Disclosures

I have no disclosures or conflicts of interests
Health Maintenance

- Review medical, social and family history
- Review allergies and reconcile medications
- Screen for tobacco and alcohol misuse
- Screen for domestic violence
Annual Well-Woman Examination

Top reasons why you should have an annual well-woman examination:

- **Birth Control**
  Learn about choosing the right birth control method for you. Some examples include the birth control pill, intrauterine device (IUD), patch, condom, or implant.

- **Cancer Screening**
  Learn more about breast cancer, colon cancer, or other types of cancer.

- **Vaccinations**
  Get vaccinations against the flu, human papillomavirus (HPV), and more.

- **Health Screening**
  Get screened for high blood pressure, diabetes, bone density for osteoporosis, and more.

- **Depression Screening**
  Depression is a common but serious illness. Depression can be mild, moderate, or severe. To diagnose depression, your obstetrician–gynecologist or other health care provider will discuss your symptoms, how often they occur, and how severe they are.

https://www.acog.org
Sexually Transmitted Infections Screening
Sexually transmitted infections (STIs), such as chlamydia, gonorrhea, and genital herpes, are infections that are spread by sexual contact.

Concerns About Sex
Discuss what happens during intercourse, pain during sex, hormonal changes that change interest or response to sex, or different forms of sex.

Weight Control
Learn about body mass index (BMI), exercise, obesity, diet, surgery, and health problems associated with being overweight.

Issues With Your Menstrual Period
Discuss premenstrual syndrome (PMS), painful periods, your first period, heavy bleeding, or irregular periods.

Preconception Counseling
If you are planning to become pregnant, it is a good idea to have preconception counseling. Your obstetrician-gynecologist or health care provider will ask about your diet and lifestyle, your medical and family history, medications you take, and any past pregnancies.
<table>
<thead>
<tr>
<th>Age</th>
<th>AAFP/USPSTF</th>
<th>ACOG</th>
<th>ACS</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 40</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>40-49</td>
<td>Individual decision</td>
<td>Annual mammography based on shared decision</td>
<td>Offer at age 40; start annual mammogram at 45</td>
</tr>
<tr>
<td>50-75</td>
<td>Mammography every 2 years</td>
<td>Annual or biennial mammography</td>
<td>Annual mammogram age 45-54 After 54, every 2 yrs</td>
</tr>
<tr>
<td>&gt; 75</td>
<td>Insufficient Evidence</td>
<td>Individual decision</td>
<td>Screen if woman healthy and expect to live &gt;10 yrs</td>
</tr>
</tbody>
</table>
Breast Cancer Risk Factors

- Family history of breast cancer, ovarian cancer, or other hereditary breast and ovarian syndrome-associated cancer (e.g., prostate cancer, pancreatic cancer)
- Known deleterious gene mutation
- Prior breast biopsy with specific pathology
  - Atypical hyperplasia (lobular or ductal)
  - Lobular carcinoma in situ
- Early menarche
- Late menopause
- Nulliparity
- Prolonged interval between menarche and first pregnancy

- Menopausal hormone therapy with estrogen and progestin (decreased risk with estrogen alone)
- Not breastfeeding
- Increasing age
- Certain ethnicities (e.g., increased risk of BRCA mutation in Ashkenazi Jewish women)
- Higher body mass index
- Alcohol consumption
- Smoking
- Dense breasts on mammography
- Prior exposure to high-dose therapeutic chest irradiation in young women (10–30 years old)

From ACOG Practice Bulletin: July 2017
Signs and Symptoms of Breast Cancer

Figure 1. Algorithm for the diagnostic evaluation of women with palpable breast masses.

Cervical Cancer Screening

If you are younger than 21 years

You do not need screening.

If you are aged 21–29 years

Have a Pap test every 3 years.

If you are aged 30–65 years

Have a Pap test + an HPV test (co-testing) every 5 years (preferred) or a Pap test alone every 3 years.

If you are 65 years or older

You do not need screening if you have no history of cervical changes and either three negative Pap test results in a row or two negative co-test results in a row within the past 10 years, with the most recent test performed within the past 5 years.

REMEMBER!

- You still need to have screening if you have been vaccinated against HPV.
- You still need to have screening if you have had a hysterectomy and your cervix was not removed.

https://www.acog.org/Patients/FAQs/Cervical-Cancer-Screening-Infographic
Cervical Cancer Symptoms

- Pelvic pain including pain during intercourse
- Vaginal discharge
- Vaginal bleeding after intercourse
- Heavier or irregular menstrual periods
- Low back pain
- Bleeding after menopause

https://familydoctor.org/condition/cervical-cancer/
Endometrial Cancer

Risk Factors

1) Unopposed Estrogen
   a) Estrogen therapy
   b) Early menarche
   c) Late menopause
   d) Nulliparity
   e) Infertility (PCOS)
   f) Tamoxifen therapy
2) Family hx of endometrial ca or Lynch syndrome
3) Age >50
4) Obesity → HTN, DM, Thyroid disease

Protective Factors

1) Combined oral contraceptives
2) Multiparity
3) Breastfeeding
Endometrial Cancer

- **Symptom** → postmenopausal bleeding/abnormal uterine bleeding
- **Screening** → no evidence to support screening in asymptomatic women but ACS recommends discussing symptoms of endometrial cancer with women over age 65

**Evaluation**
- Pregnancy test (if childbearing age), CBC, PT/INR
- Pelvic US
- Endometrial biopsy in pts over 45 yrs old

**Treatment**
- Surgical (preferred)
- Nonsurgical - progesterone therapy
Ovarian Cancer

**Risk Factors**

1) Family History
   a) BRCA mutation
   b) Lynch Syndrome
2) Increased Age
3) Postmenopausal Hormone therapy (>5 yrs)
4) Obesity
5) Controversial:
   a) NSAIDs
   b) Perineal talc exposure
   c) Smoking
   d) Infertility drug treatment

**Protective Factors**

1) OCPs use (> 4 years)
2) Depo-Provera
3) Salpingectomy
4) Tubal ligation
5) Breastfeeding
6) Less Evidence For:
   a) Multiparity
   b) Late menarche
   c) Early menopause
Ovarian Cancer

❖ Symptoms
  ➢ Early stage usually asymptomatic
  ➢ Pelvic/abdominal pain with bloating and early satiety
  ➢ Nonspecific urinary symptoms
  ➢ Back pain and fatigue

❖ Screening - USPSTF/AAFP recommend against routine screening of asymptomatic women but patients with family history should be referred to genetic counseling

❖ Evaluation
  ➢ Transvaginal Ultrasound
  ➢ CA 125
  ➢ CBC, CMP

❖ Treatment
  ➢ Surgery
Evaluation and Management of Ovarian Cancer

Woman presenting with ovarian cancer–related symptoms or signs*?

Yes

History and physical examination,† including genetic risk assessment

Suspect ovarian cancer or other adnexal mass?

No

Other workup or referral as clinically indicated (e.g., gastrointestinal)

Go to A

No

Normal

Transvaginal ultrasonography and other diagnostic workup (e.g., CA 125)‡

Abnormal or suspicious for ovarian cancer§

Yes

Refer for genetic counseling and testing

High-risk genetic mutation carrier?

Yes

All high-risk mutations

Gynecologic oncology referral (evaluation and diagnostic, staging, or risk-reducing surgery)¶

No

Consider long-term hormonal contraceptive use, if clinically appropriate

A Risk assessment

Increased-risk personal or family history (Table 3)?

Yes

No
Abnormal Uterine Bleeding

<table>
<thead>
<tr>
<th>Anovulatory</th>
<th>Ovulatory</th>
</tr>
</thead>
<tbody>
<tr>
<td>❖ Irregular, infrequent periods</td>
<td>❖ Regular intervals with excessive bleeding or</td>
</tr>
<tr>
<td>❖ Progesterone-deficient/estrogen-dominant state</td>
<td>duration &gt; 7 days</td>
</tr>
<tr>
<td>❖ Flow can be minimal to excessive</td>
<td>❖ Less than 1% of women develop cancer or</td>
</tr>
<tr>
<td>❖ 14% of women develop endometrial cancer or</td>
<td>hyperplasia</td>
</tr>
<tr>
<td>hyperplasia</td>
<td></td>
</tr>
</tbody>
</table>
Abnormal uterine bleeding:
- Heavy menstrual bleeding (AUB/HMB)
- Intermenstrual bleeding (AUB/IMB)

PALM—structural causes:
- Polyp (AUB-P)
- Adenomyosis (AUB-A)
- Leiomyoma (AUB-L)
  - Submucosal leiomyoma (AUB-LSM)
  - Other leiomyoma (AUB-LO)
- Malignancy and hyperplasia (AUB-M)

COEIN—nonstructural causes:
- Coagulopathy (AUB-C)
- Ovulatory dysfunction (AUB-O)
- Endometrial (AUB-E)
- Iatrogenic (AUB-I)
- Not yet classified (AUB-N)

From: ACOG Practice Bulletin
Evaluation

❖ Physical exam
  ➢ Pelvic examination with speculum
  ➢ Bimanual examination

❖ Labs
  ➢ Pregnancy
  ➢ TSH
  ➢ Prolactin
  ➢ CBC
  ➢ CMP
  ➢ STD
  ➢ Pap smear
  ➢ Work-up for bleeding disorders if + screen

❖ Imaging
  ➢ Pelvic ultrasound - based on clinical judgement
    ■ Abnormal exam, no improvement despite treatment, postmenopausal

Box 1. Clinical Screening for an Underlying Disorder of Hemostasis in the Patient With Excessive Menstrual Bleeding

Initial screening for an underlying disorder of hemostasis in patients with excessive menstrual bleeding should be structured by the medical history. A positive screening result* comprises the following circumstances:

• Heavy menstrual bleeding since menarche
• One of the following conditions:
  — Postpartum hemorrhage
  — Surgery-related bleeding
  — Bleeding associated with dental work
• Two or more of the following conditions:
  — Bruising, one to two times per month
  — Epistaxis, one to two times per month
  — Frequent gum bleeding
  — Family history of bleeding symptoms

*Patients with a positive screening result should be considered for further evaluation, including consultation with a hematologist and testing for von Willebrand factor and ristocetin cofactor.
Endometrial Biopsy

- First line test in women >45 yrs old
- < 45 yrs for women with unopposed estrogen
  - Obese
  - PCOS
  - Failed medical management
  - Persistent bleeding

Treatment

❖ Hormonal management
  ➢ First line therapy
  ➢ IV conjugated equine estrogen (for acute bleeding)
  ➢ Combined oral contraceptives
  ➢ Oral progestins or IUD (Mirena)

❖ Surgery
  ➢ D&C
  ➢ Endometrial ablation
  ➢ Uterine artery embolization
  ➢ Hysterectomy
  ➢ Polypectomy/myomectomy

❖ Other
  ➢ NSAIDs
  ➢ Tranexamic acid
Amenorrhea

❖ Primary - no menarache → needs to be evaluated if:
  ➢ There is no pubertal development by age 13
  ➢ If no menses 5 years after initial breast development
  ➢ Age > 15 yrs
  ➢ Most likely due to chromosomal or anatomic abnormalities

❖ Secondary
  ➢ Cessation of previously regular menses for >3 months
  ➢ Cessation of previously irregular menses > 6 months
  ➢ Most likely due to hormonal imbalance
    ■ PCOS
    ■ Hypothalamic amenorrhea
    ■ Hyperprolactinemia
    ■ Primary Ovarian Insufficiency
<table>
<thead>
<tr>
<th>Table 1. Major Causes of Amenorrhea</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outflow tract</strong></td>
</tr>
<tr>
<td>Congenital</td>
</tr>
<tr>
<td>Complete androgen resistance</td>
</tr>
<tr>
<td>Imperforate hymen</td>
</tr>
<tr>
<td>Müllerian agenesis</td>
</tr>
<tr>
<td>Transverse vaginal septum</td>
</tr>
<tr>
<td>Acquired</td>
</tr>
<tr>
<td>Asherman syndrome (intrauterine synchieae)</td>
</tr>
<tr>
<td>Cervical stenosis</td>
</tr>
<tr>
<td><strong>Primary ovarian insufficiency</strong></td>
</tr>
<tr>
<td>Congenital</td>
</tr>
<tr>
<td>Gonadal dysgenesis (other than Turner syndrome)</td>
</tr>
<tr>
<td>Turner syndrome or variant</td>
</tr>
<tr>
<td>Acquired</td>
</tr>
<tr>
<td>Autoimmune destruction</td>
</tr>
<tr>
<td>Chemotherapy or radiation</td>
</tr>
<tr>
<td><strong>Pituitary</strong></td>
</tr>
<tr>
<td>Autoimmune disease</td>
</tr>
<tr>
<td>Cocaine</td>
</tr>
<tr>
<td>Cushing syndrome</td>
</tr>
<tr>
<td>Empty sella syndrome</td>
</tr>
<tr>
<td>Hyperprolactinemia</td>
</tr>
<tr>
<td>Infiltrative disease (e.g., sarcoidosis)</td>
</tr>
<tr>
<td>Medications</td>
</tr>
<tr>
<td>Antidepressants</td>
</tr>
<tr>
<td>Antihistamines</td>
</tr>
<tr>
<td>Antihypertensives</td>
</tr>
<tr>
<td>Antipsychotics</td>
</tr>
<tr>
<td>Opiates</td>
</tr>
<tr>
<td>Other pituitary or central nervous system tumor</td>
</tr>
<tr>
<td>Prolactinoma</td>
</tr>
<tr>
<td>Sheehan syndrome</td>
</tr>
<tr>
<td><strong>Hypothalamic</strong></td>
</tr>
<tr>
<td>Eating disorder</td>
</tr>
<tr>
<td>Functional (overall energy deficit)</td>
</tr>
<tr>
<td>Gonadotropin deficiency (e.g., Kallmann syndrome)</td>
</tr>
<tr>
<td>Infection (e.g., meningitis, tuberculosis, syphilis)</td>
</tr>
<tr>
<td>Malabsorption</td>
</tr>
<tr>
<td>Rapid weight loss (any cause)</td>
</tr>
<tr>
<td>Stress</td>
</tr>
<tr>
<td>Traumatic brain injury</td>
</tr>
<tr>
<td>Tumor</td>
</tr>
<tr>
<td><strong>Other endocrine gland disorders</strong></td>
</tr>
<tr>
<td>Adrenal disease</td>
</tr>
<tr>
<td>Adult-onset adrenal hyperplasia</td>
</tr>
<tr>
<td>Androgen-secreting tumor</td>
</tr>
<tr>
<td>Chronic disease</td>
</tr>
<tr>
<td>Constitutional delay of puberty</td>
</tr>
<tr>
<td>Cushing syndrome</td>
</tr>
<tr>
<td>Ovarian tumors (androgen producing)</td>
</tr>
<tr>
<td>Polycystic ovary syndrome (multifactorial)</td>
</tr>
<tr>
<td>Thyroid disease</td>
</tr>
<tr>
<td><strong>Physiologic</strong></td>
</tr>
<tr>
<td>Breastfeeding</td>
</tr>
<tr>
<td>Contraception</td>
</tr>
<tr>
<td>Exogenous androgens</td>
</tr>
<tr>
<td>Menopause</td>
</tr>
<tr>
<td>Pregnancy</td>
</tr>
</tbody>
</table>

*Information from references 1, 2, and 4 through 11.*
Evaluation

❖ Thorough history and physical exam
  ➢ Female athlete triad
❖ Review medications, supplements and illicit drugs
❖ Labs
  ➢ Pregnancy
  ➢ TSH
  ➢ FSH, LH
  ➢ Prolactin
❖ Hormonal Challenge
  ➢ Provera 10mg for 7-10 days
    ■ Positive if withdrawal bleed
    ■ Negative if no bleed → US to evaluate for anatomy
❖ Imaging
  ➢ Pelvic Ultrasound - especially if no withdrawal bleed after progesterone challenge
  ➢ MRI of brain if pituitary issue is suspected
Diagnosis of Secondary Amenorrhea

Perform history and physical examination (Table 2)
Review medications including contraceptives and illicit drugs

Pregnancy test; serum LH, FSH, TSH, and prolactin levels; pelvic ultrasonography or other laboratory testing if clinically indicated

Pregnancy test positive – pregnant (exclude ectopic pregnancy if indicated)
Abnormal TSH level – order thyroid function tests and treat thyroid disease
Abnormal prolactin level – MRI of the pituitary to exclude adenoma; consider medications

Elevated FSH and LH levels
Repeat in one month; consider serum estradiol
Primary ovarian insufficiency, natural menopause; order karyotype, especially if patient is of short stature, to rule out Turner syndrome or variant

Evidence of disordered eating, excessive exercise, or poor nutritional status
Most likely functional amenorrhea, but consider chronic illness

Evidence of high intracranial pressure (e.g., headache, vomiting, vision changes)
Consider MRI of head to evaluate for neoplasm

Evidence of hyperandrogenism
Order serum testosterone, DHEA-S, 17-hydroxyprogesterone testing

History of obstetric or gynecologic procedures; consider induction of withdrawal bleed or hysteroscopy to evaluate for Asherman syndrome

Normal or low FSH and LH levels

Elevated 17-hydroxyprogesterone level
Consider late-onset congenital adrenal hyperplasia
Screen for metabolic syndrome; treat accordingly

Meets criteria for polycystic ovary syndrome
Rapid onset of symptoms or very high serum androgen levels; consider adrenal and ovarian imaging to evaluate for tumor
Contraception

- Pelvic, breast or physical exam is not required to prescribe oral contraceptives
- Check blood pressure before initiating combined hormonal contraceptive
- Begin method at the time of visit (quick start) and prescribe a year long supply
- Exclude pregnancy
- Always use condoms to reduce risk of STDs
- Forms:
  - Combined estrogen/progestin hormonal contraceptives
  - Progestin-only contraceptives
  - Other
    - Condoms, Diaphragms, Copper IUD
    - Non-reversible: vasectomy, TBL
Combined Estrogen/Progestin Contraceptives

❖ Formulations:
  ➢ Monophasic vs triphasic pills
  ➢ Nuvaring
  ➢ Contraceptive Patch (Ortho Evra)

❖ Noncontraceptive Benefits
  ➢ Treatment of acne and hirsutism, pelvic pain, menstrual irregularities, PMS
  ➢ Decreases risk of colon, endometrial and ovarian cancers

❖ Side Effects
  ➢ VTE, MI - increased risk with higher estrogens
  ➢ Breast tenderness, nausea, bloating, menstrual irregularities, headaches

❖ Drug interactions
  ➢ Antibiotics and anticonvulsants

❖ Contraindications
  ➢ Women >35 yrs who are obese or smoke
  ➢ Migraines WITH aura; liver disease
Progestin-only Contraceptives

❖ Formulations
  ➢ Depo-Provera
  ➢ Mirena IUD
  ➢ Nexplanon
  ➢ Mini-pill

❖ Noncontraceptive Benefits
  ➢ Women with sickle cell disease may see decrease in sickling or painful crises with Depo-Provera
  ➢ May decrease seizure frequency
  ➢ Decreases endometrial cancer

❖ Side Effects
  ➢ Decreased bone mineral density with Depo if use > 2 years
  ➢ Sometimes unpredictable bleeding pattern
Sexually Transmitted Infections - Screening Guidelines

- Screen for GC/Chlamydia all sexually active women under age 24 and older women who are at risk for STDs (AAFP, USPSTF; CDC says age 25)
- All patients age 15-65 should be screened at least once for HIV (AAFP, USPSTF; CDC says 13-64)
- Syphilis, Hep B and HIV in ALL pregnant patients
- Herpes
  - AAFP and USPSTF → do not screen asymptomatic women
  - CDC and ACOG → type-specific serologic testing should be considered for women presenting for STI evaluation
STDs - Gonorrhea and Chlamydia

❖ Gonorrhea
  ➢ Presentation: mucopurulent discharge or pelvic pain, but most are asymptomatic
  ➢ Diagnosed with culture of the discharge or with NAAT of urine/cervical specimen
  ➢ Can cause PID and disseminated disease if left untreated
  ➢ Treatment → Ceftriaxone 250mg IM X 1 dose + Azithromycin 1g PO x 1 dose to treat coinfection with Chlamydia
  ➢ Re-testing → 3-4 weeks for TOC in pregnant patients only, otherwise re-test in 3-6 months

❖ Chlamydia
  ➢ Presentation: abnormal vaginal discharge, bleeding after intercourse, dysuria but most are asymptomatic
  ➢ Diagnosed with NAAT of urine/cervical specimen
  ➢ Can cause PID and reactive arthritis
  ➢ Treatment: Azithromycin 1g PO x 1 dose or Doxycycline 100mg PO BID x 7 days
  ➢ TOC in 3-4 weeks for pregnant patients only, otherwise re-test in 3-6 months
Bacterial Vaginosis

- Most common cause of vaginitis
- Fishy odor of thin discharge that may be worse after intercourse
- Treatment - Metronidazole 500mg PO BID x 7 days

https://www.pinterest.com/pin/429812358163396354/
Vulvovaginal Candidiasis

- White, thick, cheesy discharge with no odor
- Vulvar itching or burning
- Inflamed vulva - erythema and edema
- Diagnosed by visualization of hyphae on KOH preparation
- Normal acidic vaginal pH
- Treatment:
  - Diflucan 150mg x 1 dose, may repeat in 3 days
  - Miconazole/Clotrimazole vaginal creams/suppositories
Trichomoniasis

- STD - very contagious
- Green or yellow frothy discharge with foul odor
- Vaginal inflammation causing discomfort
- Strawberry cervix
- Protozoa observed on wet mount but CDC recommends NAAT in high risk patients
- Treatment: Metronidazole 2g PO x 1 dose
- Repeat testing in 3 months
Osteoporosis - Screening

- BMD testing in women >65 yrs old
- Postmenopausal women <65 yrs old if one or more risk factors are present:
  - Low body weight: <128 lbs
  - Previous fragility fracture → hip, wrist, spine
  - Parental history of hip fracture
  - Oral steroid treatment >3 months
  - Current smoker
  - Alcohol intake >3 drinks daily
- Secondary causes:
  - Rheumatoid arthritis and IBD
  - Prolonged immobility
  - Organ transplantation
  - Type 1 DM or thyroid disease
  - COPD
  - Gonadal hormone deficiency
<table>
<thead>
<tr>
<th>Category</th>
<th>Bone mass (BMD derived from DEXA measurement)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Spinal or hip BMD within 1.0 SD below the young adult female reference mean (T-score $\geq -1.0$)</td>
</tr>
<tr>
<td>Low bone mass (osteopenia)</td>
<td>Spinal or hip BMD between 1.0 and 2.5 SDs below the young adult female reference mean (T-score $&lt; -1.0$ and $&gt; -2.5$)</td>
</tr>
<tr>
<td>Osteoporosis</td>
<td>Spinal or hip BMD $\geq 2.5$ SDs below the young adult female reference mean (T-score $\leq -2.5$)</td>
</tr>
<tr>
<td>Severe/established osteoporosis</td>
<td>BMD $\geq 2.5$ SDs below the young adult female reference mean and the presence of one or more fragility fractures</td>
</tr>
</tbody>
</table>

*BMD = bone mineral density; DEXA = dual energy x-ray absorptiometry; SDs = standard deviations.*
Treatment of Osteoporosis

- New guidelines developed by ACP and endorsed by AAFP:
- First line agents: alendronate, risedronate, zoledronic acid, or denosumab (Prolia)
- Treat for five years and DO NOT get bone density monitoring during that time
- “Menopausal estrogen therapy, menopausal estrogen plus progesterone, or raloxifene should not be used in women with osteoporosis”
- “The decision to treat women 65 years of age or older who have osteopenia and are at a high risk for fracture should be based on a discussion of patient preferences, fracture risk profile, benefits and harms of treatment, and costs of medications.”
Other topics

❖ Intimate Partner Violence
❖ Menopause
❖ PCOS
References

2. https://www.acog.org/About-ACOG/ACOG-Departments/Annual-Womens-Health-Care/Annual-Well-Woman-Exam-Infographic
12. Up to Date
17. https://www.aafp.org/afp/2012/1215/p1127.html