- Strength training and balance exercises improve function and reduce impairment
- Strong evidence to support[1]
  - Counseling for physical activity and exercise[1]
  - Counseling for general health [1]
  - Counseling for fall prevention[1]
- Screen for fall risks factors
  - Medication use (including polypharmacy)[1]
  - Blood pressure[1]
  - Balance and gait[1]
  - Heart health[1]
  - Home safety[1]
- Tables included in the article
  - Outline geriatric red flags for immediate referral and those requiring co-management or appropriate referral[1]
  - "Agency for Healthcare Research and Quality (AHRQ) recommendations for screening and counseling for adults aged 65 and older"[1]
- Hawk et al. provides "a general framework for what constitutes an evidence-based and reasonable approach to the chiropractic management of older adults."[1]
- Dougherty et al. article focuses on SMT, acupuncture, physical activity/exercise, nutritional counseling and fall prevention[2]
- Observational studies and RCTs "have reported improvement of spinal pain (acute, sub-acute and chronic) among seniors using SMT, BioEnergetic Synchronization Technique and Cox Flexion-Distraction technique."[2]
- 2010 UK Report of Manual therapies indicates effectiveness in adults for
  - SMT for acute, subacute and chronic LBP; headaches (migraine and cervicogenic) and cervicogenic dizziness[2,3]
  - SMT or mobilization for some extremity joint conditions[2,3]
  - SMT or mobilization of thoracic spine for both acute and subcute neck pain[2,3]
- Limited evidence for SMT for "COPD, constipation, depression (associated with back pain), Parkinson's disease, MS, pneumonia, spinal stenosis, urinary incontinence, and OA pain and dysfunction, especially of the knee"[2]
- Acupuncture and chronic MSK pain
  - Insufficient experimental evidence showing it benefit over other modalities[2]
- Evidence for supplement use impacting health outcomes
  - A 2011 systematic review and meta-analysis found that Vitamin D (800-1000 IU/day) improves strength and balance[4]
  - A 2010 systematic review found that Vitamin D supplementation reduces risk of falls[5]
  - Most beneficial: Vitamin D and calcium as an "adjunct to pharmacologic regimen in treatment of osteoporosis and in the prevention of hip fractures and other non-vertebral fractures"[2]
    - Recommended 1,200 mg calcium; 1,000 IU of Vitamin D[2]
  - Other supplements have "inadequate evidence or evidence of significant side effects"[2]

Continued on next page.

Special Populations - Geriatric continued

- Positive effects of aerobic exercise and strength training (strength, balance and physical functioning)[2]
  - Modest beneficial effect of resistive training on strength outcomes[2]
  - Strong evidence for improving gait speed and chair stands[2]
  - Decreased levels of arthritic knee pain with resistive training[2]
- "DCs should collect falls history information, and provide treatment and exercises for musculoskeletal conditions"[2]

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