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ABDOMINAL PAIN and DIARRHEA

**Learning Objectives**

At the end of the case discussion the student should be able to:

1. **Differentiate**, by sex, age group and body system, the diagnoses of abdominal pain which are:  
   a. most likely or common (whether “serious” or not)  
   b. most serious, or “high pay-off”, i.e., early detection and therapy will markedly improve an otherwise serious prognosis.

2. **Cite** the percentage of abdominal pain complaints in primary care which subside without a definitive diagnosis being reached.

3. **Triage**, by means of history and physical examination, patients that may have an acute “surgical” abdomen.

4. **Define** diarrhea.

5. **Differentiate** chronic from acute diarrhea.

6. **List** symptoms that help differentiate acute viral from bacterial diarrhea.

7. **Discuss** rehydration in the treatment of dehydration due to acute diarrhea.

8. **Compare and contrast** the characteristics of inflammatory (caused by invasive organisms that disrupt the mucosal lining) vs. non-inflammatory diarrhea (caused by organisms that stimulate excessive intestinal secretions.)

9. **Name** the most common organism causing traveler's diarrhea and the treatment.

10. **Understand** the evidence behind the use of probiotics and the treatment/prevention of antibiotic-induced diarrhea.
**Recommended Readings**


**Supplemental Readings/Websites**


Differential Diagnosis of Acute Abdominal Pain by Location

RIGHT UPPER QUADRANT PAIN
Acute Cholecystitis and Biliary Colic
Acute Hepatitis
Hepatic Abscess
Hepatomegaly Due to Congestive Failure
Perforated Duodenal Ulcer
Acute Pancreatitis (biliteral pain)
Retrocecal Appendicitis
Herpes Zoster
Myocardial Ischemia
Right Lower Lobe Pneumonia

DIFFUSE PAIN
Peritonitis
Acute Pancreatitis
Sickle Cell Crisis
Early Appendicitis
Mesenteric Thrombosis
Gastroenteritis
Dissecting or Rupturing Aneurysm
Intestinal Obstruction
Diabetes Mellitus

LEFT UPPER QUADRANT PAIN
Gastritis
Acute Pancreatitis
Splenic Enlargement, Rupture, Infarction, Aneurysm
Myocardial Ischemia
Left Lower Lobe Pneumonia

RIGHT LOWER QUADRANT PAIN
Appendicitis
Regional Enteritis
Meckel's Diverticulitis
Cecal Diverticulitis
Leaking Aneurysm
Abdominal Wall Hernatoma
Ruptured Ectopic Pregnancy
Twisted Ovarian Cyst
PID
Mittelabscherz
Endometriosis
Ureteral Calculi
Spermatitis
Psoas Abscess
Mesenteric Adenitis
Incarcerated, Strangulated Groin Hernia

LEFT LOWER QUADRANT PAIN
Sigmad Diverticulitis
Leaking Aneurysm
Ruptured Ectopic Pregnancy
Mittelabscherz
Twisted Ovarian Cyst
PID
Endometriosis
Ureteral Calculi
Spermatitis
Psoas Abscess
Incarcerated, Strangulated Groin Hernia
Regional Enteritis


TI 9732 Mar. 1996 ©SmithKline Beecham, 1996 Printed in U.S.A
BACK PAIN

Learning Objectives

At the end of the case discussion the students should be able to:

1. **Distinguish** by history and physical examination, low back pain secondary to systemic disease from back pain due to regional musculoskeletal origins, utilizing age, sex, and occupational risk criteria in their clinical reasoning.

2. **Distinguish** typical symptoms and signs of complicated (disc/nerve root involvement) from those typical of uncomplicated (muscular/mechanical) low back pain.

3. **Differentiate** the diagnoses of back pain that are:
   a. most common or likely
   b. most serious/ high pay off

4. **Formulate** appropriate plan of management of patients with low back pain which incorporates an awareness of the patient's occupation, home situation, and minimal use of pharmacologic agents.

5. **Integrate** the role of exercise, physical therapy, weight loss, and other modalities into the management of the acute and chronic back pain patient.

6. **Discuss** the rationale for “clinical practice guideline” by agencies such as the Agency for Healthcare Research and Quality (AHRQ), and apply these guidelines to the following cases:

   a) A 40-year-old man with 2 days of lumbar back pain after lifting his television set. He complains of pain in the right lower back area. He smokes but has no other significant history. On physical exam the only significant finding is a positive straight leg test on both right and left legs. What is the next step in this patient’s management?

   b) A 65-year-old woman with three months-worsening back pain in the lumbar area. She is obese but has lost 20 pounds without trying in the last month. She has not seen a doctor in several years because she has had no health care coverage. She recently qualified for Medicare. Her past medical history is significant for intermittent low back pain over the last 30 years. On physical exam she is an obese female with exquisite tenderness on palpation of the lumbar spine. What is the next step in the management of this patient?

Recommended Readings

1. Pust R. Chart: Physical Examination of Low Back Pain Patients Sequenced by "4S" Positions.

3. Pust R. Back Exam: The systematic 4-S Method. College of Medicine 2016 (file is on your FCM flash drive)


Supplemental Readings/Websites

Physical Examination of Low Back Pain Patients
Sequenced by "4S" Positions

R. Pust, M.D.

STAND
a. Inspect:
   - Lordosis (excess, normal, decreased); pelvic tilt; kyphosis (osteoporosis?); scoliosis
   - Range of motion: Forward (recheck for thoracic scoliosis); backward; side-bending
b. Palpate:
   - Paraspinal muscles (spasm?); spinous processes and interspaces (localized tenderness)
   - Iliac crest (bilateral pelvic compression) → S.I. joint (synovial) pain?

STEPS (walk)
   a. Gait: symmetry? antalgic (i.e. pain-avoiding) limp
   b. Heel-walking (L₄,₅); toe walking (S₁)

SIT (on exam table)
   a. "Sitting straight-leg raising (SLR) test" (should be similar to supine SLR if not malingering)
   b. Strength of quads (L₃,₄) and ankle plantar flexors (S₁); ankle and big toe dorsiflexors (L₅)
   c. Size of calf: measure circumference 10 cm below tibial tubercle
   d. Sensation (circle calf: L₃, L₄, L₅) (circle instep: L₄, L₅, S₁)
   e. Reflexes: knee-jerk (L₄), ankle jerk (S₁); no ‘pure’ L₅ reflex

SUPINE
a. SLR with knee fully extended (180°): Record the angle of hip flexion at which “sciatic” pain begins; if SLR causes any “sciatic” (?) hamstring pain, try Lesegue’s test (“SLR” with knee at 160° i.e., relaxed hamstrings, dorsiflex ankle): if pain only with ankle dorsiflexion, Lesegue’s test is “positive” (i.e., likely true ‘sciatica’)
b. Hip R.O.M. and Thomas test (detects hip flexion deformity)
c. Measure (and compare) length of legs (p.r.n.) anterior superior iliac spine to tip of medial malleolus

Note: Details may be deleted or added (e.g. sphincter tone) depending on the history: acute/new onset, trauma history, and initial exam findings (e.g., S₁ -S₂ “saddle” sensory loss).
1. Name five organ systems as possible sources of chest pain and differentiate these by age and most likely versus high payoff diagnoses.

<table>
<thead>
<tr>
<th>Common Causes</th>
<th>SEVERE/LIFE THREATENING</th>
</tr>
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<tbody>
<tr>
<td>Children</td>
<td></td>
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<tr>
<td>Costochondritis</td>
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<td>Pleurisy</td>
<td>Angina</td>
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<tr>
<td>Herpes zoster</td>
<td>Myocardial infarction</td>
</tr>
<tr>
<td>Anxiety</td>
<td>Pericarditis²</td>
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<tr>
<td>Peptic ulcer disease</td>
<td>Pulmonary embolism</td>
</tr>
<tr>
<td>Esophagitis</td>
<td>Pneumonia</td>
</tr>
<tr>
<td>Costochondritis</td>
<td>Pneumothorax</td>
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<tr>
<td>Elderly</td>
<td></td>
</tr>
<tr>
<td>Pleurisy</td>
<td>Angina</td>
</tr>
<tr>
<td>Herpes zoster</td>
<td>Myocardial infarction</td>
</tr>
<tr>
<td>Peptic ulcer disease</td>
<td>Dissecting aortic aneurysm</td>
</tr>
<tr>
<td>Esophagitis</td>
<td>Pulmonary embolism</td>
</tr>
<tr>
<td>Costochondritis</td>
<td>Pneumonia</td>
</tr>
<tr>
<td>Anxiety</td>
<td>Pneumothorax</td>
</tr>
</tbody>
</table>

2. List at least 10 non-cardiac causes for chest pain.

3. Realize that even though the work-up of chest pain is aimed at ruling out cardiac causes, the most common causes of chest pain in the primary care setting are not cardiac. List these:

4. List seven major risk factors (three “demographic” and four preventable) for cardiac disease.

5. Cite appropriate evaluation, medications, work up and treatment plan of a patient with suspected myocardial infarction.

6. Explain the importance of advanced directives and give examples of how to discuss these with patients and their families.
7. Describe the symptoms, diagnosis and treatment of costochondritis.

8. Describe risk factors, signs/symptoms, evaluation, diagnostic tools and treatment of PE

**Recommended Readings**


**Supplemental Readings/Websites**


**COUGH, INCLUDING ASTHMA**

**Learning Objectives**
At the end of the case discussion the student should be able to:

1. **Differentiate** acute cough from chronic cough.

2. **Outline** by age and respiratory tract site (upper vs. lower) the diagnoses of cough which are:
   a. Most likely or common.
   b. Severe/life threatening diagnoses, i.e., early detection and therapy will markedly improve an otherwise serious prognosis.

3. **Identify** the most common causes of chronic cough.

4. **Discuss** the symptomatic management of cough in patients with common diagnoses (as determined in objective 2a above).

5. **List** at least 4 common triggers of asthma exacerbations and potential measures to decrease these triggers.

6. **Explain** at least 5 assessment parameters that help to determine the severity of an asthma exacerbation.

7. **Compare** the major types of pharmacologic agents and the sequence in which they are used to treat asthma and describe their mechanism of action and side effects.

8. **Discuss** the initial treatment of a patient presenting with an acute asthma exacerbation.

9. **Summarize** the importance of family involvement in a home asthma management plan.

---

**Recommended Readings**


**Supplemental Readings/Websites**

1. Valley Fever Center for Excellence, the University of Arizona  
   http://www.vfce.arizona.edu
Cognitive Impairment

Objectives

1. List signs, symptoms, and diagnostic approach to the following common cognitive disorders of the elderly:
   a. Delirium
   b. Alzheimer’s disease
   c. vascular dementia
   d. frontotemporal dementia
   e. Lewy body dementia
   f. Parkinson dementia

2. Conduct and interpret a screening examination for cognitive impairment.

3. Conduct and interpret a diagnostic evaluation for a patient with cognitive impairment using cognitive testing, lab studies, and brain imaging.

4. Implement basic principles of dementia management, including medication use, nonpharmacologic management of behavioral symptoms, and community resources.
Suggested Readings:

Recommended Reading

Primary Care Dermatology

Learning Objectives:
After participating in the Primary Care Dermatology didactic session, the student should be able to:

1. Describe any skin lesion using appropriate descriptive terminology after inspecting and palpating the lesion.
2. Classify any common skin condition into the appropriate “Lynch Algorithm” category.

3. Differentiate potentially malignant skin neoplasm from those that are benign, discuss screening recommendations for skin cancer and counsel patients on malignant skin neoplasm and their prevention.

USPSTF states: Insufficient evidence for or against routine screening for skin cancer in asymptomatic patients.

http://www.uspreventiveservicestaskforce.org/uspstf/uspsslca.htm

4. Describe initial therapy for acne patients.

Recommended Readings


3. Titus S and Hodge J. Diagnosis and Treatment of Acne. AFP Oct 15, 2012

4. Shenenerberger, DW. Cutaneous Melanoma: A primary Care Perspective, AFP 2012 Jan 15; 85(2) 161-168


   http://www.aafp.org/afp/2010/0315/p726.html


Supplemental Readings/Websites

1. Interactive Morphology Tutorial.
   http://www.logicalimages.com/morphology/morphology3_content.html
LYNCH ALGORITHM

Major Diagnostic Groups

1. Vesiculobullous diseases
2. Pustular diseases
3. Skin-colored papules and nodules
4. White lesions
5. Brown, blue, and black lesions
6. Yellow lesions
7. Red macules, papules, and nodules
8. Vascular reactions
9. Papulosquamous disease
10. Eczematous diseases

Figure 5.1 Algorithm for unknown skin disease.

## Table 5.1
Essential Dermatologic Diseases


### 1. Vesiculobullous diseases
- **A. Vesicular diseases**
  - i. Herpes simplex
  - ii. Varicella-zoster
  - iii. Vesicular tinea pedis
- **B. Bullous disease**
  - i. Pemphigus vulgaris
  - ii. Pemphigold
  - iii. Erythema multiforme bullosum (Stevens-Johnson syndrome)
  - iv. Poison Ivy contact dermatitis
  - v. Bullous impetigo
  - vi. Traumatic bullae (friction, burns and pressure)

### 2. Pustular diseases
- **A. True (soft) pustules**
  - i. Acne vulgaris and related variants
  - ii. Rosacea (acne rosacea)
  - iii. Bacterial folliculitis
  - iv. Fungal folliculitis
  - v. Candidiasis
- **B. Pseudopustules (see group 4, white papules)**
  - i. (Milia)
  - ii. (Keratosis pilaris)
  - iii. (Molluscum contagiosum)

### 3. Skin-colored papules and nodules
- **A. Rough surfaced (keratotic) lesions**
  - i. Warts: verruca vulgaris, paronychial warts and plantar warts
  - ii. Actinic keratoses
  - iii. Squamous cell carcinoma (actinically induced)
  - iv. Corns and calluses
- **B. Smooth-surfaced (nonkeratotic) lesions**
  - i. Warts: flat warts, genital warts
  - ii. Basal cell carcinoma
  - iii. Squamous cell carcinoma (mucosal and non-actinically induced)
  - iv. Epidermoid (“sebaceous”) cysts
  - v. Lipomas
  - vi. Molluscum contagiosum

### 4. White lesions
- **A. White patches and plaques**
  - i. Pityriasis (tinea) versicolor
  - ii. Pityriasis alba
  - iii. Vitiligo
- **B. White papules**
  - i. Milia
  - ii. Keratosis pilaris
  - iii. Molluscum contagiosum

### 5. Brown, blue and black lesions
- **A. Brown, blue and black macules, papules, and nodules**
  - i. Freckles
  - ii. Lentigines
  - iii. Nevii: junctional, compound and intradermal
  - iv. Nevii: dysplastic
  - v. Melanoma
  - vi. Seborrheic keratoses
  - vii. Dermatofibromas
- **B. Brown, blue and black patches, plaques, and generalized hyperpigmentation**
  - i. Café-au-lait patches
  - ii. Giant congenital nevus
  - iii. Pigmentation secondary to drugs and systemic disease

### 6. Yellow lesions
- **A. Yellow papules and plaques**
  - i. Xanthelasma
  - ii. Sebaceous gland hyperplasia
- **B. Yellow patches and generalized yellow color**
  - i. Necrobiosis lipoidica diabeticaorum
  - ii. Jaundice

### 7. Red macules, papules, and nodules
- **A. Red macules and papules**
  - i. Insect bites
  - ii. Cherry angomas
  - iii. Spider angomas
  - iv. Pyogenic granulomas
  - v. Granuloma annulare
  - vi. Viral exanthems (nonvesicular)
- **B. Red nodules**
  - i. Furuncles
  - ii. Inflamed cysts
  - iii. Hidradenitis suppurativa
  - iv. Cellulitis
  - v. (Erythema nodosum)

### 8. Vascular reactions
- **A. Nonpurpuric (blanchable) lesions**
  - i. Transient flat erythema (flushing reactions)
  - ii. Persistent flat erythema
  - iii. Urticaria and angioedema
  - iv. Annular and gyrate erythemas
  - v. Erythema multiforme
  - vi. Erythema nodosum
- **B. Purpuric (nonblanchable) lesions**
  - i. Petechiae (only)
  - ii. Petechiae and ecchymoses (intravascular and extravascular purpura)
  - iii. Petechiae with ulceration (vascular ulcers)

### 9. Papulosquamous diseases
- **A. Macules and/or papules predominate**
  - i. Pityriasis rosea
  - ii. Lichen planus
  - iii. Secondary syphilis
  - iv. (Guttate psoriasis)
- **B. Patches and/or plaques predominate**
  - i. Psoriasis
  - ii. Tinea corporis, cruris, pedis, manus and capitis
  - iii. Lupus erythematosus (discoid type)
  - iv. Parapsoriasis and mycosis fungoides

### 10. Eczematous (dermatitic) diseases
- **A. Prominent excoriation and/or lichenification**
  - i. Atopic dermatitis (neurodermatitis, lichen simplex chronicus, infantile eczema)
  - ii. Dyshidrotic eczema
  - iii. Stasis dermatitis
  - iv. Scabies (scabetic eczema)
  - v. Exfoliative erythrodermatitis
- **B. Minimal excoriation**
  - i. Seborrheic dermatitis
  - ii. Xerotic eczema
  - iii. Irritant contact dermatitis
  - iv. Allergic contact dermatitis
  - v. Eczematous reaction patterns (nummular eczema and autoeczematization)
Macule - a flat circumscribed discolored area of the skin or mucous membrane up to 1 cm at longest diameter

Patch - a flat circumscribed discoloration of the skin or mucous membrane greater than 1 cm in diameter

Papule - a solid elevated lesion of the skin or mucous membrane up to 1 cm at longest diameter

Plaque - a solid elevated lesion of the skin or mucous membrane greater than 1 cm at longest diameter

Nodule - a solid elevated lesion of the skin or mucous membrane less than 1 cm at longest diameter, with the added dimension of depth in the underlying tissue

Tumor - a solid elevated lesion of the skin or mucous membrane greater than 1 cm at longest diameter, with the added dimension of depth in the underlying tissue

Vesicle - a fluid-filled superficial elevated lesion of the skin or mucous membrane less than 1 cm in diameter

Bulla - a fluid-filled superficial elevated lesion of the skin or mucous membrane greater than 1 cm in diameter

Wheal - an irregularly shaped, elevated, solid, changing and transient lesion of the skin or mucous membrane due to cutaneous edema

Figure 4. Primary cutaneous lesions. (From Stewart WD, Danto JL, Maddin S. Dermatology: Diagnosis and treatment of cutaneous disorders. 4th ed. St. Louis: Mosby-Year Book, 1978.)
<table>
<thead>
<tr>
<th>Population</th>
<th>Adult general population*</th>
</tr>
</thead>
<tbody>
<tr>
<td>I statement</td>
<td>No recommendation because of insufficient evidence</td>
</tr>
</tbody>
</table>
| Risk assessment   | Skin cancer risks include family history of skin cancer and considerable history of sun exposure and sunburns Groups at increased risk of melanoma:  
|                   | • Fair-skinned men and women older than 65 years  
|                   | • Patients with atypical moles  
|                   | • Patients with more than 50 moles |
| Screening tests   | There is insufficient evidence to assess the balance of benefits and harms of whole-body skin examination by a primary care physician or patient skin self-examination for the early detection of skin cancer. |
| Suggestions for practice | Physicians should remain alert for skin lesions with malignant features that are noted while performing physical examinations for other purposes. Features associated with increased risk of malignancy include asymmetry, border irregularity, color variability, diameter greater than 6 mm (ABCD criteria), or rapidly changing lesions. Suspicious lesions should be biopsied. |
| Other relevant recommendations from the USPSTF and the U.S. Task Force on Community Preventive Services | The USPSTF has reviewed the evidence for counseling to prevent skin cancer. The recommendation statement and supporting documents can be accessed at [http://www.ahrq.gov/clinic/uspstf/uspsskco.htm](http://www.ahrq.gov/clinic/uspstf/uspsskco.htm). The U.S. Task Force on Community Preventive Services has reviewed the evidence on interventions to reduce skin cancer. The recommendations can be accessed at [http://www.thecommunityguide.org](http://www.thecommunityguide.org). |


USPSTF = U.S. Preventive Services Task Force.  
*— The USPSTF did not examine outcomes related to surveillance of patients with familial syndromes, such as familial atypical mole and melanoma syndrome.
DIABETES, CULTURE AND CHRONIC DISEASE

At the end of the case discussion the student should be able to:

Learning Objectives

1. Briefly review American Diabetes Association (ADA) screening recommendations for type 2 diabetes comparing and contrasting these to USPSTF recommendations.

Screening Criteria for Diabetes Mellitus

**American Diabetes Association**

Testing should be considered in all adults who are overweight (body mass index ≥ 25 kg per m²) and have additional risk factors:

- Physical inactivity
- First-degree relative with diabetes
- Members of high-risk ethnic populations
- Women who delivered a newborn weighing > 9 lb (4.1 kg) or were diagnosed with gestational diabetes
- Hypertension
- High-density lipoprotein cholesterol < 35 mg per dL (0.91 mmol per L) or triglyceride level > 250 mg per dL (2.82 mmol per L)
- Women with polycystic ovary syndrome
- Impaired glucose tolerance or impaired fasting glucose on previous tests
- Other clinical conditions associated with insulin resistance

History of cardiovascular disease

In the absence of the above criteria, testing for diabetes and prediabetes should begin at 45 years of age. If the results are normal, testing should be repeated at least at three-year intervals, with consideration of more frequent testing dependent on initial results and risk status

**Pre-2008 U.S. Preventive Services Task Force**

Screening for type 2 diabetes is recommended in adults with hypertension or hyperlipidemia

Evidence is insufficient to recommend for or against routinely screening asymptomatic adults for type 2 diabetes, impaired glucose tolerance, or impaired fasting glucose

**2008 U.S. Preventive Services Task Force**

Screening is recommended for asymptomatic adults with sustained blood pressure > 135/80 mm Hg

USPSTF finds insufficient evidence for or against routine screening of asymptomatic adults for type 2 DM (I recommendation Grade 1 evidence.


4. List the physical examination and lab tests that are followed in a type 2 diabetic patient.

5. List patient variables that are considered in the management of type 2 diabetes.

6. Practice obtaining a patient’s view of their illness and treatment using the ETHNIC mnemonic.

7. Discuss known complications of type 2 diabetes.

8. List treatment goals to prevent these complications.

9. Explain the rationale for using metformin as a first line agent for most patients and briefly review other classes of oral and injectable agents used in the treatment of type 2 diabetes.

10. Identify the six components of the Chronic Disease Model using diabetes as an example.

11. Identify the aspects of care that should be recognized in the elderly?

Recommended Readings

2. Chronic Care Model Appendix.

Supplemental Readings/Websites

Table 1. Criteria for testing for diabetes in asymptomatic adult individuals  ADA

<table>
<thead>
<tr>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Testing for diabetes should be considered in all individuals at age 45 years and above and, if normal, it should be repeated at 3-year intervals.</td>
</tr>
<tr>
<td>2. Testing should be considered at a younger age or be carried out more frequently in individuals who</td>
</tr>
<tr>
<td>• are overweight (BMI $\geq 25$ kg/m$^2$)</td>
</tr>
<tr>
<td>• have a first-degree relative with diabetes</td>
</tr>
<tr>
<td>• are members of a high-risk ethnic population (e.g., African-American, Latino, Native American, Asian-American, Pacific Islander)</td>
</tr>
<tr>
<td>• have delivered a baby weighing $&gt;9$ lb or have been diagnosed with GDM</td>
</tr>
<tr>
<td>• are hypertensive $(140/90$ mmHg$)$</td>
</tr>
<tr>
<td>• have an HDL cholesterol level $\leq 35$ mg/dl $(0.90$ mmol/l$)$ and/or a triglyceride level $&gt;250$ mg/dl $(2.82$ mmol/l$)$</td>
</tr>
<tr>
<td>• on previous testing, had IGT or IFG</td>
</tr>
<tr>
<td>• have other clinical conditions associated with insulin resistance (e.g. PCOS or acanthosis nigricans)</td>
</tr>
</tbody>
</table>

Table 2. Testing for type 2 diabetes in children  ADA

<table>
<thead>
<tr>
<th>Criteria*</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Overweight (BMI $&gt;85$th percentile for age and sex, weight for height $&gt;85$th percentile, or weight $&gt;120$% of ideal for height)</td>
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<tr>
<td>Plus any two of the following risk factors:</td>
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<tr>
<td>• Family history of type 2 diabetes in first- or second-degree relative</td>
</tr>
<tr>
<td>• Race/ethnicity (Native American, African-American, Latino, Asian-American, Pacific Islander)</td>
</tr>
<tr>
<td>• Signs of insulin resistance or conditions associated with insulin resistance (acanthosis nigricans, hypertension, dyslipidemia, or PCOS)</td>
</tr>
<tr>
<td>• Age of initiation: age 10 years or at onset of puberty, if puberty occurs at a younger age</td>
</tr>
</tbody>
</table>

Frequency: every 2 years  
Test: FPG preferred
SCREENING EVALUATION TOOL FOR DIABETIC FOOT RISK ASSESSMENT

1. History of previous foot ulcer or amputation:
   Yes No

2. Foot deformity (claw hammer toes, bony prominence, Charcot deformity):
   Yes No

3. Bunion, excessive callus or corn present:
   Yes No

4. Insensate to 5.07 monofilament (at any site on either foot):
   Yes No

5. Current ulcer/infection/cellulitis:
   Yes No

If "No" to ALL of the above questions, feet are "low risk" and should be evaluated annually.
If "Yes" to any of these, the feet should be categorized as "high risk" and the following steps should be taken:

1. If an ulcer is present, then the "Diabetic Foot Ulcer Management Algorithm" should be followed and prophylactic intervention (see below) should be offered for the uninvolved foot.

2. Provide patient with instructions per the "Patient Self-Management Agreement (contract) for Diabetes High Risk Preventative Foot Care." Be certain to ask the patient if s/he or someone in their home can reach the feet to do the prescribed foot care. If the patient or someone is not available or able to do the foot care, then refer the patient for routine foot care to either someone in the clinic who provides those services, or if not available, then refer to a podiatrist (List of contracted providers in GHC InContext).

3. Determine if patient needs protective footwear to prevent foot ulcer (especially feet that have deformity, bunions, heavy calluses), and, if so, then refer to a certified, licensed pedorthist, or if not available, then refer to a podiatrist who offers podiatric services.

4. Reassess "high risk" feet without ulcers no less than 3 times per year, and review self-management care of feet at those contact times.

Provider

Date

ORIG: Outpatient Medical Record/Ongoing Clinical Care
CANARY: Primary Practice Nurse/Data Entry Copy
The Chronic Care Model and the Innovative Care for Chronic Conditions Framework (please see the Appendix for more information) provide extremely valuable approaches for addressing chronic conditions. These important elements of the models are:

<table>
<thead>
<tr>
<th>Chronic Care Model</th>
<th>Innovative Care for Chronic Conditions Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>6 essential elements</strong></td>
<td><strong>6 guiding principles</strong></td>
</tr>
<tr>
<td>1. The community</td>
<td>1. Evidenced-based decision making</td>
</tr>
<tr>
<td>2. The health system</td>
<td>2. Population focus (vs. individual)</td>
</tr>
<tr>
<td>4. Delivery system design</td>
<td>4. Quality focus</td>
</tr>
<tr>
<td>5. Decision support</td>
<td>5. Integration</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Summary of the Chronic Care Model

The elements of good chronic illness care require productive clinical interactions between informed patients and prepared, proactive practice teams.

The Chronic Care Model

The Development of the Chronic Care Model
The MacColl Institute for Healthcare Innovation at the Group Health Cooperative developed the Chronic Care Model (CCM) drawing on available literature about promising strategies for chronic illness management. The model was further refined during a nine-month planning project supported by the Robert Wood Johnson Foundation (RWJF). After revision from a large panel of national experts, the model was subsequently used to collect and analyze data from innovative programs recommended by experts. RWJF then provided funding for a program to test the model nationally across varied health care settings; the national program was called “Improving Chronic Illness Care” (ICIC).

The CCM provides an organizational approach for caring for people with chronic illness in a primary care setting. The model advocates that improvements in approaches to chronic conditions can be accomplished by creating a health care system that is practical, supportive, and population- and evidence-based, and that promotes an interactive relationship between patients who are informed and motivated and a health care team that is prepared and proactive. The CCM also identifies six essential elements of a health care system that encourage high-quality chronic illness care. These elements are:

1. The community
2. The health system
3. Self-management support
4. Delivery system design
5. Decision support
6. Clinical information systems
DYSURIA

Learning Objectives

At the end of the case discussion the student should be able to:

1. List six causes of dysuria in women.

2. Differentiate three causes of dysuria in men.

3. State which is the most sensitive (although not most specific) aspect of the urinalysis for diagnosing urinary tract infection.

4. List 3 medicines recommended for standard 3-5 day or 1-day therapy for uncomplicated UTI.

5. List five categories of patients for longer therapy of urinary tract infections.

6. Discuss the utility of urine cultures.

7. Describe 3 regimens that women can use if they have recurrent urinary tract infections.

9. List the three common infectious causes of vaginitis findings on “wet preps” and the treatment of each type.
10. **Generate** and carry out an evidence based medicine search on a diagnostic or treatment question raised during this session.
   - A diagnostic question should identify a gold standard and address the sensitivity and specificity of the test in question.
   - A treatment question should be phrased in the form of a PICO (population, intervention, comparison, and outcome). Find the best available, relevant, and valid evidence to answer the question.

Students can use their search engine of choice. Possibilities include the AHSL EBM Search or Dynamed.

**Recommended Readings**


EXTREMITY PAIN
(INJURIES, OVERUSE OR ENTRAPMENT SYNDROMES, ARTHRITIS)

Learning Objectives

1. General:

   Develop a differential for joint pain. See Table 1 and Table 2.

2. Knee

   A. Localize (with the patient in the optimum position for each finding) the point tenderness, ligamentous laxity, or fluid, in a knee that has:

      Lying down:

      Sitting on table

      Standing:

   B. Discuss common knee injuries, their mechanism, symptoms signs and special tests and initial therapy

      1. Anterior Cruciate Ligament (ACL) Tear

      2. Meniscus Tear

      3. Collateral Ligament Injury

      4. PCL
5. Patellofemoral Pain

C. Discuss prevalence of osteoarthritis of knee and treatment options

3. Shoulder

Differentiate findings between articular and extra-articular pathology during a shoulder evaluation.

Demonstrate the physical findings in the shoulder evaluation and initial treatment for each of the problems listed below:

a. Rotator cuff tendonitis/impingement

b. Adhesive capsulitis (frozen shoulder)

c. Bursitis

d. Bicepital tendonitis

4. Ankle (and Foot)

a. Recall the two “Ottawa” decision rules for the use of radiography in acute ankle sprains:

b. Describe the severity of ligamentous injury in grades 1, 2, and 3 ankle sprains and important differences in the treatment of each grade.

c. Interdigital (Morton's) neuroma
d. Plantar Faciitis
   Classic signs are heel pain with the first few steps in the a.m.

5. Wrist and Hand

   Demarcate the distribution of pain/paresthesias/numbness/weakness and demonstrate provocative tests in:
   
   a. Median nerve (carpal tunnel syndrome)

   Other entrapment/overuse syndromes:

   b. Ulnar nerve

   c. Double/multiple crush nerve entrapment

Describe the usual cause (trauma, cumulative/repetitive stress or disease process) that precedes the following diagnosis and be able to demonstrate a provocative test and/or list the physical findings to support your diagnosis and treatment:

   a. DeQuervain's tenosynovitis
b. **Ganglion cysts**

c. **Septic arthritis**

**Recommended Readings**

1. Pust R. Approach to the extremely painful joint. 1995. Table 1.
6. Update on Acute Ankle Sprains - June 15, 2012 - American Family Physician  
7. Evaluation and Diagnosis of Wrist Pain: A Case-Based Approach - April 15, 2013 - American Family Physician  
    [http://www.aafp.org/afp/2012/0101/p49.html](http://www.aafp.org/afp/2012/0101/p49.html)


**Supplemental Readings/Websites**

  Diagnosis and Management of Rheumatoid Arthritis - December 1, 2011 - American Family Physician
### TABLE 1

**APPROACH TO THE EXTREMELY PAINFUL JOINT**

**IS IT?**
- non-articular
- articular (see below)

**non-inflammatory**
- non-septic

**inflammatory**
- septic

Also consider whether the joint involvement is ...

- axial or peripheral?
- additive or migratory?
- polyarticular or monoarticular
- systemic or local?

<table>
<thead>
<tr>
<th></th>
<th>NON-ARTICULAR</th>
<th>ARTICULAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain With Motion</td>
<td>active motion only</td>
<td>active and passive</td>
</tr>
<tr>
<td>Tenderness</td>
<td>point tenderness</td>
<td>general or vague</td>
</tr>
<tr>
<td>Location of Pain</td>
<td>over prominent bone or tendon</td>
<td>described as &quot;inside&quot; the joint</td>
</tr>
<tr>
<td>Inflammation</td>
<td>unusual</td>
<td>common</td>
</tr>
</tbody>
</table>

Do not tap a joint through infected skin or cellulitis!

Diagram by Ron Pust 5/31/95
<table>
<thead>
<tr>
<th><strong>TABLE 2</strong></th>
<th><strong>Differential Features of Common Types of Non-Traumatic, Acute Arthritis</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>History</strong></td>
<td><strong>Physical</strong></td>
</tr>
<tr>
<td>Arthralgia only (no signs of arthritis)</td>
<td>suggests viral disease. If total lack of other symptoms, explore psychogenic cause</td>
</tr>
<tr>
<td>Fibrositis/myositis</td>
<td>history of overuse, injury or stress</td>
</tr>
<tr>
<td>Osteoarthritis*</td>
<td>gradual onset of pain, stiffness and decreased range of motion. Worse after use (i.e., late in day)</td>
</tr>
<tr>
<td>Rheumatoid Arthritis</td>
<td>systemic symptoms, morning stiffness, often involves small joints of hands, esp MCP</td>
</tr>
<tr>
<td>Gout*</td>
<td>acute morning attack, single joint (MTP or knee common); family history or prior history in patient; usually (9:1) male (less “classic”)</td>
</tr>
<tr>
<td>(Pseudogout)</td>
<td></td>
</tr>
</tbody>
</table>

*Consider these diagnoses especially in elderly patients. Also consider the following conditions, which can cause joint pain: Paget’s, neuropathic pain and polymyalgia rheumatica.
**TABLE 3**

Classic Findings in Synovial Fluid in Three Major Categories of Joint Disease

<table>
<thead>
<tr>
<th>Synovial Fluid</th>
<th>Normal</th>
<th>Non-inflammatory I</th>
<th>R.A. and Other Inflammatory II</th>
<th>Septic Arthritis III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>clear</td>
<td>clear-yellow</td>
<td>yellow</td>
<td>variable</td>
</tr>
<tr>
<td>Clarity</td>
<td>transparent</td>
<td>transparent</td>
<td>turbid</td>
<td>opaque</td>
</tr>
<tr>
<td>Viscosity</td>
<td>high</td>
<td>high</td>
<td>low</td>
<td>low</td>
</tr>
<tr>
<td>Mucin Clot**</td>
<td>good</td>
<td>fair</td>
<td>fair</td>
<td>poor</td>
</tr>
<tr>
<td>White cells (mm³)</td>
<td>&lt;150</td>
<td>&lt;3000</td>
<td>3500-50,000</td>
<td>50,000-100,000</td>
</tr>
<tr>
<td>PMN %</td>
<td>&lt;25</td>
<td>&lt;25</td>
<td>&gt;70</td>
<td>&gt;75</td>
</tr>
<tr>
<td>Glucose Difference: Serum vs Synovial**</td>
<td>0</td>
<td>&lt;5</td>
<td>&gt;30</td>
<td>&gt;30</td>
</tr>
<tr>
<td>Protein (g/dl)**</td>
<td>1.8</td>
<td>3.0</td>
<td>4.2</td>
<td>4.9</td>
</tr>
</tbody>
</table>

* Classic examples of each type:

I. Non-Inflammatory: Osteoarthritis, trauma, etc.
II. Inflammatory: Rheumatoid and related arthridites
III. Septic: Bacterial (other infections, eg. TB, or cocci, may fall under category I or II)

** Of questionable value in differentiating type.
For all joints: Exam, using anatomy for diagnosis

- **Knee (stability joint)**
  - Medial Collateral Ligament laxity (unstable knee)
  - Physical Therapy (Quadriceps-strengthening)
  - Your (student) case(s) on FCM Clerkship
  - General Rx “R.I.C.E.” ± NSAIDS

- **Shoulder (mobility joint)**
  - Range of motion terminology: Demo and measure (goniometry)
  - Impingement Syndrome (subacromial) and “frozen shoulder” (adhesive capsulitis)
  - Physical Therapy: general & specific
  - Referral Process: ask a specific question of the physiotherapist or orthopedist

- **Wrist-Hand**
  - History: Fall? Occupation and Hobbies: Repetitive stress?
  - Carpal Tunnel Syndrome
  - Neuroanatomy: Three sensory nerves of hand (motor damage indicates late or severe problem)
  - Physical Therapy: Splinting and other measures, including “ergonomics”

- **Ankle (trauma)**
  - Ottawa Rules for when to x-ray - see JAMA
  - Sprain (type and severity)
  - Crutches - fitting and gait practice (NWB vs PWB)

* indicates class session demonstration of this disorder
Extremity Pain: A Systematic Approach to Clinical Diagnosis

General Considerations for all limb pain
(for details of knee, shoulder, wrist and ankle, see following pages)

History taking for the injured limb: “Sacred 7” adapted to extremity pain
What is the age and occupation/hobbies of the patient? (both are relevant to
differential diagnosis, e.g., arthritis vs. overuse)
Where is the pain? specific vs. general
How long has the patient had it?
Was there an injury? (minor injuries can complicate with adhesive capsulitis)
Are there any other joints involved? (rheumatoid, gout, osteoarthritis)
Does the pain spread/travel? (the further down the limb, the more severe the injury)
Can the patient lie on that side at night?
Any pain at night?
Pain while the extremity is held still?

Presentation of the disorder - the SINSS acronym
Severity: minimal, moderate, or severe
Irritability: exacerbation tolerance and time to subside
Nature: trauma, inflammation, infection
Stage: acute, subacute, chronic
Stability: painful, painful/stiff, stiff

Possible Structures at Fault (initial hypotheses guide physical exam)
Joints under the area of symptoms
Joints which might refer into the area of symptoms
Contractile structure under the area of symptoms
Other structures to be examined above and below area of symptoms
Neurological structures

Physical Examination
Palpate, observe, question and interact
  Function
  ROM
  Strength
  Resistive Tests
  Special Tests

Exploration of the complaint will be guided by the subjective evaluation and will vary
in emphasis, content and vigor.

Resistive and Special Tests
<table>
<thead>
<tr>
<th>Knee</th>
<th>Shoulder</th>
<th>Hand/Wrist</th>
<th>Ankle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meniscal</td>
<td>Rotator Cuff</td>
<td>Vascular</td>
<td>Instability</td>
</tr>
<tr>
<td>McMurray’s</td>
<td>drop arm</td>
<td>Allen Test</td>
<td>Ant. Drawer</td>
</tr>
<tr>
<td>Cruciates</td>
<td>painful arc</td>
<td>Neurological</td>
<td>Talar Tilt</td>
</tr>
<tr>
<td>Drawer tests</td>
<td>impingement</td>
<td>Phalen’s</td>
<td>Neurological</td>
</tr>
<tr>
<td>Lachman’s (ACL)</td>
<td>Long Head of the</td>
<td>Tinel</td>
<td>Tinel</td>
</tr>
<tr>
<td>Collateral</td>
<td>Biceps</td>
<td>Monofilament</td>
<td>Monofilament</td>
</tr>
<tr>
<td>Test in extension and 30</td>
<td>Yergason Test</td>
<td>Tendonitis</td>
<td></td>
</tr>
<tr>
<td>degrees</td>
<td>Instability</td>
<td>(1st compartment)</td>
<td></td>
</tr>
<tr>
<td>Subluxation</td>
<td>Drawer tests</td>
<td>Finkelstein’s</td>
<td></td>
</tr>
<tr>
<td>Apprehension</td>
<td>Apprehension</td>
<td>Metacarpal-Trapezial</td>
<td></td>
</tr>
<tr>
<td>Patellar irritability</td>
<td>Neurologic</td>
<td>OA</td>
<td></td>
</tr>
<tr>
<td>Compression</td>
<td>Upper Limb</td>
<td>Grind test</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tension</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Peripheral</td>
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<tr>
<td></td>
<td>entrapment</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Adson, Tinel</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lower Limb</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tension</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
KNEE (Stability Joint)

Think COMMON CLINICAL PROBLEM AREAS
External Ligaments (collaterals)
Internal Ligaments (cruciates)
Meniscus
Patellar/Sub Patellar
Prominent Muscles of the leg
Popliteal Fossa
Hip↔Knee referred pain

Physical Examination of the Knee Problem Patient

STAND
a. Inspect: Anterior (symmetry, swelling, Q-angle)
b. Palpate: Posterior (Baker’s popliteal cyst)

STEPS
Observe: Gait and Weight Bearing for all back and lower extremity complaints

SIT
a. Palpate:
   Locate the Joint Line; Anatomical Landmarks; localize point tenderness to
   these landmarks; Anserine/Patellar bursas
b. ROM:
   Normal Active/Passive ROM (goniometry)
   Motion           Normal range (degrees)
   Flexion          130°
   Extension        0 (+5)°
   Internal Rotation 45°
   External Rotation 45°
c. Strength:
   Manual Muscle Testing (0/5-5/5) (5 is full strength)
   quadriceps (L2-4), hamstrings (L5-S1), internal/external rotation

SUPINE
b. Stability:
   Drawer Test (ACL/PCL), Collaterals (test in extension and 30 degrees)
c. Special Tests:
   Meniscal
   McMurray’s
   Patellar irritability
   Compression, Apprehension, Knee Joint Effusion
   Should you tap? If so, where?

Note: If you suspect neurologic involvement, add reflex and sensation testing
SHOULDER (Mobility Joint)

Think COMMON CLINICAL PROBLEM AREAS
Rotator Cuff
Subacromial and Subdeltoid Bursae
Capsule/Joints
The Axilla
Prominent Muscles of the Shoulder Girdle

Physical Examination of the Shoulder Problem Patient

STAND
a. Observe:
   Removing shirt/blouse (antalgic?)

b. Inspect:
   Posture: dynamic and static (rounded, elevated, retracted-protracted); symmetry.

c. Palpate:
   Anatomical landmarks; localize point tenderness to these landmarks

d. ROM:
   Normal Active ROM (goniometry)
<table>
<thead>
<tr>
<th>Motion</th>
<th>Normal Range (degrees)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexion /Extension</td>
<td>180/60 °</td>
</tr>
<tr>
<td>Abd /Adduction</td>
<td>180/45 °</td>
</tr>
<tr>
<td>Internal Rotation</td>
<td>55 °</td>
</tr>
<tr>
<td>External Rotation</td>
<td>45 °</td>
</tr>
</tbody>
</table>

e. Special Tests:
   Rotator Cuff
   Drop Arm; Painful Arc Syndrome; Impingement test

SIT
a. Strength:
   Manual Muscle Testing (scale of 0-5 with 5 being normal strength)
   trapezius(C2-4), biceps(C5-6), triceps(C7-8), rotator cuff(C5-6)

b. Special Tests:
   Long Head of the Biceps
   Yergason Test

SUPINE
a. ROM:
   Passive/Assisted ROM; restricted motion

b. Stability:
   Drawer Test; Apprehension

Think Common Clinical Problem Areas: What if patient has:
Full active ROM: resistive motion hurts
Full passive ROM: one or more muscles weak
Limited passive ROM: What is the “end feel” (painful, hard, spongy, elastic, electric)
Note: If you suspect neurologic involvement, add reflex and sensation testing
HAND/WRIST

Think COMMON CLINICAL PROBLEM AREAS
Repetitive stress disorders
  carpal tunnel syndrome
  tendonitis (thumb, long flexors, tennis/golfer’s elbow, trigger finger)
  ganglion cyst
Fractures (Colles’, scaphoid, boxer)
Dislocations (interphalangeal-IP)
  trauma, rheumatoid arthritis (RA) (mallet, swan neck, boutonniere)

Physical Examination of the Hand/Wrist Problem Patient
a. Observe
  carriage, posture
  fine/gross motor skills
b. Inspect
  color, temperature (inflammation, reflex sympathetic dystrophy (RSD))
  deformities (RA, trauma)
  nails
  palmar fascia (Dupuytren’s)
c. Palpate
  tenderness
  anatomic landmarks
d. ROM
  Normal Active
  Wrist
    flexion/extension 90-45
    ulnar/radial deviation 20-20
    supination/pronation 90-90
  Hand
    thumb opposition/extension - “OK sign” to base of fifth digit-median nerve.
    finger flexion/extension-(common finger extensors pure radial nerve)(fingertips to distal palmar crease)
    abduction/adduction of digits-ulnar nerve
e. Strength
  grip/pinch (check bilaterally)

Special Tests
Neurological
  Phalen’s, Tinel, monofilament (protective sensation)
Vascular
  Allen
Tendonitis
  1st compartment-Finkelstein’s
  forearm-elongation
Articular osteoarthritis (OA)
  stress (tap, grind)
FOOT/ANKLE

Think COMMON CLINICAL PROBLEM AREAS
Sprains/Strains (tibiotalar-1st, 2nd, 3rd degree)
Tears (Achilles’ tendon, Gastrocnemius muscle)
Fractures
Plantar Fasciitis
Articular (gout, RA, OA, bunion, hammertoe)
Neurologic (Morton’s neuroma, dysesthesias, Charcot’s joint, foot drop, tarsal tunnel syndrome)
Diabetic complications (decreased vascular, sensory)

Physical Examination of the Foot/Ankle Problem Patient
a. Observe (ecchymosis, edema, deformities, cellulitis)
b. Inspect (joints, soft tissue, callus)
c. Palpate (tenderness, anatomical landmarks)
d. ROM/Strength
   Normal Ankle active range of motion
   Goniometry/Manual Muscle Testing
   dorsiflexion/plantar flexion  20-45 degrees
   inversion/eversion  30-20

e. Special Tests
   Instability (anterior drawer test, talar tilt, squeeze test)
   Neurological (monofilament, Tinel)
   Muscle-tendon (Thompson’s test)
f. Lab: Radiographic (use Ottawa rule to decide whether to order films)
FATIGUE AND DEPRESSION

Learning Objectives

SOME EXAMPLES OF COMMON AND SEVERE/LIFE THREATENING CAUSES OF FATIGUE AND DEPRESSION

<table>
<thead>
<tr>
<th></th>
<th>Common Causes</th>
<th>Serious/Life Threatening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child/Adolescent</td>
<td>infectious mono anemia</td>
<td>pregnancy</td>
</tr>
<tr>
<td></td>
<td>depression/adjustment reaction</td>
<td>progressive neuromuscular disorder</td>
</tr>
<tr>
<td></td>
<td>family violence</td>
<td>cancer</td>
</tr>
<tr>
<td></td>
<td>substance abuse</td>
<td></td>
</tr>
<tr>
<td>Adult</td>
<td>anemia</td>
<td>HIV</td>
</tr>
<tr>
<td></td>
<td>thyroid</td>
<td>TB</td>
</tr>
<tr>
<td></td>
<td>type 2 DM</td>
<td>adrenal insufficiency</td>
</tr>
<tr>
<td></td>
<td>depression</td>
<td>chronic kidney disease</td>
</tr>
<tr>
<td></td>
<td>chronic fatigue syndrome</td>
<td>sleep apnea</td>
</tr>
<tr>
<td></td>
<td>substance abuse</td>
<td>cancer</td>
</tr>
<tr>
<td></td>
<td>sleep apnea</td>
<td>pregnancy</td>
</tr>
<tr>
<td>Elderly</td>
<td>depression</td>
<td>cancer</td>
</tr>
<tr>
<td></td>
<td>elder abuse</td>
<td>malnutrition</td>
</tr>
<tr>
<td></td>
<td>dementia</td>
<td>TB</td>
</tr>
<tr>
<td></td>
<td>type 2 diabetes</td>
<td>chronic kidney disease</td>
</tr>
<tr>
<td></td>
<td>pulmonary insufficiency</td>
<td>congestive heart failure</td>
</tr>
<tr>
<td></td>
<td>substance abuse</td>
<td></td>
</tr>
<tr>
<td></td>
<td>polypharmacy</td>
<td></td>
</tr>
</tbody>
</table>

1. **List** three appropriate components of the history and initial laboratory diagnostic work-up to evaluate patients complaining of fatigue.

2. **Describe** nutritional considerations in the evaluation and treatment of fatigue.

3. **State** five reasons primary care physicians need to be able to recognize and treat depression.

4. **List** five factors that can cause or contribute to depression.

5. **State** five risk factors for suicide in patients with depression.
6. **Describe** an appropriate treatment plan for patients with depression.

7. **Review** current pharmacological therapies for depression and their potential side effects.

8. **List 2** validated screening tools for depression.

9. What is the incidence of postpartum depression and name a good screening test for this.

**Cases** (examples, others possible):

A. Forty-five year old African American female, seen for the first time in your office complains of being "too tired all the time". T 36.7, P 60, BP 115/78, R 18. This information is available on the chart before you enter the examining room.

   Common causes include:

B. A 19-year old college sophomore complains of being "sleepy all the time". She recently flunked a chemistry final exam, and broke up with her boyfriend. She had a sore throat two weeks ago, but is otherwise well now.

   Common causes include:

C. A 70-year old man brought in by his daughter because he "doesn't have any energy-he seems to sleep all day long and can't even do the garden work he loves so much".

   Common causes include:
**Recommended Readings**


**Supplemental Readings/Websites**


Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the one statement in each group that best describes the way you have been feeling during the past two weeks, including today. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1. Sadness
   0 I do not feel sad.
   1 I feel sad much of the time.
   2 I am sad all the time.
   3 I am so sad or unhappy that I can't stand it.

2. Pessimism
   0 I am not discouraged about my future.
   1 I feel more discouraged about my future than I used to be.
   2 I do not expect things to work out for me.
   3 I feel my future is hopeless and will only get worse.

3. Past Failure
   0 I do not feel like a failure.
   1 I have failed more than I should have.
   2 As I look back, I see a lot of failures.
   3 I feel I am a total failure as a person.

4. Loss of Pleasure
   0 I get as much pleasure as I ever did from the things I enjoy.
   1 I don't enjoy things as much as I used to.
   2 I get very little pleasure from the things I used to enjoy.
   3 I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings
   0 I don't feel particularly guilty.
   1 I feel guilty over many things I have done or should have done.
   2 I feel quite guilty most of the time.
   3 I feel guilty all of the time.

6. Punishment Feelings
   0 I don't feel I am being punished.
   1 I feel I may be punished.
   2 I expect to be punished.
   3 I feel I am being punished.

7. Self-Dislike
   0 I feel the same about myself as ever.
   1 I have lost confidence in myself.
   2 I am disappointed in myself.
   3 I dislike myself.

8. Self-Criticalness
   0 I don't criticize or blame myself more than usual.
   1 I am more critical of myself than I used to be.
   2 I criticize myself for all of my faults.
   3 I blame myself for everything bad that happens.

9. Suicidal Thoughts or Wishes
   0 I don't have any thoughts of killing myself.
   1 I have thoughts of killing myself, but I would not carry them out.
   2 I would like to kill myself.
   3 I would kill myself if I had the chance.

10. Crying
    0 I don't cry anymore than I used to.
    1 I cry more than I used to.
    2 I cry over every little thing.
    3 I feel like crying, but I can't.
<table>
<thead>
<tr>
<th>Beck Depression Inventory</th>
<th>Baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>v 0477</td>
<td></td>
</tr>
<tr>
<td>CRN: ____    CRF number: ____ Page 15 patient init: ____</td>
<td></td>
</tr>
</tbody>
</table>

11. Agitation
0 I am no more restless or wound up than usual.
1 I feel more restless or wound up than usual.
2 I am so restless or agitated that it's hard to stay still.
3 I am so restless or agitated that I have to keep moving or doing something.

12. Loss of Interest
0 I have not lost interest in other people or activities.
1 I am less interested in other people or things than before.
2 I have lost most of my interest in other people or things.
3 It's hard to get interested in anything.

13. Indecisiveness
0 I make decisions about as well as ever.
1 I find it more difficult to make decisions than usual.
2 I have much greater difficulty in making decisions than I used to.
3 I have trouble making any decisions.

14. Worthlessness
0 I do not feel I am worthless.
1 I don't consider myself as worthwhile and useful as I used to.
2 I feel more worthless as compared to other people.
3 I feel utterly worthless.

15. Loss of Energy
0 I have as much energy as ever.
1 I have less energy than I used to have.
2 I don't have enough energy to do very much.
3 I don't have enough energy to do anything.

16. Changes in Sleeping Pattern
0 I have not experienced any change in my sleeping pattern.
1a I sleep somewhat more than usual.
1b I sleep somewhat less than usual.
2a I sleep a lot more than usual.
2b I sleep a lot less than usual.
3a I sleep most of the day.
3b I wake up 1-2 hours early and can't get back to sleep.

17. Irritability
0 I am no more irritable than usual.
1 I am more irritable than usual.
2 I am much more irritable than usual.
3 I am irritable all the time.

18. Changes in Appetite
0 I have not experienced any change in my appetite.
1a My appetite is somewhat less than usual.
1b My appetite is somewhat greater than usual.
2a My appetite is much less than before.
2b My appetite is much greater than usual.
3a I have no appetite at all.
3b I crave food all the time.

19. Concentration Difficulty
0 I can concentrate as well as ever.
1 I can't concentrate as well as usual.
2 It's hard to keep my mind on anything for very long.
3 I find I can't concentrate on anything.

20. Tiredness or Fatigue
0 I am no more tired or fatigued than usual.
1 I get more tired or fatigued more easily than usual.
2 I am too tired or fatigued to do a lot of the things I used to do.
3 I am too tired or fatigued to do most of the things I used to do.

21. Loss of Interest in Sex
0 I have not noticed any recent change in my interest in sex.
1 I am less interested in sex than I used to be.
2 I am much less interested in sex now.
3 I have lost interest in sex completely.
Beck Depression Inventory - 2nd Edition

Purpose: Designed to determine presence and severity of symptoms of depression.

Population: Adolescents and adults.

Score: Produces single score indicating intensity of the depressive symptoms.

Time: 5-10 minutes, longer for patients with severe depression or obsessional disorders.

Author: Aaron T. Beck, Robert A. Steer, and Gregory K. Brown.

Publisher: the Psychological Corporation.

Description: The Beck Depression Inventory Second Edition (BDI-II) is a 21-item self-report instrument intended to assess the existence and severity of symptoms of depression as listed in the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* Fourth Edition (DSM-IV; 1994). This new revised edition replaces the BDI and the BDI-1A, and includes items intending to index symptoms of severe depression, which would require hospitalization. Items have been changed to indicate increases or decreases in sleep and appetite, items labeled body image, work difficulty, weight loss, and somatic preoccupation were replaced with items labeled agitation, concentration difficulty and loss of energy, and many statements were reworded resulting in a substantial revision of the original BDI and BDI-1A. When presented with the BDI-II, a patient is asked to consider each statement as it relates to the way they have felt for the past two weeks, to more accurately correspond to the DSM-IV criteria.

Scoring: Each of the 21 items corresponding to a symptom of depression is summed to give a single score for the BDI-II. There is a four-point scale for each item ranging from 0 to 3. On two items (16 and 18) there are seven options to indicate either an increase or decrease of appetite and sleep. Cut score guidelines for the BDI-II are given with the recommendation that thresholds be adjusted based on the characteristics of the sample, and the purpose for use of the BDI-II. Total score of 0-13 is considered minimal range, 14-19 is mild, 20-28 is moderate, and 29-63 is severe.

Reliability: BDI has been used for 35 years to identify and assess depressive symptoms, and has been reported to be highly reliable regardless of the population. It has a high coefficient alpha, (.80) its construct validity has been established, and it is able to differentiate depressed from non-depressed patients. For the BDI-II the coefficient alphas (.92 for outpatients and .93 for the college students) were higher than those for the BDI-1A (.86). The correlations for the corrected item-total were significant at .05 level (with a Bonferroni adjustment), for both the outpatient and the college student samples. Test-retest reliability was studied using the responses of 26 outpatients who were tested at first and second therapy sessions one week apart. There was a correlation of .93, which was significant at $p < .001$. The mean scores of the first and second total scores were comparable with a paired $t (25)=1.08$, which was not significant.
Validity: One of the main objectives of this new version of the BDI was to have it conform more closely to the diagnostic criteria for depression, and items were added, eliminated and reworded to specifically assess the symptoms of depression listed in the DSM-IV and thus increase the content validity of the measure. With regard to construct validity, the convergent validity of the BDI-II was assessed by administration of the BDI-1A and the BDI-II to two sub-samples of outpatients (N=191). The order of presentation was counterbalanced and at least one other measure was administered between these two versions of the BDI, yielding a correlation of .93 (p<.001) and means of 18.92 (SD = 11.32) and 21.888 (SD = 12.69) the mean BDI-II score being 2.96 points higher than the BDI-1A. A calibration study of the two scales was also conducted, and these results are available in the BDI-II manual. Consistent with the comparison of mean differences, the BDI-II scores are 3 points higher than the BDI-1A scores in the middle of the scale. Factorial Validity has been established by the inter-correlations of the 21 items calculated from the sample responses.

Norms: The normative sample included 500 outpatients from rural and suburban locations. All patients were diagnosed according to DSM-III-R or DSM-IV criteria were used to investigate the psychometric characteristics of BDI-II. The group was comprised of 63% women, and 37% men, the mean age was 37.20 years, range of 13-86 years. The racial/ethnic makeup was 91% White, 4% African American, 4% Asian American, and 1% Hispanic. A student sample of 120 college students in Canada served as a comparative normal group.

Suggested use: The BDI-II is intended to assess the severity of depression in psychiatrically diagnosed adults and adolescents 13 years of age and older. It is not meant to serve as an instrument of diagnosis, but rather to identify the presence and severity of symptoms consistent with the criteria of the DSM-IV. The authors warn against the use of this instrument as a sole diagnostic measure, as depressive symptoms may be part of other primary diagnostic disorders.

http://cps.nova.edu/~cpphelp/BDI2.html
APA Releases Guideline on Treatment of Patients with Major Depressive Disorder

CARRIE ARMSTRONG

*Am Fam Physician. 2011 May 15;83(10):1219-1227.*

**Guideline source:** American Psychiatric Association

**Evidence rating system used?** Yes

**Literature search described?** Yes


The American Psychiatric Association (APA) recently updated its guideline on the treatment of major depressive disorder. The new evidence-based guideline summarizes recommendations on the use of antidepressants and other drug therapies; psychotherapy, including cognitive behavior therapy; and electroconvulsive therapy (ECT). Because many patients with major depressive disorder have co-occurring psychiatric disorders, including substance use disorders, physicians should also consider appropriate treatments for these diagnoses. Patients who have depressive symptoms in the context of another disorder but who do not meet the diagnostic criteria for major depressive disorder should be treated according to guidelines pertaining to the primary diagnosis.

**Acute Phase**

Treatment in the acute phase should be aimed at inducing remission of the depressive episode and achieving a full return to the baseline level of functioning. Patients with mild to moderate depression should be treated with antidepressants (Table 1) or psychotherapy. Combined pharmacotherapy and psychotherapy may be useful in patients with psychosocial or interpersonal problems, intrapsychic conflict, or a co-occurring axis II disorder. ECT can be used in select patients.

**TABLE 1.**

**Medications for Treatment of Major Depressive Disorder**

<table>
<thead>
<tr>
<th>Drug</th>
<th><em>Starting dosage (mg per day)</em></th>
<th><em>Usual dosage (mg per day)</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dopamine-norepinephrine reuptake inhibitors‡</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bupropion, immediate release</td>
<td>150</td>
<td>300 to 450</td>
</tr>
<tr>
<td>(Wellbutrin)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bupropion, sustained release</td>
<td>150</td>
<td>300 to 400</td>
</tr>
<tr>
<td>(Wellbutrin SR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bupropion, extended release</td>
<td>150</td>
<td>300 to 450</td>
</tr>
<tr>
<td>(Wellbutrin XL)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monoamine oxidase inhibitors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Isocarboxazid</td>
<td>10 to 20</td>
<td>30 to 60</td>
</tr>
<tr>
<td>Drug</td>
<td>Starting dosage (mg per day)*</td>
<td>Usual dosage (mg per day)</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Moclobemide (not available in the United States)</td>
<td>150</td>
<td>300 to 600</td>
</tr>
<tr>
<td>Phenelzine (Nardil)</td>
<td>15</td>
<td>45 to 90</td>
</tr>
<tr>
<td>Selegiline, transdermal (Emsam)</td>
<td>6</td>
<td>6 to 12</td>
</tr>
<tr>
<td>Tranylcypromine</td>
<td>10</td>
<td>30 to 60</td>
</tr>
<tr>
<td><strong>Norepinephrine-serotonin modulator‡</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mirtazapine (Remeron)</td>
<td>15</td>
<td>15 to 45</td>
</tr>
<tr>
<td><strong>Selective serotonin reuptake inhibitors‡</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citalopram (Celexa)</td>
<td>20</td>
<td>20 to 60§</td>
</tr>
<tr>
<td>Escitalopram (Lexapro)</td>
<td>10</td>
<td>10 to 20</td>
</tr>
<tr>
<td>Fluoxetine (Prozac)</td>
<td>20</td>
<td>20 to 60§</td>
</tr>
<tr>
<td>Paroxetine (Paxil)</td>
<td>20</td>
<td>20 to 60§</td>
</tr>
<tr>
<td>Paroxetine, extended-release (Paxil CR)</td>
<td>12.5</td>
<td>25 to 75</td>
</tr>
<tr>
<td>Sertraline (Zoloft)</td>
<td>50</td>
<td>50 to 200§</td>
</tr>
<tr>
<td><strong>Serotonin modulators</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nefazodone</td>
<td>50</td>
<td>150 to 300</td>
</tr>
<tr>
<td>Trazodon∥</td>
<td>150</td>
<td>150 to 600</td>
</tr>
<tr>
<td><strong>Serotonin-norepinephrine reuptake inhibitors‡</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desvenlafaxine (Pristiq)</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Duloxetine (Cymbalta)</td>
<td>60</td>
<td>60 to 120</td>
</tr>
<tr>
<td>Venlafaxine, immediate release (Effexor)</td>
<td>37.5</td>
<td>75 to 375</td>
</tr>
<tr>
<td>Venlafaxine, extended release (Effexor XR)</td>
<td>37.5</td>
<td>75 to 375</td>
</tr>
<tr>
<td><strong>Tricyclics and tetracyclics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amitriptyline</td>
<td>25 to 50</td>
<td>100 to 300</td>
</tr>
<tr>
<td>Desipramine (Norpramin)</td>
<td>25 to 50</td>
<td>100 to 300</td>
</tr>
<tr>
<td>Doxepin</td>
<td>25 to 50</td>
<td>100 to 300</td>
</tr>
<tr>
<td>Imipramine (Tofranil)</td>
<td>25 to 50</td>
<td>100 to 300</td>
</tr>
<tr>
<td>Maprotiline</td>
<td>75</td>
<td>100 to 225</td>
</tr>
<tr>
<td>Nortriptyline (Pamelor)</td>
<td>25</td>
<td>50 to 200</td>
</tr>
<tr>
<td>Protriptyline</td>
<td>10 to 20</td>
<td>20 to 60</td>
</tr>
<tr>
<td>Trimipramine (Surmontil)</td>
<td>25 to 50</td>
<td>75 to 300</td>
</tr>
</tbody>
</table>

*—Lower starting dosages are recommended for older patients and for patients with panic disorder, anxiety, hepatic disease, and co-occurring medical conditions.

†—For some drugs (e.g., tricyclics), the upper dosage limit reflects the risk of toxicity or need for plasma level assessment, whereas for other drugs (e.g., selective serotonin reuptake inhibitors), higher dosages are safe but have not been proven more effective than lower dosages.

‡—These drugs are likely optimal in terms of safety, adverse effects, and quantity and quality of clinical trial data.

§—Dosage varies with diagnosis.
In patients with severe depression without psychotic features, pharmacotherapy, combined pharmacotherapy and psychotherapy, or ECT can be used; however, psychotherapy should not be used alone. In patients with severe depression with psychotic features, antidepressant and antipsychotic agents should be used, with or without psychotherapy. ECT is also an option.

Selection of an initial treatment modality should be influenced by clinical features, such as severity of symptoms and presence of co-occurring disorders, as well as other factors, such as patient preferences and prior treatment experiences. Because the effectiveness of antidepressants is generally comparable between and within drug classes, the initial selection will be based largely on anticipated adverse effects, safety and tolerability, pharmacologic properties (e.g., half-life, drug interactions), and cost. For most patients, optimal treatments include a selective serotonin reuptake inhibitor, a serotonin-norepinephrine reuptake inhibitor, mirtazapine (Remeron), or bupropion (Wellbutrin). The use of nonselective monoamine oxidase inhibitors should be restricted to patients who do not respond to other treatments. In patients who prefer complementary and alternative therapies, S-adenosylmethionine (SAM-e) or St. John's wort can be considered. However, patients who take St. John's wort should be monitored carefully for drug interactions.

Once an antidepressant has been selected, it should be titrated based on the patient's age, the treatment setting, and the presence of co-occurring disorders, concomitant pharmacotherapy, or adverse effects of medication. If adverse effects occur, the dosage can be lowered or the patient should be switched to a different medication.

An incomplete response to treatment is associated with poor functional outcomes; therefore, the acute phase of treatment should not be concluded prematurely in patients who do not fully respond. If a moderate improvement in symptoms does not occur within four to eight weeks after treatment initiation, the diagnosis should be reconsidered, adverse effects and adherence to therapy assessed, comorbidities and psychosocial factors reviewed, and the treatment plan adjusted. For patients who are being treated with psychotherapy, the frequency of sessions and the specific approach to psychotherapy should be reassessed. If minimal or no improvement is noted after an additional four to eight weeks, the treatment plan should be readjusted, and consultation should be considered.

**Continuation Phase**

In the continuation phase, management is aimed at preventing relapse. Systematic assessment of symptoms and monitoring for adverse effects of medications (Table 2), adherence to therapy, and functional status are essential. To reduce the risk of relapse, patients in whom pharmacotherapy has been successful should continue treatment at the same dosage for four to nine months. Depression-focused cognitive behavior therapy is also recommended in the continuation phase.
<table>
<thead>
<tr>
<th>Effect</th>
<th>Associated antidepressant</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anticholinergic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constipation</td>
<td>TCAs</td>
<td>Adequate hydration; bulk laxative</td>
</tr>
<tr>
<td>Delirium</td>
<td>TCAs</td>
<td>Assess for other causes</td>
</tr>
<tr>
<td>Dry mouth</td>
<td>TCAs, SNRIs, bupropion (Wellbutrin)</td>
<td>Use of sugarless gum or candy</td>
</tr>
<tr>
<td>Urinary hesitancy</td>
<td>TCAs</td>
<td>Bethanechol</td>
</tr>
<tr>
<td>Visual changes</td>
<td>TCAs</td>
<td>Pilocarpine eye drops</td>
</tr>
<tr>
<td><strong>Cardiovascular</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arrhythmias</td>
<td>TCAs</td>
<td>Avoid TCA use in patients with cardiac instability or ischemia; attend to interactions with antiarrhythmic drugs</td>
</tr>
<tr>
<td>Hypertension</td>
<td>SNRIs, bupropion</td>
<td>Monitor blood pressure; keep dosage as low as possible; add antihypertensive drug</td>
</tr>
<tr>
<td>Hypertensive crisis</td>
<td>MAOIs</td>
<td>Seek emergency treatment; if hypertension is severe, intravenous antihypertensive agents (e.g., labetalol, nitroprusside [Nitropress]) may be needed</td>
</tr>
<tr>
<td>Increased cholesterol levels</td>
<td>Mirtazapine (Remeron)</td>
<td>Statin drugs</td>
</tr>
<tr>
<td>Orthostatic hypotension</td>
<td>TCAs, trazodone, nefazodone, MAOIs</td>
<td>Fludrocortisone; add salt to diet</td>
</tr>
<tr>
<td><strong>Neurologic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Headache</td>
<td>SSRIs, SNRIs, bupropion</td>
<td>Assess for other causes (e.g., caffeinism, bruxism, migraine, tension headache)</td>
</tr>
<tr>
<td>Myoclonus</td>
<td>TCAs, MAOIs</td>
<td>Clonazepam (Klonopin)</td>
</tr>
<tr>
<td>Seizures</td>
<td>Bupropion, TCAs, amoxapine</td>
<td>Assess for other causes; add anticonvulsant drug, if indicated</td>
</tr>
<tr>
<td><strong>Sexual</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arousal, erectile dysfunction</td>
<td>TCAs, SSRIs, SNRIs</td>
<td>Sildenafil (Viagra), tadalafil (Cialis), buspirone (Buspar), bupropion</td>
</tr>
<tr>
<td>Orgasm dysfunction</td>
<td>TCAs, SSRIs, venlafaxine, desvenlafaxine, MAOIs</td>
<td>Sildenafil, tadalafil, buspirone, bupropion</td>
</tr>
<tr>
<td>Priapism</td>
<td>Trazodone</td>
<td>Obtain emergency urologic evaluation</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activation</td>
<td>SSRIs, SNRIs, bupropion</td>
<td>Administer in morning</td>
</tr>
<tr>
<td>Akathisia</td>
<td>SSRIs, SNRIs</td>
<td>Beta blocker or benzodiazepine</td>
</tr>
<tr>
<td>Bruxism</td>
<td>SSRIs</td>
<td>Obtain dental consultation, if indicated</td>
</tr>
<tr>
<td>Effect</td>
<td>Associated antidepressant</td>
<td>Treatment</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------------------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Diaphoresis</td>
<td>TCAs, some SSRIs, SNRIs</td>
<td>Alpha-1-adrenergic antagonist, central alpha-2-adrenergic antagonist, or anticholinergic</td>
</tr>
<tr>
<td>Fall risk</td>
<td>TCAs, SSRIs</td>
<td>Monitor blood pressure for evidence of hypotension or orthostasis; assess for sedation, blurred vision, or confusion; modify environment to reduce risk</td>
</tr>
<tr>
<td>Gastrointestinal bleeding</td>
<td>SSRIs</td>
<td>Determine whether other medications may affect clotting</td>
</tr>
<tr>
<td>Hepatotoxicity</td>
<td>Nefazodone</td>
<td>Provide education about and monitor for evidence of hepatic dysfunction; order hepatic function testing, if indicated</td>
</tr>
<tr>
<td>Insomnia</td>
<td>SSRIs, SNRIs, bupropion</td>
<td>Administer in morning; add sedative-hypnotic drug at bedtime; add melatonin; provide cognitive behavior therapy or sleep hygiene education</td>
</tr>
<tr>
<td>Nausea, vomiting</td>
<td>SSRIs, SNRIs, bupropion</td>
<td>Administer after a meal or in divided doses</td>
</tr>
<tr>
<td>Osteopenia</td>
<td>SSRIs</td>
<td>Monitor bone mineral density and treat, if indicated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(e.g., calcium and vitamin D supplement, bisphosphonates, selective estrogen receptor agents)</td>
</tr>
<tr>
<td>Sedation</td>
<td>TCAs, trazodone, nefazodone, mirtazapine</td>
<td>Administer at bedtime; add modafinil (Provigil) or methylphenidate (Ritalin)</td>
</tr>
<tr>
<td>Severe serotonin syndrome</td>
<td>MAOIs</td>
<td>Obtain emergency evaluation; consider admission to a critical care unit</td>
</tr>
<tr>
<td>Weight gain</td>
<td>SSRIs, mirtazapine, TCAs, MAOIs</td>
<td>Encourage exercise; consult with dietician; if changing antidepressants, consider a secondary amine (if a TCA is required) or antidepressant with less effect on weight (e.g., bupropion)</td>
</tr>
</tbody>
</table>

MAOI = monoamine oxidase inhibitor; SNRI = serotonin-norepinephrine reuptake inhibitor; SSRI = selective serotonin reuptake inhibitor; TCA = tricyclic antidepressant.


Patients who respond to ECT should continue treatment with medication; a combination of lithium and nortriptyline (Pamelor) is recommended. Alternatively, continuation ECT can be given, especially if medication and psychotherapy have been ineffective.

**Maintenance Phase**

Patients who have had three or more episodes of major depression or who have chronic major depressive disorder should proceed to the maintenance phase of treatment after completing the continuation phase. Maintenance therapy should also be considered for patients with additional risk factors for recurrence.
(e.g., residual symptoms, ongoing psychosocial stressors, early age at onset). Additional considerations include patient preference, the type of treatment received, adverse effects, comorbid conditions, frequency and severity of previous depressive episodes (including psychosis and suicide risk), and the persistence of depressive symptoms after recovery. In many patients—particularly those with chronic and recurrent major depressive disorder or co-occurring medical or psychiatric disorders—some form of treatment will be required indefinitely. Because of the risk of recurrence, patients should be monitored at regular intervals during the maintenance phase.

The antidepressant that produced symptom remission during the acute phase should be continued at the full therapeutic dosage. If depression-focused psychotherapy was used during the acute and continuation phases, maintenance therapy should be considered, with less frequent sessions. Maintenance ECT can be considered in patients with depressive episodes that have not responded to medications or depression-focused psychotherapy, but that have responded to ECT.

**Discontinuation**
Pharmacotherapy should be tapered over the course of at least several weeks. Before discontinuation of active treatment, patients should be counseled about the potential for relapse, and a plan should be established for seeking treatment if symptoms recur. Patients should be monitored for several months after medications are discontinued, and they should receive another course of acute-phase treatment if symptoms recur.

Coverage of guidelines from other organizations does not imply endorsement by *AFP* or the AAFP.


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HEADACHE

Learning Objectives

At the ending of the case discussion, the student should be able to:

1. Define “primary” and “secondary” headache.

2. Common and Severe/Life Threatening Diagnoses.

<table>
<thead>
<tr>
<th>Common Causes</th>
<th>Severe/Life Threatening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Migraine headaches</td>
<td>Neoplasm</td>
</tr>
<tr>
<td>Tension headaches</td>
<td>Congenital malformation</td>
</tr>
<tr>
<td>Child/Adolescent</td>
<td></td>
</tr>
<tr>
<td>Migraine headaches</td>
<td>Cancer</td>
</tr>
<tr>
<td>Tension headaches</td>
<td>Intracranial bleed</td>
</tr>
<tr>
<td>Cluster headaches</td>
<td>Meningitis</td>
</tr>
<tr>
<td>Caffeine withdrawal</td>
<td>Stroke</td>
</tr>
<tr>
<td>Adults</td>
<td>Temporal arteritis</td>
</tr>
<tr>
<td>Migraine headaches</td>
<td>Pseudotumor cerebri</td>
</tr>
<tr>
<td>Tension headaches</td>
<td></td>
</tr>
<tr>
<td>Cluster headaches</td>
<td></td>
</tr>
<tr>
<td>Caffeine withdrawal</td>
<td></td>
</tr>
</tbody>
</table>

3. Discuss the differential historical features and physical findings for the three “classic” types of primary headache.

7. Systematically organize the major categories of secondary headaches, utilizing age, historical information and physical findings.

8. List warning symptoms of headaches that are associated with significant underlying disease.

9. Describe symptoms that are concerning in pediatric headaches.

10. List challenges that present when managing headaches in older patients.
11. List acute treatment for primary headaches, and prevention using pharmacologic agents, diet, and lifestyle changes.

12. List 3 categories of further studies that may help to determine the cause of secondary headache.

13. List complementary therapies that may help alleviate tension headaches.

**Recommended Readings**


8. Blume, HK, Pediatric Headache: A Review. Peds in review 2012 33 (12) 582 [http://pedsinreview.aappublications.org/content/33/12/562.full.pdf](http://pedsinreview.aappublications.org/content/33/12/562.full.pdf)

Headache
Basic Diagnostic Categories

Primary Headache*

Muscle Contraction

Vascular

Migraine

Cluster

Common

Classic

Secondary (to another process)

See Table on “Potentially Dangerous Headaches”

*In some cases, patients may have a combination of causes/types.
Vaginal Bleeding

Learning Objectives

At the end of the case discussion the students should be able to:

1. Elicit an accurate menstrual history

2. Gather appropriate GYN history

3. Identify a differential diagnosis for vaginal bleeding based on trimester of pregnancy.

4. Recognize abnormal bleeding patterns and create a differential for abnormal ovulatory vs anovulatory bleeding
   a. Describe appropriate clinical, laboratory, and radiologic evaluations
   b. Discuss treatment options for each

Recommended Reading

VISUAL DIFFICULTY/RED EYE

Learning Objectives

After reviewing the readings and after the didactic session, the student will be able to:

1. Identify which patient populations should be screened for visual impairment; Differentiate myopia, hyperopia, presbyopia and astigmatism on visual acuity exam.

2. Discuss briefly the care and hazards of contact lenses.

3. Review key components of the “concentric” external eye exam in a patient with eye complaints.

4. List four common, yet anatomically and pathophysiologically very distinct causes of the red eye as seen in family/primary care practice.

5. Differentiate these four eye diseases on the bases of:
   a. relative frequency (incidence, prevalence).
   b. risk factors: age, occupation, predisposing disease.
   c. anatomic site in the eye and basic pathophysiology.
   d. distinguishing clinical features; e.g., visual acuity; pain; photophobia; discharge; appearance of conjuncive, cornea and pupil; pupil size and light response, intraocular pressure, corneal fluorescein staining.
   e. Medications, modalities, and precautions used in primary care of these conditions.

6. Specify which of these acute red eye diseases are typically managed by:
   a. family physician or other primary care clinicians.
   b. conjointly by family physician and ophthalmologist.
c. ophthalmologist

7. **List** eye emergencies in which referral to an ophthalmologist is mandatory.

8. **List** 5 important causes of vision loss in the elderly; describe complications which can arise from low vision in this population.

---

**Recommended Readings**

1. Pust RE and Snyder RW (eds.) The Acute Red Eye-(Table).

2. Eye Anatomy: Superior/transverse view of right eye and orbit.


8. The Red Eye: a Pictorial Catalogue PowerPoint

9. Flouroescein dye exam of cornea [47 sec. video] [www.youtube.com/watch?v=SkxMqtXcU6Q](http://www.youtube.com/watch?v=SkxMqtXcU6Q)
Supplemental Readings/Websites

# The Red Eye

**EPIDEMIOLOGY, DIFFERENTIAL DIAGNOSIS, TREATMENT, REFERRAL**

(adapted by R.E. Pust, MD and R.W. Snyder, MD)

* = Prominent Distinguishing (Differentiating) Features

<table>
<thead>
<tr>
<th>RED EYE CAUSE</th>
<th>FEATURES/ FINDINGS</th>
<th>CONJUNCTIVITIS (esp. bacterial)</th>
<th>IRRITIS (acute)</th>
<th>CORNEAL DAMAGE or KERATITIS</th>
<th>GLAUCOMA (acute angle)</th>
</tr>
</thead>
<tbody>
<tr>
<td>⊗ Relative Frequency</td>
<td>Very common</td>
<td>Fairly common</td>
<td>Common</td>
<td>Uncommon</td>
<td></td>
</tr>
<tr>
<td>⊗ Risk Factors:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>age</td>
<td>All, esp. young</td>
<td>All</td>
<td>All</td>
<td>Often &gt;40</td>
<td></td>
</tr>
<tr>
<td>occupation</td>
<td>Child care, etc.</td>
<td>--</td>
<td>Chemicals, foreign bodies</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>predisposing diseases</td>
<td>--</td>
<td>Autoimmune; granulomatous</td>
<td>steroid drops, herpes (HSV 1)</td>
<td>Family history?</td>
<td></td>
</tr>
<tr>
<td>⊗ Anatomic Site</td>
<td>Conjunctiva (eye lid &amp; globe)</td>
<td>Uveal tract (incl. iris)</td>
<td>Cornea</td>
<td>Angle of Schlemm</td>
<td></td>
</tr>
<tr>
<td>⊗ Basic Pathophysiology</td>
<td>Purulent superficial infection</td>
<td>Inflammatory response, many causes</td>
<td>Epithelial disruption ulcération</td>
<td>Obstruction, pressure</td>
<td></td>
</tr>
<tr>
<td>⊗ Vision</td>
<td>Normal</td>
<td>Blurred</td>
<td>Blurred (may be normal early)</td>
<td>Marked blurring; &quot;halos&quot; in some pts.</td>
<td></td>
</tr>
<tr>
<td>⊗ Pain</td>
<td>None</td>
<td>Moderately severe; intermittent stabbing</td>
<td>Moderate to severe; sharp, foreign body</td>
<td>Very severe; sometimes sensation and vomiting</td>
<td></td>
</tr>
<tr>
<td>nausea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>⊗ Photophobia</td>
<td>None</td>
<td>Moderate or severe</td>
<td>Moderate</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>⊗ Discharge</td>
<td>* Usually significant discharge with crusting of lashes</td>
<td>None</td>
<td>None to mild</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>⊗ Conjunctival Injection</td>
<td>* Diffuse (but may be mild, early)</td>
<td>* Circumcorneal (surrounding the cornea)</td>
<td>Circumcorneal (if present)</td>
<td>Diffuse</td>
<td></td>
</tr>
<tr>
<td>⊗ Appearance of Cornea</td>
<td>Clear</td>
<td>Clear</td>
<td>Cloudy (may be clear, early)</td>
<td>Cloudy &quot;Steamy&quot;</td>
<td></td>
</tr>
<tr>
<td>⊗ Pupil Size</td>
<td>Normal</td>
<td>* Constricted</td>
<td>Normal</td>
<td>* Dilated</td>
<td></td>
</tr>
<tr>
<td>⊗ Intraocular Pressure</td>
<td>Normal: (do not measure with discharge present)</td>
<td>Normal or low</td>
<td>Normal</td>
<td>* Elevated</td>
<td></td>
</tr>
<tr>
<td>⊗ Corneal Fluorescein Staining</td>
<td>Absent</td>
<td>Absent</td>
<td>* Focal (trauma) or diffuse (early keratitis)</td>
<td>Absent</td>
<td></td>
</tr>
<tr>
<td>⊗ Basic treatment in primary care</td>
<td>Local antibiotic, e.g. sulfacetamide, (no steroids)</td>
<td>Refer for cycloplegics and steroids</td>
<td>Local antibiotic; eye patch; see next day NO STEROIDS</td>
<td>Emergency referral; no steroids</td>
<td></td>
</tr>
<tr>
<td>⊗ Ophthalmology referral if/for: No response to Rx or decreasing vision</td>
<td>Initial Rx; periodic follow-up</td>
<td>Embedded foreign body; enlarging or herpes ulcer; hyphema, etc.</td>
<td>All cases of acute glaucoma</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ALWAYS:
1. Measure (and record on chart) visual acuity *(before you begin examination)* via office nurse
2. Consult/refer for: decreasing vision, increasing severe pain/photophobia circumcorneal injection, anisocoria, "hard eyeball", "steamy" cornea, herpes, hyphema, and as noted in above table, or if unsure of diagnosis.

This table is an initial guide only; it does not replace standard textbooks or indicated ophthalmology consultation.

It is adapted from material presented in:
UPPER RESPIRATORY INFECTIONS
APPROPRIATE USE OF ANTIBIOTICS

Learning Objectives:

The Common Cold

1. Describe the signs and symptoms.

2. Understand the epidemiology.

3. Describe the transmission.


Sinusitis

5. Differentiate between viral and bacterial sinusitis.


7. Review treatment choices for sinusitis.

Bronchitis

8. Describe the diagnosis and treatment of acute uncomplicated bronchitis.
Influenza

9. **Differentiate** influenza from the common cold.

10. **Discuss** influenza vaccine and recommendation.

Pharyngitis

11. **Describe** the classical differences between sore throat caused by Group A Strep (GAS) and other causes.

12. **Understand** the goal of treatment of GAS pharyngitis.

13. **List** antibiotics that are effective in treating Strep.

14. **Discuss** the role of Strep Culture and Rapid Antigen Detection Testing (RADT) in the treatment of strep-pharyngitis.

15. **Generate** and carry out an evidence based medicine search on a diagnostic or treatment question raised during this session.

   A diagnostic question should identify a gold standard and address the sensitivity and specificity of the test in question.
   A treatment question should be phrased in the form of a PICO (population, intervention, comparison, and outcome). Find the best available, relevant, and valid evidence to answer the question.
   Students can use their search engine of choice. Possibilities include the AHSL EBM Search or Dynamed.
Although shorter courses of azithromycin and some cephalosporins have been reported to be effective for treating group A streptococcal upper respiratory tract infections, evidence is not sufficient to recommend these shorter courses for routine therapy at this time.

Amoxicillin is often used in place of oral penicillin V for young children; efficacy appears to be equal. The choice is primarily related to acceptance of the taste of the suspension.

See the discussion of benzathine penicillin G therapy in Management of Group A Streptococcal Pharyngitis.

For patients who weigh <27 kg.

Dose should be determined on basis of the benzathine component. For example, mixtures of $9 \times 10^5$ U of benzathine penicillin G and $3 \times 10^5$ U of procaine penicillin G contain less benzathine penicillin G than is recommended for treatment of adolescents or adults.

Available as stearate, ethyl succinate, estolate, or base. Cholestatic hepatitis may rarely occur in patients, primarily adults, receiving erythromycin estolate; the incidence is greater among pregnant women, who should not receive this formulation.

Taken from Practice guidelines for the diagnosis and management of Group A streptococcal pharyngitis by the Infectious Disease Society of America.
Recommended Readings


Supplemental Readings/Websites

Preventive topic 1:

DIAGNOSING AND PREVENTING ILLNESS -
THE CONTINUUM IN FAMILY PRACTICE

The required key (and free!) resource for Clinical Prevention in the FCM clerkship (and for all US clinicians) is ePSS. You need to download the electronic Preventive Services Selector (ePSS), to your mobile device. Just “google” ePSS to bring up links from which you can download the app for your particular device. This app identifies which preventive services are appropriate for each of your patients.

For more information about the Guide and other Task Force resources, visit: www.uspreventiveservicestaskforce.org

Learning Objectives

By the end of this clerkship, utilizing specific “chief complaints” and patient/population examples, each student should be able to:

1. Manage, [from a clinical/epidemiologic perspective,] patient-care encounters across the family-practice spectrum, from diagnosis to case-finding to screening. (This will be illustrated by an actual case)

2. Review briefly Sensitivity, Specificity, disease Prevalence (in relevant population of “patients”) and Predictive Value of positive (+PV) finding. Compare to Likelihood Ratio. (See Required reading No. 2.)

3. Relate the three terms in Objective 2 (above) to diagnostic thinking (Bayesian problem-solving) in primary care, comparing and contrasting to diagnostic thinking in sub-specialty clinic populations. Sensitively and specificity of the test or finding do not change. But prevalence varies widely across specialties and patient populations.

4. Extend this “diagnostic” continuum to “case-finding” and to “preventive screening” in the population served by the clinic in this session AND at the students’ clerkship site.
In Objectives 5-7, we will review three concepts, each consisting of 3 aspects.

5. **Describe 3 levels of preventive intervention in the pathogeneses of a disease over time, providing specific examples.**

6. **List 3 major sources of clinical prevention guidelines, comparing the “aggressiveness” of their recommendations**
   1. USPSTF (used in Family Medicine and primary care) is the most evidenced based
   2. Medical specialty organizations e.g. ACOG, cardiology, urology.
   3. Disease-specific voluntary organizations. (e.g. Am. Lung Association, Susan Komen (most aggressive.)

7. **Identify the 3 major methods a physician should use in preventing disease. All three are evaluated by the U.S. Preventive Services Task Force, including ePSS, the free USPSTF “app.”**

8. **Review six criteria for judging the value of screening tests (three related to the disease and three related to the test.)** This objective (and this prevention overview section) should be a review, integrating concepts from the “Evidence Based Medicine” thread of your ArizonaMed pre-clinical curriculum

**Required Readings**


2. Pust R. et. al “Working Clinically” in *Essential Clinical Global Health*. Wiley 2015  pp. 10-11 (in syllabus) *Be able to explain and use clinically the 3 figures. Case examples are from global health but are applicable to diagnosis anywhere.*


**Supplemental Readings or Web Sites**

2. https://subscriptions.ahrq.gov/service/subscribe.html?code=USAHRQ_7 (email list serv; you can get on this listserv by sending an email to this address; you will get updates on USPSTF, clinical guidelines and other links).

Interpreting clinical findings in the context of the local epidemiology

The classic triad of time, place, and person (i.e., patient demographics) determine to a great extent the relative prevalence of disease. The fact that Sara was a child and from a malaria-endemic area increased the risk that she had clinical malaria (Taylor et al., 2010). These epidemiological findings must be considered when estimating her pre-test probability of any specific disease, such as malaria (Richardson, 1999). Additional diagnostic tools are then used to generate a likelihood ratio, which is the ratio of true positives to false positives of any clinical finding (“test”) for the disease being considered, in this case malaria. The Fagan nomogram (Figure 1.4), or the equivalent in hand-held software, can be used to calculate the post-test probability of that disease. The red and green lines in Figure 1.4 demonstrate these concepts. While experienced clinicians are not formally completing this analysis with each patient test, the foundation of their veteran decision-making is often based on this thoughtful, data-driven approach.

In the context of a high post-test probability for malaria, most clinicians would advise treatment (Davey, 2001; Simoes et al., 2003). However, the implications of a false-positive diagnosis, leading to inappropriate treatment, must also be considered (Chandler et al., 2008). In the case of Sara, this would unnecessarily expose Sara to the risks of antimalarial medications and, more importantly, delay the diagnosis and treatment of her actual disease.

Any individual physical finding may not have significant sensitivity or specificity for clinical malaria (Busoffi & Broeuf, 2013). Splenomegaly, for example, may be absent (false negative) in a child’s first few attacks of malaria, and these are the cases most likely to be fatal. Since many children (often 50%) in endemic communities have enlarged spleens from prior malaria episodes, there is little correlation between splenomegaly and current clinical malaria, thereby lowering the likelihood ratio of splenomegaly for the diagnosis of current clinical malaria (Hackett, 1994; WHO, 2012). Therefore, in the example in Figure 1.4, if the positive likelihood ratio of splenomegaly for current clinical malaria is approximately 2, the post-test probability is raised only modestly, to 67% (red line).

Considering “clusters” of clinical findings or syndromes

Since any one given physical finding may not yield a high likelihood ratio for a specific disease, a skilled clinician will use a combination of findings in the patient’s history and physical examination to quickly limit the differential diagnosis. When
combined with epidemiologic assessment of pre-test probabilities of diseases, this very efficient clinical approach considers the likelihood of a combination of findings in order to make a "syndromic diagnosis" (English et al., 2005), as illustrated by the Venn diagram in Figure 1.5. The areas on the diagram are approximate and will vary by time, place, and person. Combinations of findings, or areas of numbered overlaps, are "syndromes" and can suggest specific diagnoses, of which the following are examples.

- Cough (black circle 1) plus tachypnea (green circle 2) suggests pneumonia. If the child has only these two findings (area 12), this is potentially pneumonia, which is much more likely if there is also chest retraction. However, if the child has additional symptoms or combinations (areas 6, 7, 8, and/or 11), the child has complicated pneumonia and/or additional disease(s).
- Palmar pallor (blue circle 3) in the febrile child suggests malaria. If the patient also has altered mental status (area 5) and/or tachypnea (area 6), complicated malaria is likely.
- Altered mental status (red circle 4) in the febrile child suggests meningitis; lumbar puncture is recommended, regardless of other finding, and especially if there are no other findings. In resource-limited settings, where comprehensive work-ups are usually not available, syndromic management becomes increasingly important.

In general, the greater the number of combined findings or elements of a syndrome present, the more likely and specific is the diagnosis of the suspected disease. Palmar pallor (Muhle et al., 2000) could indicate anemia (Montresor et al., 2003; Callis et al., 2008) from a variety of causes. However, the likelihood of malaria is raised if palmar pallor is part of a syndrome of findings consistent with malaria (Taylor & Molyneux, 2003).
Prevention Topic 2:

PRIMARY PREVENTION – BEHAVIORAL COUNSELING TO PREVENT CARDIOVASCULAR DISEASE AND OBESITY

Learning Objectives

1. Identify the top ten causes of overall mortality in the U.S.

2. List two reasons why physicians should perform behavioral counseling.

3. Examine evidence of prevention effectiveness by physicians towards initiating, sustaining and/or enabling patients to succeed with tobacco cessation.

4. Given a clinical scenario, identify a patient’s modifiable risk factors for cardiovascular disease; review a) the Stages of Change model; b) the Health Beliefs model; and c) the Five A’s model; and apply motivational interviewing techniques to counsel the patient.

5. Explain the role of nutrition/physical activity in cardiovascular disease.

6. Provide specific lifestyle recommendations for the management of coronary artery disease.

7. List medications used in the primary prevention of cardiovascular disease.
8. Identify two strategies that have been shown to decrease the risk of diabetes type 2 in those with pre-diabetes by 58%.

9. Discuss the role of screening and office interventions for overweight and obesity in the primary care office.

10. Recognize the value of information technology for promoting adherence to clinical practice guidelines.

Recommended Readings

1. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC VI)

2. The JNC 8 Hypertension Guidelines: An In-Depth Guide.


4. Stages of Change model. Table 2.

5. Health Beliefs model. Table 3.


7. Updated ATP III LDL-C Goals & Risk Categories. Table 5.

   https://www.ahrq.gov/professionals/clinicians-providers/guidelines-recommendations/guide/index.html
Supplemental Readings/Websites


Case History - Cardiovascular Disease

A 50 year-old Caucasian man presents to your office with a sore throat for 2 days. He has had a low-grade fever (99°F) and a slight cough and running nose. He denies ear pain or difficulty swallowing. His appetite is normal.

Before you start the physical exam, you note that your nurse has recorded his vitals as blood pressure 160/80, pulse 80, respirations 20, and temperature 98.7°F. His height is 5'10" and weight is 220 pounds. What additional questions may you want to ask this patient?

What do you want to look for on physical exam?

What is your assessment and plan?

One month later the patient returns for follow up BP and weight check. Today it is 165/85 and his weight is unchanged. His lipid panel came back as follows: Total cholesterol 240, Triglycerides 200, LDL 160, HDL 35. What stage of hypertension does he have?

Based on this, what would you recommend the patient do?

What further work up and/or therapies would you recommend?
Table 1: The 5 A's Model: A Physician's Guide For Helping Your Patients Stop Smoking **

1. **Ask** about smoking at every opportunity.
   - Prompt the patient for information by asking the following questions:
     - “Do you smoke?”
     - “How much?”
     - “How soon after waking do you have your first cigarette?”
     - “Are you interested in stopping smoking?”
     - “Have you ever tried to stop before?” “If so, what happened?”

2. **Assess** whether the patient is willing to make a ‘quit’ attempt at this time
   - Ask the patient if they are willing to quit smoking at this time (within the next 30 days).
   - If the patient is not ready to make a ‘quit’ now, provide a motivational intervention.
   - If the patient is willing to make a quit attempt at this time, provide assistance.

3. **Advise** all smokers to stop smoking.
   - State your advice clearly. For example: "As your physician, I must advise you to stop smoking now."
   - Personalize the message to quit. Refer to the patient's clinical condition, smoking or family history, personal interests, or social roles as reasons/motivators for quitting.

4. **Assist** the patient in stopping
   - **Set a quit date**
     - Help the patient pick a date within the next four weeks. Acknowledge that quitting now (today) is ideal.
     - Consider signing a stop-smoking contract with patient.
   - **Provide self-help materials**
     - If the patient is not willing to quit now, provide motivating literature such as the NCI's "Why Do You Smoke?" pamphlet.
     - Follow up on their status at their next visit.
     - Consider prescribing nicotine replacement therapy, especially for highly addicted patients (e.g., those smoking one pack or more a day or those who smoke within 30 minutes of waking). See Table 3 for a listing of nicotine replacement therapies.
     - See Table 4 for a listing of organizations that offer educational materials (print or online).
       - “Quit for Good” from the National Cancer Institute (NCI) is one example of educational information available

5. **Arrange** for follow-up
   - **Call or write** the patient within 7 days after initial visit. Reinforce the decision to quit. Remind them of the quit date.
   - **Schedule a follow-up visit** within 1-2 weeks after the quit date.
     - Ask about the patient's smoking status. This will provide support and help to prevent relapse.
     - Relapse is common; if it occurs, encourage the patient to try again immediately.
   - **Schedule a second follow-up visit** in 1-2 months.
   - For patients who have relapsed, discuss the circumstances of the relapse and other special concerns.
     - Recognize harm reduction as well as cessation. Acknowledge the health benefits of fewer number of cigarettes smoked; assist patient to recognize their skills in self-mastery as encouragement for behavior change. Commend them for their efforts.
**A 6th step is recommended for use with youth: it is entitled "Anticipate" and it precedes the "Ask" step. That is, anticipate that youth are experimenting or using tobacco.

Table 2. Stages of Change model

A recently married young woman talks of her hopes to become pregnant as soon as possible and start a family. She also reports that she shares a six-pack or two with her husband several times a week when they are partying.

<table>
<thead>
<tr>
<th>Concept</th>
<th>Example of Physician Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-contemplation</td>
<td>Inquire as to whether or not she has thought about the effects of alcohol on her ability to get pregnant and/or on a developing fetus</td>
</tr>
<tr>
<td>Contemplation</td>
<td>Discuss what her ideas are regarding prenatal care (e.g., beliefs re: the effects of her behavior, including sleep, nutrition, stress level on developing fetus); give pamphlets</td>
</tr>
<tr>
<td>Preparation</td>
<td>[prep] Discuss resources available for support in cutting down or eliminating alcohol intake. Consider recommending a diary for recording her daily beer consumption and associated feelings/ circumstances</td>
</tr>
<tr>
<td>Action</td>
<td>Assist patient in action plan (e.g., including her husband at the next visit, setting a quit date, formalize or repeat referral to resources)</td>
</tr>
<tr>
<td>Relapse</td>
<td>Identify situations/feelings that prompt her to drink and strategies for Preventing relapse. Discuss alternatives to drinking and what to do when a relapse occurs. Acknowledge her demonstrated ability to change; the benefits baby may have already accrued via harm reduction</td>
</tr>
</tbody>
</table>

Table 3. Health Belief Model

<table>
<thead>
<tr>
<th>Concept</th>
<th>Definition</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Susceptibility</td>
<td>One's opinion of chances of getting a condition</td>
<td>Define population(s) at risk, risk levels; personalize risk based on a person's features or behavior; heighten perceived susceptibility if too low.</td>
</tr>
<tr>
<td>Perceived Severity</td>
<td>One's opinion of how serious a condition and its sequelae are</td>
<td>Specify consequences of the risk and the condition</td>
</tr>
<tr>
<td>Perceived Benefits</td>
<td>One's opinion of the efficacy of the advised action to reduce risk or seriousness of impact</td>
<td>Define action to take; how, where, when; clarify the positive effects to be expected.</td>
</tr>
<tr>
<td>-------------------</td>
<td>------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Perceived Barriers</td>
<td>One's opinion of the tangible and psychological costs of the advised action</td>
<td>Identify and reduce barriers through reassurance, incentives, assistance.</td>
</tr>
<tr>
<td>Cues to Action</td>
<td>Strategies to activate “readiness”</td>
<td>Provide how-to information, promote awareness, reminders.</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>Confidence in one's ability to take action</td>
<td>Provide training, guidance in performing action.</td>
</tr>
</tbody>
</table>
Table 4. Motivational Interviewing Algorithm

1. Assess and Personalize Patient’s Risk Status
   • "Based on your BMI, WC, labs, physical exam, family history and symptoms, I am concerned about the following: ______, ______, and _____."
   • "I want to talk to you about how your weight may be affecting your health."

2. Stages of Change Evaluation
   • "How do you feel about your weight?"
   • "What concerns do you have about health risks?"
   • "Are you considering/planning weight loss now?"
   • "Do the pros of changing outweigh the cons?"

3. Educate: Risks and Advise: Weight Goal
   • Educate: Medical Consequences Tip Sheet (longevity and quality of life)
   • Advise: Establish a reasonable goal for weight loss using a clear statement.
   • "A 5-10% weight loss over 6 months for a total loss of _____ to ___ pounds."

4. Assess Patient’s Understanding and Concerns
   • "How do you feel about what I’ve said?"
   • "On a scale of 1 – 10, with 10 being 100% ready to take action, how ready are you to lose weight?"

5. Facilitate motivation depending the patient’s level of contemplation
   • 1-4 = Precontemplation. Goal: Move patient from “No!” to “I’ll think about it.”
   - 1. Validate the patient’s experience.
   - 2. Acknowledge the patient’s control of the decision.
   - 3. In a simple, direct statement, give your opinion on the medical benefits of weight loss for this patient.
   - 4. Explore potential concerns.
   - 5. Acknowledge possible feelings of being pressured.
   - 6. Validate that they are not ready.
   - 7. Restate your position that the decision to lose weight is up to them.
   - 8. Encourage reframing of current state of change as the potential beginning of a change - rather than a decision to never change.

   • 5-7 = Contemplation. Goal: Move to Preparation
   - 1. Validate the patient’s experience.
   - 2. Acknowledge patient’s control of the decision.
   - 3. Clarify patient’s perceptions of the pros and cons of attempted weight loss.
   - 4. Encourage further self-exploration.
5. Restate your position that it is up to them.
6. Leave the door open for moving to preparation.

- 8-10 = Preparation. Goal: Provide direction and support
  
  1. Praise the decision to change behavior.
  2. Prioritize behavior change opportunities.
  3. Identify and assist in problem solving re: obstacles.
  4. Encourage small, initial steps.
  5. Assist patient in identifying social supports.

6. Schedule Follow-up
   - Tell patient when you would like to see them again.
   - Give patient a referral (to a dietitian / exercise specialist / therapist/ etc) if appropriate.
**Nutrition Web Sites**

American Cancer Society: [www.cancer.org](http://www.cancer.org)
American Heart Association: [www.americanheart.org](http://www.americanheart.org)
Centers for Disease Control and Prevention: [www.cdc.gov](http://www.cdc.gov)
American Dietetic Association, complete food & nutrition guide: [www.eatright.org](http://www.eatright.org)
Web Dietitian: [www.webdietitian.com](http://www.webdietitian.com)
Institute of Medicine: [www.iom.edu](http://www.iom.edu)

<table>
<thead>
<tr>
<th>Risk Category</th>
<th>LDL-C Goal</th>
<th>Initiate Therapeutic Lifestyle Changes (TLC)</th>
<th>Consider Drug Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High Risk:</strong> CHD or CHD Risk Equivalents (10-year risk &gt;20%)</td>
<td>&lt;100 mg/dL (Optional goal: &lt;70 mg/dL)</td>
<td>≥100 mg/dL</td>
<td>≥100 mg/dL (&lt;100 mg/dL consider drug options)</td>
</tr>
<tr>
<td><strong>Moderately High Risk:</strong> 2+ Risk Factors (10-year risk 10% to 20%)</td>
<td>&lt;130 mg/dL</td>
<td>≥130 mg/dL</td>
<td>≥130 mg/dL (100-129 mg/dL consider drug options)</td>
</tr>
<tr>
<td><strong>Moderate Risk:</strong> 2+ risk factors 10 year risk &lt;10%</td>
<td>&lt;130 mg/dL</td>
<td>≥130 mg/dL</td>
<td>≥160 mg/dL</td>
</tr>
<tr>
<td><strong>Lower Risk:</strong> 0-1 Risk Factor</td>
<td>&lt;160 mg/dL</td>
<td>≥160 mg/dL</td>
<td>≥190 mg/dL (160-189 mg/dL: LDL-lowering drug optional)</td>
</tr>
</tbody>
</table>

Screening for Lipid Disorders in Adults
Release Date: June 2008

Summary of Recommendations

Screening Men

• The U.S. Preventive Services Task Force (USPSTF) strongly recommends screening men aged 35 and older for lipid disorders.
  Grade: **A recommendation**.
• The USPSTF recommends screening men aged 20 to 35 for lipid disorders if they are at increased risk for coronary heart disease.
  Grade: **B recommendation**.

Screening Women at Increased Risk

• The USPSTF strongly recommends screening women aged 45 and older for lipid disorders if they are at increased risk for coronary heart disease.
  Grade: **A recommendation**.
• The USPSTF recommends screening women aged 20 to 45 for lipid disorders if they are at increased risk for coronary heart disease.
  Grade: **B recommendation**.

Screening Young Men and All Women Not at Increased Risk

• The USPSTF makes no recommendation for or against routine screening for lipid disorders in men aged 20 to 35, or in women aged 20 and older who are not at increased risk for coronary heart disease.
  Grade: **C recommendation**.

[http://www.uspreventiveservicestaskforce.org/uspschol.htm](http://www.uspreventiveservicestaskforce.org/uspschol.htm)

Aspirin for the Prevention of Cardiovascular Disease
Release Date: March 2009

Summary of Recommendations

• The USPSTF recommends the use of aspirin for men age 45 to 79 years when the potential benefit due to a reduction in myocardial infarctions outweighs the potential harm due to an increase in gastrointestinal hemorrhage.
  Grade: **A recommendation**.
• The USPSTF recommends the use of aspirin for women age 55 to 79 years when the potential benefit of a reduction in ischemic strokes outweighs the potential harm of an increase in gastrointestinal hemorrhage.
  Grade: **A recommendation**.
• The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of aspirin for cardiovascular disease prevention in men and women 80 years or older.
  Grade: **I statement**.
• The USPSTF recommends against the use of aspirin for stroke prevention in women younger than 55 years and for myocardial infarction prevention in men younger than 45 years.
  Grade: **D recommendation**.

[http://www.uspreventiveservicestaskforce.org/usps09/aspirincvd/aspcvdrs.htm](http://www.uspreventiveservicestaskforce.org/usps09/aspirincvd/aspcvdrs.htm)
Screening for Type 2 Diabetes Mellitus in Adults
Release Date: June 2008

Summary of Recommendations

- The USPSTF recommends screening for type 2 diabetes in asymptomatic adults with sustained blood pressure (either treated or untreated) greater than 135/80 mm Hg. Grade: B Recommendation.
- The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for type 2 diabetes in asymptomatic adults with blood pressure of 135/80 mm Hg or lower.

http://www.uspreventiveservicestaskforce.org/uspstf/uspsdiab.htm

Screening for Obesity in Adults
Release Date: December 2003

Summary of Recommendations

- The USPSTF recommends that clinicians screen all adult patients for obesity and offer intensive counseling and behavioral interventions to promote sustained weight loss for obese adults. Grade: B Recommendation.
- The USPSTF concludes that the evidence is insufficient to recommend for or against the use of moderate- or low-intensity counseling together with behavioral interventions to promote sustained weight loss in obese adults. Grade: I Statement.
- The USPSTF concludes that the evidence is insufficient to recommend for or against the use of counseling of any intensity and behavioral interventions to promote sustained weight loss in overweight adults. Grade: I Statement.

http://www.uspreventiveservicestaskforce.org/uspstf/uspsobes.htm
Preventive Topic 3:
SECONDARY PREVENTION – SCREENING TO MAKE A DIFFERENCE

1. **Review** the definition and goal of secondary prevention.

2. **List** six criteria for judging the value of screening tests.

3. **Discuss** secondary prevention screening across the age and disease spectrum giving two examples of common screening tests/procedures in children, adolescents and adults.

Below are a few examples to facilitate discussion, other examples are possible.

<table>
<thead>
<tr>
<th>Children</th>
<th>Adolescent</th>
<th>Adult</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Screen Hb/Hct for anemia</td>
<td>• PAP test</td>
<td>• Breast cancer</td>
</tr>
<tr>
<td>• Lead screening</td>
<td>• Screen for tobacco use and recommend tobacco cessation</td>
<td>• Cervical cancer</td>
</tr>
<tr>
<td>• Growth</td>
<td>• Alcohol and substance abuse</td>
<td>• Colon cancer</td>
</tr>
<tr>
<td>• Developmental milestones</td>
<td></td>
<td>• Coronary heart disease</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Depression</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Elder abuse</td>
</tr>
</tbody>
</table>

4. **Evaluate** the case for and against screening for prostate and colon cancer.

5. **Evaluate** the case for and against screening mammography.

6. **List** the options for secondary screening for each of the following diseases: cervical cancer, ovarian cancer and testicular cancer.

7. **Discuss** the role of BRCA1 and 2 genetic testing. What are the prevention implications?

8. **Define** the unique role for family practice in secondary prevention.

**Required Readings**


2. Guide To Clinical Preventive Services: (Summary Recommendations) 3rd edition
   - Screening for abdominal aortic aneurysm
     [http://www.uspreventiveservicestaskforce.org/uspsft/uspsaneu.htm](http://www.uspreventiveservicestaskforce.org/uspsft/uspsaneu.htm)
   - Screening for breast cancer
   - Screening for colorectal cancer
   - Screening for cervical cancer
     [http://www.uspreventiveservicestaskforce.org/uspsft/uspscerv.htm](http://www.uspreventiveservicestaskforce.org/uspsft/uspscerv.htm)
   - Screening for prostate cancer
     [http://www.uspreventiveservicestaskforce.org/uspsft/uspsprca.htm](http://www.uspreventiveservicestaskforce.org/uspsft/uspsprca.htm)
   - Screening for depression
Supplemental Readings/Websites


Preventive Topic 4:
FAMILY MEDICINE AND PUBLIC HEALTH

Learning Objectives: Adolescent and Adult Immunizations

1. **List** the vaccines included in the routine adolescent immunization schedule.

2. **List** the vaccines included in the adult immunization schedule.

3. **Know** where to find the current recommended child, adolescent, and adult immunization schedules.

4. **Know** the CDC guidelines for influenza vaccination.

5. **Know** the ACIP recommendations for HPV vaccination:

6. **List** the true contraindications to vaccines and conditions that are commonly mistaken to be contraindications.

7. **Discuss** with patients common misconceptions and misinformation regarding vaccine risks and benefits.

8. **Know** where to find information about vaccine side effects.

9. **Know** where to find information on vaccines recommended for international travel.

10. **Discuss** the importance of office systems in insuring that patients are up to date on immunizations.

**Learning activities**

1. **Construct** an immunization plan for an adolescent.
2. **Construct** an immunization plan for an adult.
3. Construct a “catch-up” immunization schedule for an adult or adolescent who is under immunized.

**Recommended Readings**

1. General Recommendations on Immunization Recommendations of the Advisory Committee on Immunization Practices (ACIP)
   [https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html](https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html)


**Supplemental Readings/Websites**

1. [http://www.cdc.gov/vaccines/news/news-pubs/index.html](http://www.cdc.gov/vaccines/news/news-pubs/index.html)-this website has info re: vaccine related topics such as vaccine safety and adverse events and you may also search for contraindications for vaccine, info for parents and general side effects or automatic updates.

2. Updated Recommendations for Use of Tetanus Toxoid, Reduced Diphtheria Toxoid, and Acellular Pertussis (Tdap) Vaccine in Adults Aged 65 Years and Older – Advisory Committee on Immunization Practices (ACIP), [http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6125a4.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6125a4.htm)


6. Prevention of Herpes Zoster Recommendations of the Advisory Committee on Immunization Practices (ACIP) [http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5705a1.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5705a1.htm)

7. MMWR. Recommendations for Partner Services Programs for STIs Vol 57 1-63 October 30, 2008 [http://www.cdc.gov/mmwr/pdf/rr/rr57e1030.pdf](http://www.cdc.gov/mmwr/pdf/rr/rr57e1030.pdf)
Learning Objectives: Screening for Sexually Transmitted Infections

1. Discuss why the CDC now recommends routine and widespread screening for HIV and compare the USPSTF recommendation for HIV screening to that of the CDC.

2. Know where to find current treatment recommendations for sexually transmitted infections.

3. Formulate a differential diagnosis for cervicitis, vaginitis, and urethritis.

4. Describe the presenting symptoms of gonorrhea, chlamydia, syphilis, herpes and papilloma virus in both men and women.

5. Discuss the USPSTF recommendations for screening for chlamydia, gonorrhea and syphilis.

6. Discuss the collaborative role of family physicians and local health departments in community control of sexually transmitted infections.

Learning Activities

1. Present a young adolescent female as asymptomatic and discuss STI/HIV screening.

2. Present a symptomatic male and discuss diagnosis and treatment for gonorrhea and how to handle follow up, contact tracing and public health reporting. Discuss HIV screening and risk reduction.

Required Readings


Preventive Topic 5:
CARE OF OLDER ADULTS – HEALTH PROMOTION AND DISEASE PREVENTION

Learning Objectives

1. Discuss challenges in assessing prevention strategies in the elderly.

2. List five leading causes of death in the older adult and discuss strategies for prevention.

3. Identify and define the six components of a comprehensive assessment of older adults.

4. Differentiate between basic activities of daily living (BADLs), instrumental activities of daily living (IADLs), and advanced activities of daily living (AADLs) and the role each plays in overall function and quality of life.

5. List and discuss 10 common syndromes associated with older adults.

6. Identify four strategies that promote independence and optimal aging.
7. List and discuss how aging can uniquely affect older adults with disabilities.

**Recommended Readings**


5. Carroll T, Tomasa L. In-home safety checklist - things you can do to reduce the risk of falling. 2001.


10. Folstein Mini Mental Status Exam.

11. Clock Drawing

12. Geriatric Depression Scale (GDS).

13. Facts About Older Adults with Developmental Disabilities and Their Aging Family Caregivers, The Department of Disability and Human Development, the University of Illinois at Chicago


Supplemental Readings/Websites

**Activities of Daily Living (ADLs): An Assessment of Function**

**Name:** ___________________________  
**Date:** __________________

**Location:** ___________________________  
**Information Obtained From:** ___________________

**Lives at:** own home with family  
*other:* ________________

<table>
<thead>
<tr>
<th>BASIC ADLs</th>
<th>LEVEL OF HELP</th>
<th>ASSISTIVE DEVICES USED</th>
<th>PLAN OF ACTION AND RECOMMENDATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AMBULATION:</strong> Walking for 50 feet or Room to Room</td>
<td>I</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td><strong>AMBULATION:</strong> On uneven surfaces or stairs.</td>
<td>I</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td><strong>TRANSFER:</strong> Gets in/out of bed or chair</td>
<td>D</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BATHING:</strong> Gets to or obtains water, washes, dries body</td>
<td>I</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td><strong>EATING:</strong> Gets food into body from plate, cup etc.</td>
<td>D</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DRESSING:</strong> Selects clothes, puts top, bottom, shoes</td>
<td>I</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td><strong>GROOMING:</strong> Brushes hair, teeth, shaves, puts on makeup</td>
<td>D</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BOWEL FUNCTION:</strong> Gets to bathroom in time</td>
<td>I</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td><strong>BLADDER FUNCTION:</strong> Gets to bathroom in time</td>
<td>D</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INSTRUMENTAL ADLs</th>
<th>LEVEL OF HELP</th>
<th>HOW ACTIVITY IS COMPLETED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GET TO PLACES OUT OF WALKING DISTANCES (by bus, taxi, cab)</strong></td>
<td>I</td>
<td>A</td>
</tr>
<tr>
<td><strong>SHOPPING:</strong> groceries, clothes, etc.</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td><strong>LAUNDRY:</strong> Washing, folding, hanging</td>
<td>I</td>
<td>A</td>
</tr>
<tr>
<td><strong>HOUSEWORK:</strong> Vacuuming, cleaning, etc.</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td><strong>COOKING:</strong> Safe use of stove, oven, microwave</td>
<td>I</td>
<td>A</td>
</tr>
<tr>
<td>Activity</td>
<td>Level of Help</td>
<td>How Activity is Completed</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>---------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td><strong>MONEY MANAGEMENT</strong>: Pay bills, write checks, etc.</td>
<td>I</td>
<td>A</td>
</tr>
<tr>
<td><strong>USING THE TELEPHONE</strong>: Call friends, family, for help</td>
<td>I</td>
<td>A</td>
</tr>
<tr>
<td><strong>MANAGING MEDICATIONS</strong>: Takes meds as directed</td>
<td>I</td>
<td>A</td>
</tr>
<tr>
<td><strong>DRIVING</strong>: Day and night</td>
<td>I</td>
<td>A</td>
</tr>
<tr>
<td><strong>HOME MAINTENANCE</strong>: Yardwork, plumbing, repairs</td>
<td>I</td>
<td>A</td>
</tr>
<tr>
<td><strong>READING</strong>:</td>
<td>I</td>
<td>A</td>
</tr>
<tr>
<td><strong>WRITING</strong>:</td>
<td>I</td>
<td>A</td>
</tr>
<tr>
<td><strong>ADVANCED ADLs</strong>: ability to fulfill societal, community and family roles (individualized)</td>
<td>I</td>
<td>A</td>
</tr>
</tbody>
</table>
In-Home Safety Check List

Things you can do to reduce your risk of falling

Falls are preventable. Falls are one of the leading problems facing the older person and may lead to permanent disability that limits a person's independence. Indirectly, the fear of falling may also be damaging. Elderly who fear falling limit their activities, which ultimately leads to social isolation. Making simple changes to lifestyle and the environment can provide peace of mind and prevent the likelihood of falling.

The older population's risk of falling is related to three influences: the normal aging process, pathology that increases with age, and environmental conditions. Below are simple lifestyle changes and home modifications that may increase your safety and deter falls.

The lack of exercise leads to weakness and increases your chance of falling. Exercise that improves strength, balance, and coordination are one of the most important ways to reduce your risk of falling. Ask your doctor or health care provider about the best type of exercise program for you.

The following includes helpful hints to help you reduce your risk of falling. This list does not include all the potential causes of falls. Review the following and check those that apply to you. Contact your health care provider if you have further questions, or need help making changes. Home visits and safety assessments can be done by physicians, nurses, social workers, physical therapists, occupational therapists, or other trained individuals.

Have you fallen 2 or more times in the past 6 months?

Get a checkup! Falls lead to injuries. You need to find out why you are falling.

Do you have:

Trouble walking without holding on to something
- You may need a cane or a walker
- Consult your doctor or health care provider

Poor lighting
As you get older, you need brighter lights to see well
- Add nightlights where overhead lighting is lacking
- Add nightlights in the bathroom, bedroom, or hallway to make night trips to the bathroom safer
- Keep a charged flashlight near your bed for emergencies
- Adding lamp shades or frosted bulbs can reduce glare

Throw Rugs or Clutter
- Remove things from the floor and keep hallways or high-traffic areas clear
- Remove papers, books, clothes, electric cords, and shoes from stairs and places where you walk
- If you do not wish to remove your throw rugs, they should be securely fastened with an adhesive, double-stick tape

Unsafe, broken or worn steps/stairs/railings
- Add bright strips of tape to the edge of each stair in order to see them better
- Repair broken or worn steps and keep them free of clutter
- Repair or install handrails on stairs

Spills or slippery floors (bathroom, bathtub, shower)
- Wipe up spills as soon as they happen
- Wear supportive, rubber-soled shoes that fit well
- Always use a non-skid bathtub / shower mat
If you bathe in a shower, consider installing a non-skid shower chair and hand-held shower head so you can sit while bathing.

Install grab bars or handrails in the shower, on walls around the bathtub, and alongside the toilet when necessary.

Pool shoes worn before, during and after bathing provides a non-slip surface.

Avoid pulling up on the sink or towel bars to get up from the toilet or bathtub. They are not securely fastened to the wall or floor, and are not intended to support your weight.

**Floppy slippers or a long bathrobe**
- Wear well-fitting supportive shoes with non-skid soles.
- Avoid night clothing that drags on the ground.
- Keep robe tied.

**Phone that is not accessible**
Help is only a phone call away.
- Keep emergency numbers readily available.
- Keep phones in bedroom, kitchen, or where you spend most of your time.
- Cordless phones can be kept on your walker (walker bag).
- “Lifeline” can be worn on neck or wrist.

**Multiple Medications**
Certain medications can cause dizziness, drowsiness and balance problems.
- Have all of your medications (including over-the-counter medicines such as cold medicines) reviewed each time you are given a new prescription or at least yearly by a pharmacist or doctor.
- Limit alcohol intake.
- Make a list of all your medications, including dose and frequency and keep in a clearly visible location (for example: front of ice box, kitchen cabinet).
- Develop a reminder system (med box, chart, etc.).
- Keep all medications in one central location.

**Sensory Changes:**

**Hearing**
- Dizziness can occur with hearing loss.
- Make an appointment to check your hearing.

**Vision**
- Keep your glasses clean.
- Have your eyes examined regularly – you may be wearing the wrong glasses or have a medical condition such as glaucoma, cataracts, macular degeneration, etc.

**Regularly used items out of reach (Reach-Balance Test)**
- Put regularly used items on shelves within easy reach between hip and eye level.
- A long-handled grasper can be used to reach objects that are on high shelves or on the floor.

**Reach-Balance Test**
While standing, can you lean forward and reach out with one arm in front of you 1 to 3 feet without losing your balance? If not, you may have an increased risk of falling.

**Furniture that is difficult to get in and out of? (Get Up and Go Test)**
- Try to sit on furniture with good back support that you can get into and out of easily.
- Firm chairs with arm rests are easier to get out of.
- Add pillows to the back of the chair so your feel can touch the floor.
Do not sit on low furniture
Use a raised toilet seat
Use caution when getting up – **take your time**

**Get Up and Go Test**

How long does it take to go from sitting to standing and then take a few steps? Less than 5 seconds is good. More than 5 seconds or repeated efforts may mean you have an increased risk of falling.

Tracy Carroll, PT, MPH   Dept. of Family and Community Medicine, University of Arizona
Lynne Tomasa, PhD, MSW, Dept. of Family and Community Medicine, University of Arizona
Home Visit with an Older Adult  
Family Practice Clerkship 2010-11

Introduction:
Each student is encouraged to make a home visit with an older adult. The home visit can be done with the preceptor, a home health staff member, hospice team member, or family medicine faculty member. The purpose of the home visit is do a comprehensive evaluation with the goal of promoting independence, safety and health in the home. **Students are encouraged** to fill out the Home Assessment Form as completely as possible or as appropriate.

Learning Objectives:
1. Conduct an in-home assessment that addresses home safety, nutritional status, medication use, finances, functional status, and social supports.
2. Discuss the influence of culture, family, living environment, and other factors in the health care status of older persons and incorporate this knowledge into a care plan.
3. Identify potential problems regarding falls/home safety, abuse (physical, neglect and exploitation), and caregiver stress.

Regular in-home assessments are becoming increasingly important because the number of frail and immobile elders is forecast to double over the next 20 years. Home assessments reveal new and important information, which typically cannot be obtained even in the most comprehensive office visit. The benefits of a home evaluation include 1) enhanced physician/patient communication; 2) fall/accident prevention; 3) caregiver assessment/needs; 4) improved functional status; and 4) more accurate decision-making regarding long term care needs.

For example, the older adult may show a higher level of functioning than during the office evaluation because of adaptations made in their home. At the same time, health and safety hazards may be identified before they become a problem and before an injury occurs. Direct observation in the home of older adult-caregiver interactions allows the health care provider to offer suggestions and education. Burnout and the potential for abuse and neglect can be identified and addressed. A home assessment is particularly helpful in maximizing independence and quality of life, and when necessary, evaluating an older person for possible institutional care.

Home visits can address a single problem (terminal care) or entail the complete assessment of all domains.

**Indications for In-Home Assessment**
- Recent discharge from hospital or long term care facility
- Planning rehabilitative or restorative therapy
- Non response to therapy
- Non response to therapy
- Preventive care for elders at risk of falling or injury
- Individuals with dementia and or depression
- Complicated social situation
- Social isolation
- Fact-finding related to weight loss, failure to thrive, or unexplained new problem
- Individuals facing chronic or terminal illness

**Assessment Tools Commonly Used to Assess Older Adults**
- Home Assessment Tool
- Advance Directives
- Folstein Mini Mental Exam
- Geriatric Depression Scale
- In-Home Safety Check List (included in syllabus for Week 6)
Home Assessment Tool

Home Visit with: ______________________________

Lives Alone: YES NO

Lives with: _______________ Relationship: __________________ Phone: ________________

Lives in: Own home/Apt. Assisted Living Boarding/Care home Nursing Home
Other: _____

FUNCTIONAL STATUS

<table>
<thead>
<tr>
<th>Degree of Independence (check the appropriate column according to the following definitions)</th>
<th>ASSISTIVE DEVICES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I = INDEPENDENT</strong></td>
<td></td>
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<tr>
<td><strong>SH = SOME HELP</strong></td>
<td></td>
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<tr>
<td><strong>D = DEPENDENT</strong></td>
<td></td>
</tr>
<tr>
<td><strong>ACTIVITIES OF DAILY LIVING (ADLs)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>INSTRUMENTAL ADLS (IADLs)</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Activity</th>
<th>I</th>
<th>SH</th>
<th>D</th>
<th>Activity</th>
<th>I</th>
<th>SH</th>
<th>D</th>
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<tbody>
<tr>
<td>ambulation</td>
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<td>money management</td>
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<td>use of telephone</td>
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<tr>
<td>toileting</td>
<td></td>
<td></td>
<td></td>
<td>taking own medications</td>
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</tbody>
</table>

Driving History: (Accidents)
Exercise Activity/ Frequency:

GAIT AND BALANCE (Timed Get up and Go Test):
Using a Watch - Ask person to stand up from a chair, walk 3 meters, turn around, walk back, and sit down.
(< 5 sec. = good; >5 sec./repeated efforts = increased risk of falling; > 15 sec. = abnormal)
Comment on unsafe or incomplete transfers, poor sitting balance, instability, staggering, discontinuous steps, hesitancy, unsafe maneuvers, grabbing for support, stumbling).

ENVIRONMENTAL - Fall History (SPLAT)

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Previous Falls</th>
<th>Location</th>
<th>Activity</th>
<th>Time</th>
</tr>
</thead>
</table>

FAMILY/COMMUNITY SUPPORT

Support System: Family ______________________________________________________

Friends/Neighbors_______________________________________________

Church __________

Outside Activities: ______________________________________________________________

Fear of Crime ____________________________________________________________

Potential for Abuse / Neglect: YES NO Unable to Assess
Vulnerable: YES NO Reason for Concern: ________________________________
Living Will: YES NO

Durable Medical Power of Attorney: YES (name: __________________) NO
Legal Guardian: YES (name: __________________) NO

Services Currently Received

Case Management ___ Day Care ___ Home Meals ___ Home Health ___
Mental Health Counseling ___ Hospice ___ Homemaker ___ Respite ___ Other ____________

MENTAL STATUS

Geriatric Depression Scale (GDS) score _________ Folstein Mini Mental score _________
Suicide history/risk

Recent behavioral changes (per caregiver):
  Wandering:
  Paranoia:
  Hallucinations:
  Other:

FINANCIAL SITUATION

Health Insurance______________________ Social Security _____  SSI _______
Pension __________ Other ____________

Able to afford medications?  YES  NO
Able to afford adequate nutrition?  YES  NO
Able to afford rent, other necessities?  YES  NO

NUTRITIONAL STATUS

Special Diet __________________________________________________________________________

Typical Recall (ask what they ate the previous day for each meal, including liquid intake)

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

Nutritional Risk  YES  NO
Reason:_____________________________________________________________________________

Ask permission to check refrigerator for
  Fresh fruits  YES  NO
  Fresh vegetables  YES  NO
  Old/spoiled food  YES  NO
  Other Concerns:

Recent weight loss  YES ( from _____ to _____)  NO CHANGE
(Increased risk if weight decreased 5% in one month or 10% in six months)

Problems with:
  chewing____________________________________________________________________________
  dentures____________________________________________________________________________
  swallowing____________________________________________________________________________
  constipation___________________________________________________________________________
  diarrhea_____________________________________________________________________________
## MEDICATIONS

List of medications  (include over the counter medications, herbals and alternative Rx)

<table>
<thead>
<tr>
<th>Medication and Dose</th>
<th>Side Effects</th>
<th>Is it Helping?</th>
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</table>

Able to state medication dose and purpose
(have person read label to you and ask how many did you take yesterday?)

____________________________________________________________________________________

Takes medication as prescribed (is the dose taken same as label instructions?)

____________________________________________________________________________________

Medication set-up (location and aids used to remember schedule, i.e. med box)

____________________________________________________________________________________

Do a complete pill count if compliance is a concern __________________________________

## SAFETY CHECK LIST

Check potential safety hazards

- Clutter
- Loose telephone cords
- Poor lighting (bathroom, bedroom, living area)
- Pets underfoot
- Burners/Oven Left On
- Loose Carpets
- Steps
- Poor shoes/Slippery shoes/Socks
- Shelves beyond easy reach
- No grab bars in tub/shower
_____ Loose/No handrails                      _____ No smoke detectors
_____ Doors left unlocked                    _____ Other ____________________________

Recommendations Made: ____________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

NOTES
Preventive Topic 6: Women's Health

Objectives:

**Contraception**
Discuss different contraceptive options and the associated counseling with each option

**Prenatal Care**
1. Describe the best means of accurately determining gestational age
2. Cite when prenatal vitamins or supplements are indicated
3. Summarize appropriate screening tests during pregnancy. When to order them.
4. How does a prior cesarean delivery influence current delivery options.

**Menstrual Irregularities**
1. Define each of the following
   a. Premenstrual syndrome
   b. Dysmenorrhea
   c. Menorrhagia
2. Describe the appropriate clinical, lab, and radiologic evaluation for each of the above

3. Cite the best course of treatment or therapeutic options for each

**Menopause**

1. Identify symptoms associated with menopause

2. Potential therapeutic options for those associated symptoms

3. Discuss osteoporosis prevention and treatment

4. Hormone therapy. What are the options?

**Recommended Reading**