Preventive Care, Health Maintenance, and Contraception
Preventative Care

- 51-year old G3P3 in office for health maintenance exam.
  - No specific concerns and is in good health.
  - Ob Hx: three normal vaginal deliveries. She is sexually active with her husband and has been using condoms for contraception. No prior abnormal Pap smears or sexually transmitted diseases. Last Pap smear was one year ago. Her cycles are irregular, as she only had 4 menstrual periods last year. LMP 2 months ago.
  - Meds: None.
  - FH: Maternal aunt who was diagnosed with ovarian cancer at age 60.
  - PE: VS WNL. Cardio, respiratory, and abdominal exams WNL. Pelvic examination with normal external genitalia, normal vagina and cervix. Bimanual exam with slightly enlarged uterus, and no palpable adnexal masses. Rectovaginal exam confirms.
Preventative Care

- What is the next step in the management of this patient?

- What counseling would you offer her?

- What if she was 61? or 16?
Pap Smear

- Developed in 1943 by Dr. Papanicolaou
- Has reduced cervical cancer incidence and mortality by 70%. Swab of the transitional zone of the cervix to send for a Wet prep.
- Wet prep may reveal cells that are dysplastic.
- Start at age 21 and no sooner
- After 3 consecutive normal annual tests, Pap smears can be performed less frequently in low-risk women
- Repeat every 3 years or if new risk factors like new sexual partner
Mammogram, Bone Density, Lipids and Colonoscopy

- Mammograms every year after the age of 40. ACOG still recommends scans every year despite statement by USPTF.
- Bone Density every five years after the age of 60. May start earlier if the pt has risk factors
  + FH of osteoporosis
  + previous fracture
- Lipid profile every three years if no risk factors or preexisting disease. Every year if high risk.
- Colonoscopy starting at age 50 and repeated every 10 years
STI prevention, Domestic Abuse, and Depression Screening

- If a woman is sexually active, she should be counseled about STI prevention, including gonorrhea, chlamydia, HSV, HIV, Hepatitis, HPV, and Syphilis
- Every history should include a screening question regarding Domestic Abuse
- A depression screening question should also be asked
Immunizations

- Gardasil injection for HPV prevention
  - Protects against HPV 6,11, 16, 18
  - Ages 9-26
  - Three shot vaccination series over 6 months

- Varicella
  - document evidence of infection through symptoms (pox or zoster), documented vaccination, or laboratory evidence of immunity
  - first dose pre-pregnancy or at completion with the second injection 4-8 weeks after the first dose.

- MMR
  - need documented immunity to Rubella ideally in the pre-conception visit
  - If no immunity, then one dose given post partum
Immunizations Continued

- **Td/Tdap → DTaP**
  - Tetanus booster should be given every ten years with either Td or DTaP
  - Pregnant women received the last Td >10 years previously should get the vaccine in the second or third trimester.
  - DTaP in the post partum period with close contact to infants <12 months every 2 years for both Mom and Dad

- **Pneumococcal polysaccharide (PPSV) vaccination**
  - Vaccinate anyone with risk factors: lung disease, cardiovascular disease, DM, Chronic liver disease, functional or anatomic asplenia, renal failure, and/or HIV. Repeat vaccination in 5 years.
  - Otherwise one time vaccination at 65y/o
CONTRACEPTION

- All available contraceptives act to prevent union of sperm and egg or preventing embryo implantation
- 64% of women between the age of 15 and 44 use some form of contraception
  - Sterilization
    - Female 27%
    - Male 12%
  - OCP 27%
  - Condoms 20%
  - Intrauterine Device 1%
  - Depo Provera 3%
CONTRACEPTION

- Decision making
  + Safety
  + Availability
  + Cost
  + Interference with coital spontaneity
  + Personal acceptance

- Pregnancy has greater morbidity and mortality than any approved contraceptive method
“Rhythm method”

- Prevents pregnancy by avoiding intercourse around time of ovulation or using the knowledge of ovulation to augment other methods
  - Estimates woman’s fertile period
- Couple must be highly motivated
- More effective in Women with regular menstrual cycles
  - Failure 19% during first year of use
NATURAL FAMILY PLANNING

- For 28d cycle
  + Fertile period defined as days 10-17 ± 3 days
  + Coitus avoided days 7 – 20 of menstrual cycle or other contraceptives used during those days

- Indicators of ovulation
  + Increase in BBT of 0.5 to 1°F
  + Presence of thin, stretchy, clear cervical mucus

- Not a good choice in postpartum period due to irregular menses
BARRIER CONTRACEPTIVES

- Spermicides
  - Nonoxynol-9
  - Octoxynol-3
  - Inserted into vagina before coitus
    - 15 to 60 min prior
  - Maximum effectiveness is for no more than 1 hr
  - Douching should be avoided for at least 8 hrs after use
BARRIER CONTRACEPTIVES

- **Male Condom**
  - Only reliable, nonpermanent contraceptive available to men
  - Inexpensive
  - Easily available
  - Failure rate: Perfect 3% Typical 16%

- **Female Condom**
  - Vaginal liner
  - Recommended left in place 6-8 hrs after coitus
  - Failure rate: Perfect 5% Typical 21%
  - Relatively expensive
**BARRIER CONTRACEPTIVES**

- **Diaphragm**
  - Requires proper fitting by MD
  - Inserted with spermicidal jelly or cream
  - Occludes cervix
  - Must be inserted before intercourse and left in place for 6-8 hrs
  - Failure Rates: Perfect 6%  Typical 18%
  - Failure usually traced to pt not using device due to discomfort or improper placement
  - Disadvantages are increased rate of UTI
BARRIER CONTRACEPTIVES

- Cervical Cap
  - Higher failure rate dependent on parity
    - Nulliparous Perfect use 9%
      Typical use 20%
    - Multiparous Perfect use 26%
      Typical use 40%
  - Must be fitted by MD and difficult for most patients to apply properly
  - High risk of cervicitis and possibly toxic shock syndrome
  - Must have normal PAP Smear
**OCP’S**

- Single hormone
  - Progestin only

- Combined contraceptives
  - Estrogen (estradiol or mestranol) plus progestin (multiple forms)
    - Monophasic
    - Bi or Triphasic
  - Low dose “pill”
    - $\leq 35 \mu g$ estrogen
  - High dose “pill,” no longer available
    - $> 50 \mu g$ estrogen
OCP’S

- Combined OC’s – method of action
  - Blocks mid-cycle gonadotropin surge
    - Ovarian selection of a dominant follicle and ovulation is inhibited
  - Alters uterine and fallopian tube motility
  - Thickening of cervical mucus
  - Creates hostile endometrium (impairs blastocyst survival)
Non-contraceptive benefits

- Decreases dysmenorrhea
- Decreases testosterone
- Decreases ovarian cysts
- Decreases menstrual flow
- Menstrual regularity
- Decreases acne
- Decreased incidence of endometrial and ovarian cancer
- Less PMS/PMDD
- Decrease in benign breast disease
- Decrease incidence of pelvic inflammatory disease
COMBINED OCP’S

ABSOLUTE CONTRAINDICATIONS

- Thromboembolic dz.
- Coronary or cerebral vascular dz.
- Impaired liver function or hepatic neoplasm
- Breast cancer
- Pregnancy
- Smokers > 35 yrs of age
- Congenital hyperlipidemia
COMBINED OC’S –

RELATIVE CONTRAINDICATIONS

- Vascular HA (migraines) unless triggered by ovulation
- Poorly controlled HTN
- Obstructive jaundice in pregnancy
- Epilepsy (may affect medication levels)
- May interact with other medications: Abx, anxiolytics, and anticonvulsants
NEW HORMONAL CONTRACEPTIVES

- NuvaRing
  - Ethinyl estradiol / etonogestrel
  - Flexible ring placed vaginally and continuously kept in place for 3 wks and then removed for 1 wk
  - Provides 4 wks of contraception
  - No impact on sensation of intercourse
  - Same indications and contraindications as combined OC’s
NEW HORMONAL CONTRACEPTIVES

- Ortho Evra
  + Combined contraceptive patch
  + Patch stays in place for 7d and replaced for 3 wks with 1 wk off
  + Better compliance than with OC’s
  + Same indications and contraindications as combined OC’s
Injectable and Implantable Hormonal Contraceptives

- Depo-Provera (medroxyprogesterone acetate)
  - 150 mg IM q 12 weeks
    - Truly 14 weeks of coverage
  - Ideally given within 5 d of current menses
  - May be given immediately postpartum
  - No effect on lactation
  - Thickens cervical mucus
  - Blocks LH surge and therefore ovulation
Injectable and Implantable Hormonal Contraceptives

- **Depo-Provera (cont’d)**
- **Advantages**
  - Reversible
  - Good safety profile
  - Effective - 0.3% failure rate
- **Disadvantages**
  - Longest return to fertility - 50% within 6 mo, 25% greater than 1 year
  - High prevalence of irregular spotting or amenorrhea
    - Main reason for discontinuation
  - Small weight gain
  - Depression
  - Breast Tenderness
- **Contraindications:**
  - Suspected pregnancy
  - Unexplained vaginal bleeding
  - Thromboembolic disorders
Injectable and Implantable Hormonal Contraceptives

- IUD’s
  - Most commonly used contraceptive worldwide
  - Medicated
    - Mirena – impregnated with progestin
    - 5 yrs, decreased menstrual flow
  - Unmedicated
    - Paragard Copper T380
    - 10 yrs, heavier flow
Injectable and Implantable Hormonal Contraceptives

- **Side effects**
  - May increase dysmenorrhea and bleeding
    - Somewhat alleviated with progestin IUD
  - Increased risk of pelvic infections

- **Long term effectiveness**
  - Paragard T380 – 10 yrs
  - Mirena – 5 yrs

- Initially expensive (~ $400)
Injectable and Implantable Hormonal Contraceptives

- Pregnancy
  - Possibility of spontaneous abortion in 1\textsuperscript{st} trimester
  - If string visible, should offer removal to pt
    - Only 30\% spontaneous abortion rate if removed
  - If left in place, pregnancy may be uneventful
    - No increased risk of fetal anomalies
    - 2-4\times increase in PTL and delivery
Injectable and Implantable Hormonal Contraceptives

- IUD’s (cont’d)
  + Creates hostile uterine environment
    - Sterile inflammatory response due to foreign body
  + Few sperm reach ovum in fallopian tube
  + Implantation of embryo is inhibited
  + Does not alter ovulation
  + Patient selection critical
    - Long-term monogamy
    - No hx of STD’s or PID
Sterilization

- Male Vasectomy
  - 50,000 performed annually
  - Transection of the vas deferens
  - Not sterile until two sperm-free ejaculates 30 days apart
  - Risks: 5% hematoma, sperm granulomas, and/or epididymitis,
  - Failure rates up to 6%.
    - 10% request reversal with a 40% success rate

- Female
  - Postpartum tubal ligation
    - Modified Pomeroy, Parkland, Madlener, Irving, Uchida
  - Laparoscopic tubal ligation
    - Silastic rings, Clips, Fulguration
  - Essure/Adiana
  - Failure rate 2-3/100 over 10 years
    - Failed sterilization procedures account for less than 2% of all ectopic pregnancies

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EMERGENCY CONTRACEPTION

- Plan B
- Given 72 hrs after unprotected intercourse
- 90% effective
- Side Effects
  + Nausea and vomiting
  + Breast tenderness
  + Headache
  + Dizziness

1. combined estrogen–progestin regimen:
   100 micrograms of ethinyl estradiol plus 0.5 mg of levonorgestrel—taken 12 hours apart

2. progestin-only regimen:
   total of 1.5 mg of levonorgestrel

3. IUD insertion:
   Within 5 days of unprotected intercourse. 0.1% failure rate