the New York State Academy of Family Physicians and a member of its Education Commission. She believes that the United States needs a health care system based on primary care and that the public must learn more about family medicine to pave the way.

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Tenessa MacKenzie, MD, FAAFP

Family physician, University of California, San Francisco (UCSF) Family Medicine Center at Lakeshore; Assistant Clinical Professor, Department of Family and Community Medicine, UCSF

Dr. MacKenzie has been an outpatient primary care clinician at the UCSF Family Medicine Center at Lakeshore since 2014. She teaches UCSF medical students and provides pediatric, adult, and prenatal care. She earned her medical degree at the University of Florida in Gainesville in 2009 and completed a residency in family medicine at Beth Israel Medical Center in New York in 2012. Prior to joining UCSF, Dr. MacKenzie worked as a locum tenens physician in Canada and New Zealand. In 2016, she completed the UCSF Family Medicine Faculty Development Fellowship Program. Her clinical interests include comprehensive women's health care, outpatient procedures, pediatrics, medical education, and healthy lifestyle counseling.

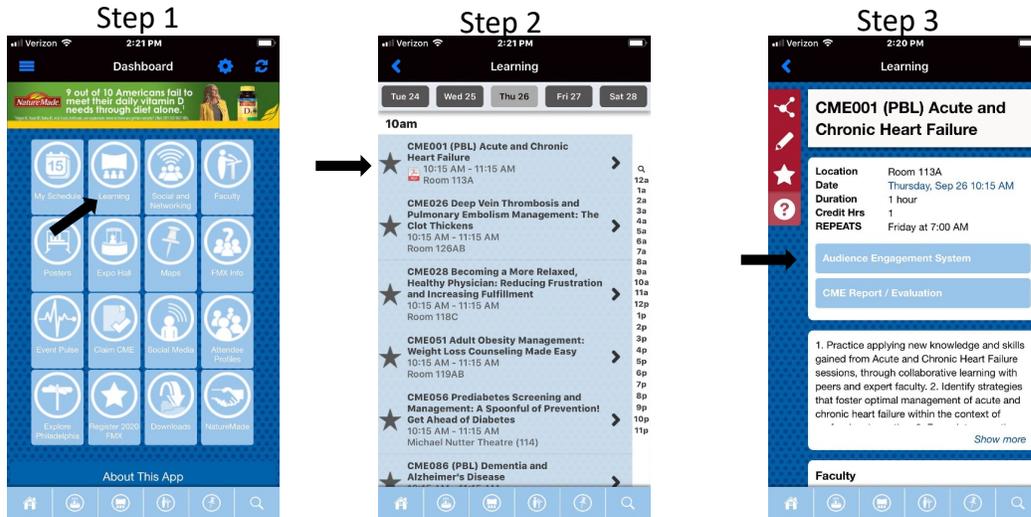
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Learning Objectives

1. As a part of primary care visits, provide pregnancy intendedness screening for all women of reproductive age and then education and health promotion counseling to those sexually active and not using contraception to reduce reproductive risk and improve pregnancy outcomes.
2. Counsel pregnant and postpartum patients on interconception health care needs including needed immunizations, new and ongoing risk factors for future pregnancies, and contraception options to prevent unintended pregnancy and to space pregnancies for optimum health.
3. Use pregnancy visits and postpartum visits as an opportunity to review and encourage good health habits such as exercise, smoking cessation, and healthy diet.
4. Preconception visits should include advice about foods to avoid during pregnancy, folic acid, smoking cessation, BMI measurement with discussion of health weights and depression screening.

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Audience Engagement System



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Outline

- Introduction
- Obstacles to preconception care
- Opportunities for preconception care
- Pregnancy intention
- Preventive counseling - folic acid, substance use, vaccines, other infections, obesity
- Preconception counseling for men
- Coding and reimbursement



Advanced Preconception Care

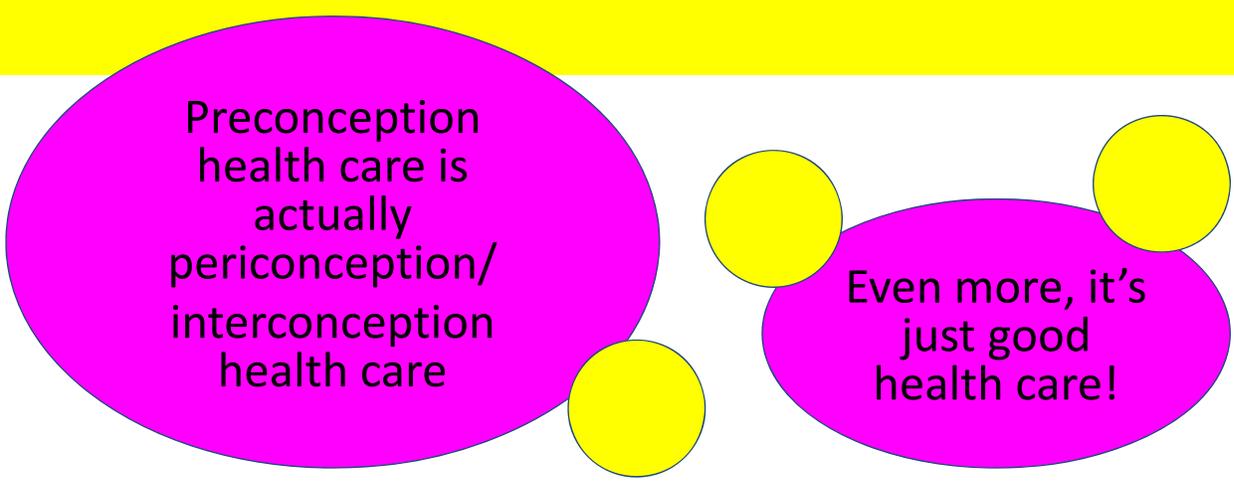
Common medical conditions in women of reproductive age

- Hypertension
- Diabetes mellitus
- Hypothyroidism
- Opioid use disorder

Contraception

Preconception carrier screening

Introduction



Preconception
health care is
actually
periconception/
interconception
health care

Even more, it's
just good
health care!

Obstacles to Preconception Care - Patient

- Lack of knowledge/understanding of goals of preconception care
- Unplanned pregnancy
- Lack of access: women at highest risk often have less access to care
- Disparities



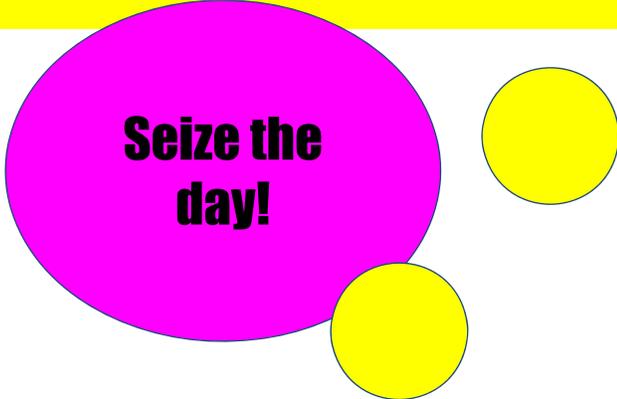
Obstacles to Preconception Care - Provider

- Lack of evidence – what works?
- Poor reimbursement (?)
 - is this care cost-effective?
- Limited time in primary care visits
- Lack of training



Opportunities for Preconception Counseling

- Health maintenance visit
- Postpartum visit
- Well child visit
- Negative pregnancy test



Seize the day!

Importance of Pregnancy Intention

- 45% of pregnancies in the US are unplanned
- Consider using **One Key Question**: *Would you like to become pregnant in the next year?*
 - Yes, No, I Don't Know
 - Pilot studies have shown feasibility, acceptability, increased prescription of contraception
 - RCT in progress

<https://powertodecide.org/system/files/resources/primary-download/One%20Key%20Question%20%28R%29%20Research%20Summary.pdf>



Would you like to become pregnant in the next year?

www.powertodecide.org

Preventive Counseling

1. Folic Acid
2. Caffeine, alcohol, tobacco, other substances
3. Vaccines, other infections
4. Obesity



Poll Question 1

Folic acid supplementation prior to pregnancy and in the first trimester is associated with a lower risk of which of the following conditions:

- A) Autism
- B) Neural tube defects
- C) Genitourinary malformations
- D) All of the above

Folic Acid

- **Periconception folic acid decreases neural tube defects**
- Not associated with increased rate of conception
- Does not affect rates of miscarriage, ectopic, stillbirth
- Increase in multiple births – most likely from confounding from IVF

JAMA USPSTF evidence summary: <https://jamanetwork.com/journals/jama/fullarticle/2596299>

Folic Acid

GU malformations

- 85% decreased risk of having a child with GU malformation

Cleft lip/palate

- OR 0.61 for child with cleft lip +/- cleft palate

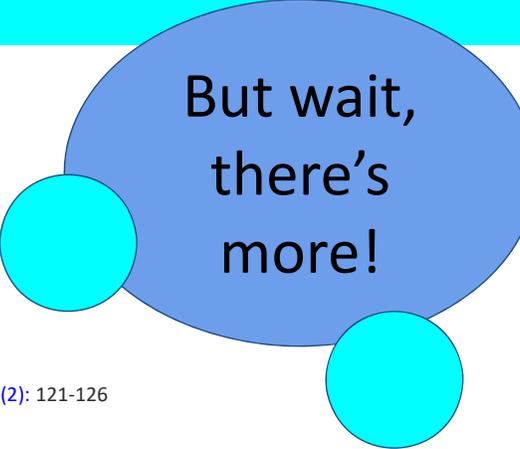
Autism

- OR autistic disorder 0.61

Fernandez et al *Journal of Pediatric Urology* 2012; 8(2): 121-126

Wilcox et al *BMJ* 2007;334:464

Suren et al *JAMA* 2013;309(6):570-577



But wait,
there's
more!

Folic Acid

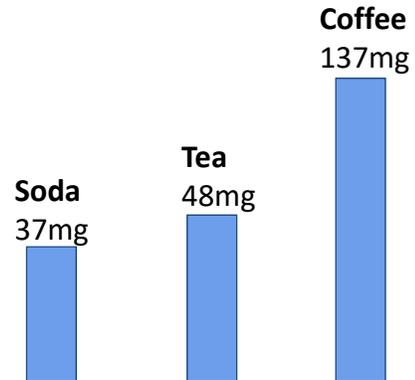
- Dose for prevention is 0.4 to 0.8mg one month before pregnancy through first 2-3 months of pregnancy
- What about diet fortification?

Folic Acid

- ~~Chuang Preventive Medicine 2011; 53(1-2): 85-88~~
 - Survey 33,000 women
 - Women intending pregnancy in next 12 months 57% higher odds taking daily folic acid vs. those not intending pregnancy
- Williams Maternal and Child Health Journal 2012; 16(9): 1854–1861
 - Women who received preconception care more likely to take pre-pregnancy multivitamins
 - AOR 4.4 95% CI 4.0-4.7)

Caffeine

- No convincing evidence of birth defects, hypertensive disorders of pregnancy, preterm delivery, early miscarriage
- Late miscarriage and stillbirth rates higher in women consuming >300 mg/day
- Drinking >6 cups coffee/tea a day increased risk of SGA infants



Caffeine

- Moderate caffeine intake **<200 mg/day** does not appear to be a major contributing factor in miscarriage or preterm birth
- A final conclusion can not be made whether there is a correlation between high caffeine intake and miscarriage
- The relationship to IUGR remains undetermined

ACOG Committee Opinion 2010: <https://www.acog.org/Clinical-Guidance-and-Publications/Committee-Opinions/Committee-on-Obstetric-Practice/Moderate-Caffeine-Consumption-During-Pregnancy>

Alcohol

No evidence of a “safe” threshold

- 7 drinks a week can cause fetal growth restriction
- Binge drinking and heavy alcohol consumption can lead to childhood learning difficulties, behavior problems, physical disabilities
- Fetal alcohol syndrome seen with alcohol exposures in all trimesters
 - Strongest association second half of first trimester



Feldman et al. Alcoholism: Clinical and Experimental Research 2012; 36(4): 670-676.

Alcohol

- Cochrane review 2009
 - Pre-pregnancy health promotion was associated with lower rates of binge drinking (RR 1.24)
- Williams 2012
 - Women who received preconception care were more likely to stop drinking prior to pregnancy (AOR 1.3 95% CI 1.2-1.5)

Poll Question 2

Smoking in pregnancy is associated with an increased risk for all of the following EXCEPT:

- A) low birth weight
- B) pre-eclampsia
- C) fetal and neonatal death
- D) preterm premature rupture of membranes (PPROM)
- E) ectopic pregnancy
- F) placenta previa

Tobacco

5% of perinatal deaths

20-30% of low birth weights

15% of preterm births

ACOG Committee Opinion on
Smoking Cessation During Pregnancy,
2017

Tobacco

- 12% of women in the US smoke cigarettes
- Higher in the South and Midwest
- 60% of women tried vaping or e-cigarettes
- Hookah use is only 1% but more common in women and younger people

www.cdc.gov/tobacco

Tobacco

- Twice as likely to experience delay to conception
 - OR at 12 months of failing to achieve a pregnancy in a smoker 1.54 (1.19-2.01)
- 30% higher odds of having infertility

The Practice Committee of the American Society for Reproductive Medicine, Smoking and Infertility, 2008.



Tobacco

- USPSTF: Behavioral interventions and pharmacotherapy are effective to reduce rates of smoking in adults (SOR: A)
- Not enough information to recommend electronic nicotine delivery systems



USPSTF Evidence Summary: <https://www.ncbi.nlm.nih.gov/books/NBK321744/>

Other Substances

- ACOG recommends avoiding marijuana use due to lack of safety data in pregnancy, possible increased risk of stillbirth
- Screen for opioid use

Poll Question 3

Which of the following is FALSE about rubella?

- A) Women with equivocal rubella immunity should be retested following pregnancy.
- B) Rubella vaccination in the United States has reduced the incidence of congenital rubella syndrome by 99%
- C) Most women who had an infant born with congenital rubella syndrome in the United States had contact with the health care system and a missed opportunity for vaccination prior to pregnancy.
- D) Women should be advised to wait 1 month following live virus vaccine prior to attempting pregnancy.

Rubella immunity

- Congenital rubella syndrome still occurs
- Most of these women had missed opportunities for screening/vaccination
- Women with equivocal or negative tests should be revaccinated after pregnancy
- Special attention to women born in other countries
- Recommend waiting one month after vaccination before attempting pregnancy

<https://www.cdc.gov/vaccines/pubs/surv-manual/chpt14-rubella.html>

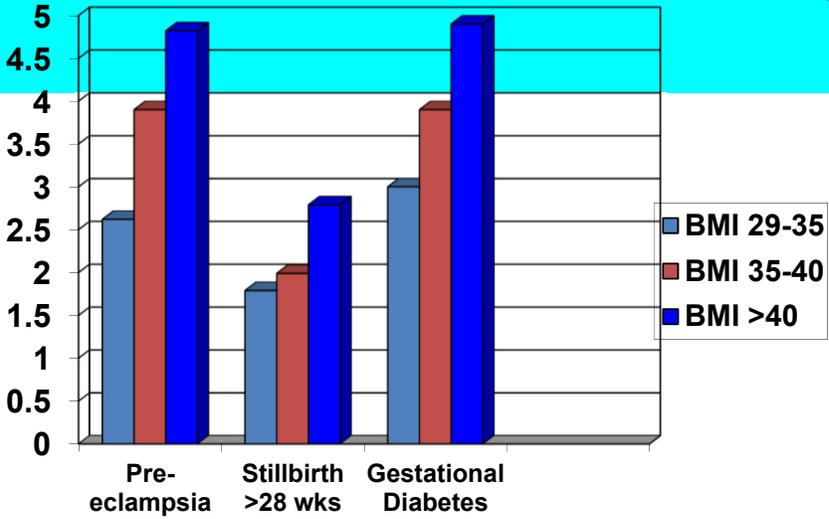
What about varicella
and measles? Other
vaccines?

Other infections

- STIs - test for gonorrhea and chlamydia
- HIV - test for HIV
- Zika
 - CDC recommends condom use or abstaining from sex after travel to an area with Zika exposure
 - For three months for the male partner
 - For two months for the female partner

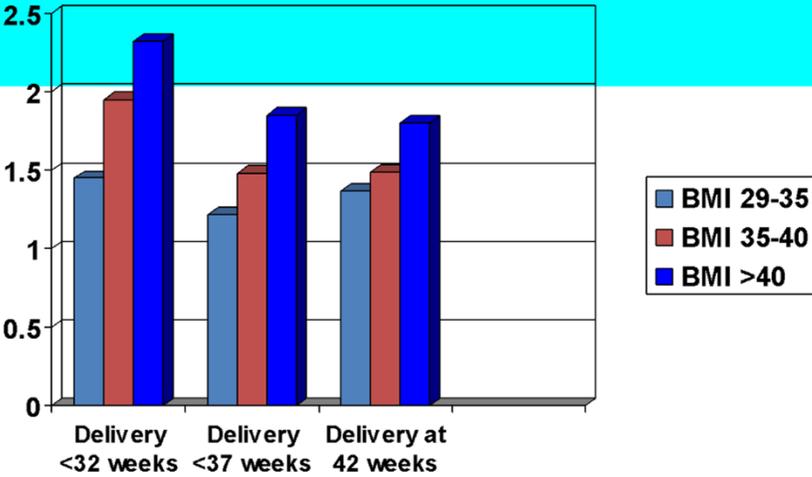


Obesity



Cedergren, Obstet Gyn 2004
 Baeten, Am J Public Health 2001
 Kim, Prev Chronic Dis 2012

Obesity



Obesity

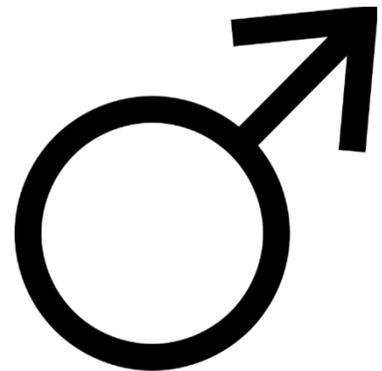
- USPSTF - intensive counseling and behavioral interventions in obese adults results in weight loss (up to 6% body weight) (SOR: B)
- Cochrane review 2015: not enough data to make practice recommendations for preconception weight loss

Preconception Counseling for Men

Smoking cessation

Factors that can contribute to infertility

- Alcohol
- Marijuana
- Cocaine
- Anabolic steroids
- Exposures through work or hobbies



Coding and Reimbursement

Can bill for preventive visit code if not done in the past year

May be covered under Medicaid for family planning - varies by state

Z31.69 Encounter for other general counseling and advice on procreation

Practice Recommendations

- Routinely assess pregnancy intention (SOR: C)
- Prescribe folic acid supplementation for women who may become pregnant (SOR: A)
- Use behavioral and/or pharmacotherapeutic interventions to help women quit smoking (SOR: A)
- Intensive behavioral interventions are effective for weight loss in women with obesity (SOR: B)



Resources

- www.beforeandbeyond.org Information for clinicians and patients, including a mobile app
- www.powertodecide.org Data and implementation strategies for One Key Question
- ACOG Committee Opinion 762, Prepregnancy Counseling: <https://www.acog.org/Clinical-Guidance-and-Publications/Committee-Opinions/Committee-on-Gynecologic-Practice/Prepregnancy-Counseling>
- CDC Preconception Care: <https://www.cdc.gov/preconception/index.html>
- CDC Information for Men (English and Spanish): <https://www.cdc.gov/preconception/men.html>
- Take Care of Yourself Before Pregnancy handout (English and Spanish): <https://familydoctor.org/take-care-pregnancy/>

Contact Information

- Heather Paladine hlp222@gmail.com
- Tenessa MacKenzie
tenessa.mackenzie@gmail.com

Questions



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