The role of chiropractic care in providing health promotion and clinical preventive services for adult patients with musculoskeletal pain: a clinical practice guideline

**Consensus Recommendations**

65 panelists. All statements reached at least 80% agreement (percentages in blue after statement ID).

### General principles of health promotion and clinical prevention

| G1. 95% | Clinical preventive services, which include screening and counseling on health promotion and disease prevention, contribute to reducing current epidemic levels of chronic disease, chronic pain, obesity and opioid use.  
| G2. 95% | Specific health behaviors are risk factors for most chronic conditions for which people seek health care.  
| G3. 99% | It is the responsibility of healthcare providers to identify these risk factors and facilitate health behavior change through providing appropriate evidence-based interventions or access to resources for such interventions.  
| G4. 99% | A biopsychosocial model is most appropriate for health promotion and disease prevention, particularly for typical chiropractic patients who present with chronic musculoskeletal pain and comorbidities/risk factors such as obesity, diabetes, cardiovascular disease and other chronic conditions.  
| G5. 99% | Interprofessional collaboration contributes to the successful delivery of clinical preventive services.  
| G6. 97% | Within their regulated scope of practice, DCs, like other health professionals, should follow established best-practice guidelines for disease prevention and health promotion, such as those recommended by the U. S. Preventive Services Task Force and other recognized authorities.  
| G7. 89% | Use health promotion counseling strategies established for use in primary care settings that can be delivered as brief interventions (3-10 min, which may be spread over multiple visits) to facilitate health behavior change in patients with risk factors for or presence of chronic disease. Emphasize key principles (G7a-e):  
| G7a. 89% | To encourage willing collaboration between patient and provider and gauge patient readiness to change, ask the patient for permission to discuss a behavioral issue directly related to the presenting complaint.  
| G7b. 99% | Provide necessary information appropriate to the patient’s level of health literacy.  
| G7c. 99% | Mutually agree on a specific behavior change, emphasizing its importance to the individual.  
| G7d. 95% | Provide readily accessed resources (ehealth/mhealth or conventional) so the patient can immediately take action.  
| G7e. 99% | Follow up at subsequent visits with brief questions and encouragement.  
| G8. 97% | Address patients’ cultural values as appropriate within the context of the specific health care topic on which you are counseling them. If these are not known, respectfully ask about their health beliefs and customs. |

### Informed consent, risks and benefits

| I1. 100% | Chiropractic management should be consistent with the principles of evidence-based practice, which depend on: (1) the best available published scientific evidence combined with (2) the clinician’s experience and expertise and (3) the patient’s preferences and values.  
| I2. 94% | Inform the patient about any serious potential risks and costs as well as the possible benefits of a proposed intervention.  
| I3. 99% | The informed consent process involves active provider-patient communication. Explain all procedures, including diagnostic and treatment options (including no treatment and the natural history of spinal pain) in terms that are appropriate for the patient’s level of health literacy. After answering the patient’s questions and obtaining their signature, enter the informed consent into the health record.  
| I4. 97% | Assess the patient for possible contraindications to manipulation or other procedures, particularly high-velocity, low-amplitude “thrust” maneuvers. |
Chiropractic-specific health promotion and disease prevention model

CHP1. **100%** Health promotion and disease prevention in chiropractic should be based on a biopsychosocial model encouraging patient empowerment and engagement in self-care practices.\(^{11,16}\)

CHP2. **99%** Clinical preventive services within the chiropractic scope of practice are congruent with those of other providers and emphasize the following 3 components:\(^{16,25}\)
1. Screening for risk factors for disease, particularly lifestyle related risk factors such as tobacco use, lack of physical activity, poor diet and obesity.
2. Evidence-based health behavior counseling to promote health and prevent disease and injury, placing an emphasis on physical activity, dietary and lifestyle factors that promote optimal function.
3. Manual procedures including spinal manipulation to enhance the patient’s ability to engage in an active lifestyle.\(^{17}\)

Phases of prevention for chiropractic management of musculoskeletal pain

MSK1. **94%** **Primary prevention of pain:** Chiropractic management that includes counseling on exercises or safety measures to decrease the risk of acute injury addresses primary prevention of pain.\(^4\) However clinical evidence does not currently exist to support the use of spinal manipulation alone for direct primary prevention of any condition or disease.\(^{26}\)

MSK2. **92%** **Secondary prevention of pain:** Chiropractic management that includes spinal manipulation, lifestyle counseling and other non-pharmaceutical approaches may contribute to secondary prevention of pain by shortening the duration of acute pain but little evidence supports spinal manipulation alone in preventing the transition from acute to chronic pain.\(^4,27,28\)

MSK3. **95%** **Tertiary prevention of pain:** Substantial evidence supports chiropractic management that includes spinal manipulation, lifestyle counseling and other non-pharmaceutical approaches for tertiary prevention of pain.\(^{17,29-32}\)

Primary prevention

P1. **94%** Tobacco use, obesity, poor diet and physical inactivity are key risk factors for chronic disease of paramount importance to the health of the public. Like all healthcare providers, DCs should screen for these risk factors and provide or refer for evidence-based resources and/or counseling.\(^{16,25}\)

(Table 1 89%—see p. 10 (after Literature Cited section))

Tobacco cessation

Tob1. **95%** Determine the tobacco use status of all adolescent and adult patients and record it in the health record.

Tob2. **95%** Offer tobacco users information and/or resources for cessation. At a minimum, offer him or her the national quit line number (U.S. 800-QUIT-NOW).

Tob3. **95%** Offer patients readily accessed online cessation resources.

Tob4. **94%** Base tobacco cessation counseling on the Ask, Advise & Refer or 5 A’s approach.\(^{25,35}\)
See Figure 2 on next page for Ask, Advise & Refer model.\(^ {25,36}\)

Weight management

WM1. **91%** Identify patients who are overweight or obese and ask permission to initiate a health-focused and person-centered discussion with them.\(^ {37}\)

WM2. **95%** Overweight patients with weight-related conditions (such as diabetes) and obese patients should be provided with a lifestyle program that includes 1) reducing calories; 2) increasing physical activity; 3) interventions to support behavioral change.\(^ {25,37,38}\)

WM3. **95%** Provide patients with individualized follow-up feedback using technology-based strategies.\(^ {5-7,37,39}\)
Nutrition/diet

Nut1. **88%** Make nutrition recommendations for adults of all body sizes personally and culturally acceptable and affordable to the patient as well as nutritionally adequate to support long-term adherence.\(^{37,40}\)

Nut2. **94%** Advise patients with risk factors for chronic disease or presence of chronic disease to adopt a diet emphasizing vegetables, fruits, whole grains and unprocessed food and minimizing added sugar and salt.\(^{41}\)

**Figure 2. Ask, Advise, Refer Model.**

[Diagram of the Ask, Advise, Refer Model]

Physical activity

PA1. **94%** Advise currently sedentary patients to reduce sitting time and increase moderate-to-vigorous physical activity.\(^{42-46}\)

PA2. **97%** For currently sedentary patients, follow the updated screening recommendations of the American Academy of Sports Medicine for exercise participation (Table 2).\(^{47}\)

**Table 2. Screening and advising on exercise participation for currently sedentary adult patients.**

<table>
<thead>
<tr>
<th>Presentation</th>
<th>Medical clearance recommended?</th>
<th>Exercise recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>No signs, symptoms or diagnosed CV, metabolic or renal disease</td>
<td>No</td>
<td>Begin with light to moderate intensity exercise</td>
</tr>
<tr>
<td>Asymptomatic but diagnosed CV, metabolic or renal disease</td>
<td>Yes</td>
<td>After medical clearance, begin light to moderate intensity exercise</td>
</tr>
<tr>
<td>Signs or symptoms suggestive of CV, metabolic or renal disease, regardless of disease status</td>
<td></td>
<td></td>
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</table>

Abbreviations: CV, cardiovascular

Injury prevention

**Fall prevention for older adults**

IP1. **99%** Advise older adults on balance, strength and endurance exercises for fall prevention.\(^{33,48-50}\)

IP2. **88%** There is limited evidence directly supporting manual therapy to improve balance in older adults.\(^{51,52}\)

However, spinal manipulation is supported for reducing chronic musculoskeletal pain and cervicogenic dizziness.\(^{53,54}\) In the presence of these conditions a multimodal approach that includes spinal manipulation combined with an appropriate exercise regimen\(^ {33,49}\) and resources for patients to correct home hazards\(^ {55}\) may be supportive to older adults at risk for falls.
### Suicide prevention

**IP3. 95%** Because chronic pain and opioid use are among a group of important risk factors for suicide, establish and maintain a list of qualified counselors experienced in suicide risk assessment and/or treatment for at-risk patients.

**IP4. 97%** Maintain readily accessible community resources for suicide prevention such as the National Suicide Prevention Lifeline.

### Firearm safety

**IP5. 86%** For patients with indications of risk for self-harm or harm to others, in additional to referral for counseling, recommend resources on firearm safety when appropriate.

### Infection control

**IC1. 83%** Immunization is a well-established medical approach to primary prevention. Because it is not within the chiropractic scope of practice, refer patients who ask about vaccines to authoritative, evidence-based resources.

**IC3. 94%** No definitive clinical evidence supports a protective effect of spinal manipulation on immune system function or infectious disease prophylaxis.

**IC2. 100%** Provide office and clinical staff with an infection control protocol with training on hand hygiene, personal protective equipment (PPE) and environmental (surface) cleaning to prevent infection, consistent with evidence-based international or national guidelines such as those provided by the World Health Organization.

**C2. 99%** Base advice to patients on infectious disease, particularly COVID-19, on evidence-based international or national public health guidelines.

**IC4. 100%** Risk factor reduction, particularly tobacco use cessation, achieving and maintaining a healthy weight, healthy food choices, stress management and increased physical activity may have a supportive effect on the immune system and possibly a prophylactic influence on infectious disease. These are not unique to chiropractic but are within the scope of many health professionals to recommend.

### Secondary prevention

**S1. 94%** Provide patients with evidence-based screening procedures within the chiropractic scope of practice, such as the priority USPSTF-recommended procedures (Table 1).

**S2. 100%** Develop a referral network of appropriate primary care and specialist practitioners for recommended screening procedures outside the scope of chiropractic practice.

**S2a. 94%** During routine physical inspection of the body, note presence of any skin lesions that appear atypical according to the ABCDS inspection (A symmetrical; irregular B order; uneven/changed C olor; Diameter > .25 inch; E volving in size, shape, or symptoms) and refer the patient to a dermatologist or their primary care physician for screening.

### Tertiary prevention

**Sp1. 91%** Patients’ chronic musculoskeletal pain should not be expected to be "cured" within a specified time interval and/or number of treatment visits. Maintaining pain and function at optimal levels may be facilitated by planned treatment visits to prevent relapses and recurrences.

**Sp2. 97%** The goal of pain management is to facilitate the patient’s ability to function optimally. This requires engaging the patient in self-care and lifestyle modifications to avoid physician dependence.

**Sp3. 100%** Consider multiple approaches that include both active and passive interventions as well as both physical and mind-body interventions.
### Spine-related chronic pain

**Sp3a. 100%** Active interventions for spine-related chronic pain include: \(^{17}\)
- Rehabilitation exercise including strengthening and flexibility
- Decrease amount of time spent sitting
- Weight management for obese patients
- Tobacco cessation for users
- Walking or other moderate aerobic exercise
- Yoga and Qigong

**Sp3b. 95%** Passive interventions should be focused on assisting the patient to become more active: \(^{17}\)
- Spinal manipulation/mobilization
- Massage
- Acupuncture
- Low-level laser therapy
- Electrotherapies: Transcutaneous Electrical Nerve Stimulation (TENS) or interferential current to manage pain and assist patient in becoming active.

**Sp3c. 97%** Mind-body approaches: Offer resources (online or by referral) for Cognitive-Behavioral Therapy and Mindfulness-Based Stress Reduction. \(^{17}\)

### Osteoarthritis

**OA1. 92%** Active physical interventions for OA include:
- Exercise to support both achieving and maintaining healthy weight and for fitness, strength and flexibility. \(^{72,73}\)
- Decrease sedentary time.
- Multifactorial weight management if overweight or obese. \(^{72-74}\)

**OA2. 97%** Passive physical interventions include: \(^{72}\)
- Manual therapy including manipulation, mobilization and/or massage \(^{75-78}\)
- Acupuncture, using “high dose” (greater treatment frequency, at least 3 x week) \(^{79,80}\)
- Low-level laser therapy \(^{81,82}\)

**OA3. 97%** Mind-body approaches: \(^{72,73}\) Offer resources (online or by referral) for mind-body interventions such as Cognitive-Behavioral Therapy and Mindfulness-Based Stress Reduction.

### Quaternary prevention

**Q1. 88%** For older patients with spinal pain, provide spinal manipulation to reduce use of opioid analgesic therapy. \(^{9,10,83-87}\)

**Q2. 94%** For adults with low back pain, provide chiropractic care to reduce risk of outpatient adverse drug events. \(^{88}\)

**Q3. 92%** For adults with work-related back injuries, provide chiropractic care when appropriate to reduce likelihood of back surgery. \(^{89}\)

**Q4. 89%** For older adults with spinal pain and no red flags, chiropractic care including spinal manipulation may be provided without imaging. \(^{90-92}\)

**Q5. 95%** Take a thorough health history on all patients, including opioid and other medication use. Because the unintended consequences of opioid analgesic therapy may complicate patient care, DCs should work closely with the medical physicians of patients using opioids to ensure appropriate clinical management and reduce risk of adverse drug events. It is outside chiropractic scope of practice to advise patients to stop opioids, so it is important to collaborate with patients’ providers with prescriptive authority to support reduction of opioid use. \(^{9,31}\)
Literature Cited


<table>
<thead>
<tr>
<th>Screening only</th>
<th>Population</th>
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<tbody>
<tr>
<td>Abdominal aortic aneurysm, screening</td>
<td>Men ages 67-75, ever smoked</td>
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<td>Abnormal blood glucose</td>
<td>Adults ages 40-70, BMI ≥ 25&lt;sup&gt;1&lt;/sup&gt;</td>
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<td>Colorectal cancer</td>
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<td>Hypertension</td>
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<td>Intimate Partner Violence (IPV)&lt;sup&gt;3&lt;/sup&gt;</td>
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<td>Ages 55-80 with ≥ 30 years smoking history and still smokes or quit within past 15 years</td>
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<td>Unhealthy drug use&lt;sup&gt;2&lt;/sup&gt;</td>
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<td>Folic acid supplement, 400-800 mcg</td>
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<td>Skin cancer prevention&lt;sup&gt;6&lt;/sup&gt;</td>
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<td>Tobacco use cessation</td>
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<td>Sexually transmitted infections</td>
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<td>Syphilis</td>
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*Color code:
Green shading—appropriate to be performed in chiropractic practices
Yellow shading—appropriate for chiropractors to refer to laboratories or medical practitioners

*All numbers refer to age in years unless otherwise specified.

<sup>1</sup> BMI 25-29.9 = overweight; BMI 30+ = obese

<sup>2</sup> Only if systems are in place (or available by referral) for accurate diagnosis, treatment and follow-up

<sup>3</sup> Refer for ongoing support services.

<sup>4</sup> Intensive counseling/behavioral intervention to promote healthful diet and physical activity

<sup>5</sup> 2017 meta-analysis suggests exercise programs that challenge balance and include more than 3 hours/week of exercise have greater fall prevention effects<sup>2</sup>

<sup>6</sup> Behavioral counseling interventions target sun-protection behaviors to reduce UV radiation exposure, including use of broad-spectrum sunscreen with a sun-protection factor of 15 or greater; wearing hats, sunglasses, or sun-protective clothing; avoiding sun exposure; seeking shade during midday hours (10 am to 4 pm); and avoiding indoor tanning beds.

<sup>7</sup> Validated question for alcohol use: How many times in the past year have you had (5 for men; 4 for women) or more drinks in a day?* Response >1 is considered positive.<sup>3</sup>