**Table E36. Data abstraction of systematic reviews of heat-cold**

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| **Author, Year** | **Comparison** | **Data Sources** | **Number and Type of****Studies** | **Interventions and****Number of Patients** | **Methods for Rating Methodological Quality of Primary Studies** | **Methods for Synthesizing Results of Primary Studies** |
| French, 2006updated inFrench, 2011 | Heat vs. no heatCold vs. no coldHeat vs. coldHeat vs. other active treatmentsCold vs. other active treatmentsHeat + another treatment vs. other treatment alone | MEDLINE,EMBASE, CCCRCT through October 2005 | 9 studies: 5 RCTs, 1CCT, 3 crossover studiesAcute pain (1 trial), mixed acute and subacute pain (4 trials), chronic pain (3 trials), mixed acute, subacute and chronic pain (1 trial)Heat vs. placebo (4 trials), heat vs. cold (2 trials), heat vs.other interventions (4 trials), cold vs. other interventions (1 trial) (some trialsevaluated multiple comparisons) | A. Heat (hot pack orheated wrap; n=446)B. Cold (cold pack or ice massage; n=94)C. Other active interventions (NSAID, n=238; exercise, n=25; lumbar support, n=38; heat + other intervention, n=24)D. No heat/cold (n=216) | Cochrane Back Groupcriteria (2003) | Qualitative analysisjudging level of evidence (strong, moderate, limited conflicting or no evidence) due to limited poolable data |

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| **Author, Year** | **Results** | **Adverse Events** | **Quality** |
| French, 2006updated inFrench, 2011 | A vs. BNo qualitative analysis; evidence from one CCT and one crossover study (both low quality). The CCT found no difference between hot packs and ice massage in a mixed population (treatment duration and followup not reported) and the crossover study found ice massage superior to hot packs in a chronic pain population after 2 20-minute treatments with each.A vs. C (specified below) Acute or subacute populationPain, VAS mean difference day 1 or 2, heat vs. (1 trial each): acetaminophen 0.90 (95% CI 0.50 to 1.30); ibuprofen 0.65 (95% CI 0.25 to 1.05); exercise 0.40 (95%CI -0.15 to 0.95) \*higher score favors heatPain, VAS mean difference day 4, heat vs. (1 trial each): acetaminophen 0.74 (95% CI 0.31 to 1.17); ibuprofen 1.05 (95% CI 0.62 to 1.48); exercise 0.30 (95% CI -0.41 to 1.01) \*higher score favors heatPain, VAS mean difference day 7, heat vs. (1 trial): exercise 0.30 (95% CI -0.68 to1.28) \*higher score favors heatFunction, RDQ mean difference, day 4, heat vs. (1 trial each): acetaminophen2.00 (95% CI 0.86 to 3.14); ibuprofen 2.20 (95% CI 1.11 to 3.29) \*higher score favors heatFunction, RDQ mean difference, day 2, heat vs. (1 trial): exercise -0.70 (95% CI-2.09 to 0.69)\*lower score favors heatFunction, RDQ mean difference, day 4, heat vs. (1 trial): exercise -0.90 (95% CI-2.84 to 1.04)\*lower score favors heatFunction, RDQ mean difference, day 7, heat vs. (1 trial): exercise -0.50 (95% CI-2.72 to 1.72)\*lower score favors heat | None reported | Good |

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| **Author, Year** | **Comparison** | **Data Sources** | **Number and Type of Studies** | **Interventions and****Number of Patients** | **Methods for Rating Methodological Quality of Primary Studies** | **Methods for Synthesizing Results of Primary Studies** |
| French, 2006updated inFrench, 2011 |  |  |  |  |  |  |

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| **Author, Year** | **Results** | **Adverse Events** | **Quality** |
| French, 2006updated inFrench, 2011 | (A + C) vs. C aloneAcute or subacute populationPain, VAS mean difference, heat + exercise vs. exercise, day 2 (1 trial): 0.50 (95% CI -0.21 to 1.21) \*higher score favors heat + exercisePain, VAS mean difference, heat + exercise vs. exercise, day 4 (1 trial): 0.80 (95% CI -0.03 to 1.63) \*higher score favors heat + exercisePain, VAS mean difference, heat + exercise vs. exercise, day 7 (1 trial): 1.40 (95% CI 0.69 to 2.11) \*higher score favors heat + exerciseFunction, RDQ mean difference, heat + exercise vs. exercise, day 2 (1 trial):0.60 (95% CI -0.79 to 1.99) \*lower score favors heat + exerciseFunction, RDQ mean difference, heat + exercise vs. exercise, day 4 (1 trial): -1.20 (95% CI -3.14 to 0.74) \*lower score favors heat + exerciseFunction, RDQ mean difference, heat + exercise vs. exercise, day 7 (1 trial): -3.20 (95% CI -5.42 to -0.98) \*lower score favors heat + exercise(A + C) vs. A alonePain, VAS mean difference, heat + exercise vs. heat, day 2 (1 trial): 0.10 (95% CI -0.61 to 0.81) \*higher score favors heat + exercisePain, VAS mean difference, heat + exercise vs. heat, day 4 (1 trial): 0.50 (95% CI -0.21 to 1.21) \*higher score favors heat + exercisePain, VAS mean difference, heat + exercise vs. heat, day 7 (1 trial): 1.10 (95% CI0.22 to 1.98) \*higher score favors heat + exerciseFunction, RDQ mean difference, heat + exercise vs. heat, day 2 (1 trial): 1.30 (95% CI -0.07 to 2.67) \*lower score favors heat + exerciseFunction, RDQ mean difference, heat + exercise vs. heat, day 4 (1 trial): -0.30 (95% CI -2.24 to 1.64) \*lower score favors heat + exerciseFunction, RDQ mean difference, heat + exercise vs. heat,, day 7 (1 trial): -2.70 (95% CI -4.92 to -0.48) \*lower score favors heat + exercise |  |  |

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| **Author, Year** | **Comparison** | **Data Sources** | **Number and Type of Studies** | **Interventions and****Number of Patients** | **Methods for Rating Methodological Quality of Primary Studies** | **Methods for Synthesizing Results of Primary Studies** |
| French, 2006updated inFrench, 2011 |  |  |  |  |  |  |

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| **Author, Year** | **Results** | **Adverse Events** | **Quality** |
| French, 2006updated inFrench, 2011 | A vs. DAcute or subacute populationPain, VAS mean difference up to day 5 (2 trials): 1.06 (95% CI 0.68 to 1.45)\*higher score favors heatFunction, RDQ mean difference day 4 (2 trials): -2.12 (95% CI -3.07 to -1.18)\*lower score favors heatB vs. COne trial of ice massage vs. TENS; included in TENS section of the report (found no difference between ice massage and TENS)B vs. DNo evidence | A vs. DSkin flushing at application site (2 trials): 5% (6/128) vs. 0.8% (1/130); RR 6.09 (95% CI 0.74 to 50)All other comparisons: not reported |  |

**Please see Appendix C. Included Studies for full study references.**