Strength training and balance exercises improve function and reduce impairment

Strong evidence to support
- Counseling for physical activity and exercise
- Counseling for general health
- Counseling for fall prevention

Screen for fall risks factors
- Medication use (including polypharmacy)
- Blood pressure
- Balance and gait
- Heart health
- Home safety

Tables included in the article
- Outline geriatric red flags for immediate referral and those requiring co-management or appropriate referral
  - “Agency for Healthcare Research and Quality (AHRQ) recommendations for screening and counseling for adults aged 65 and older”

Hawk et al. provides "a general framework for what constitutes an evidence-based and reasonable approach to the chiropractic management of older adults."

Dougherty et al. article focuses on SMT, acupuncture, physical activity/exercise, nutritional counseling and fall prevention

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.”

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
- SMT or mobilization for some extremity joint conditions
- SMT or mobilization of thoracic spine for both acute and subacute neck pain
- 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”

Acupuncture and chronic MSK pain
  - Insufficient experimental evidence showing it benefit over other modalities

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
- A 2010 systematic review found that Vitamin D supplementation reduces risk of falls
  - 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”
    - Recommended 1,200 mg calcium; 1,000 IU of Vitamin D
  - Other supplements have “inadequate evidence or evidence of significant side effects”
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”\(^2\)

References


