

Table 1: Systematic reviews of acupuncture for cancer hot flushes/flushes in cancer patients

Source: Karen Pilkington, CAM-Cancer Consortium. Acupuncture for hot flushes [online document]. <https://cam-cancer.org/en/acupuncture-hot-flushes>, 8th June 2021.

Study year	Design and methods	Number of studies Type of studies Number of patients	Included intervention and main outcomes	Main results/Conclusions
Dodin 2013	Cochrane review with meta-analysis. Searched wide range of databases to 2013. Cochrane Risk of Bias used to assess studies. All studies assessed vasomotor symptoms by self report. Analysis combined studies in breast cancer with other studies.	16 RCTs (1155 participants) met the inclusion criteria; 5 trials included women with breast cancer who had previously completed their treatment and experienced hot flushes.	Women of any age with hot flushes at baseline; included women with menopause due to surgical removal of ovaries, radiation, or chemotherapy Any type of acupuncture including electroacupuncture, acupressure, laser acupuncture and moxibustion. Any control	No significant difference in hot flush frequency when compared with sham acupuncture (8 RCTs); small effect on reported severity (SMD -0.45, 95% CI -0.84 to -0.05, 6 RCTs, 297 women, I ² = 62%, very-low-quality evidence). Acupuncture appeared to offer a benefit when compared with no treatment but was less effective than hormone therapy and evidence was low to very low quality. No data on adverse effects.
Frisk 2014	Systematic review Searches only conducted to 2012 Jadad used to assess quality Included uncontrolled studies	17 studies of which 7 had a Jadad score of at least 3; 6 studies (n=172) were included	Long-term effects of a defined treatment period of acupuncture on vasomotor symptoms in women with breast cancer and men with prostate cancer	'At the last follow-up (mean 5.8 months, range 3-9 months) after the end of therapy, the weighted reduction from baseline was sustained at 45.6 % in the 153 of 172 patients (89 %) who were followed up.'
Garcia 2015	Systematic review Searches of 5 English language databases up to 2014 Cochrane risk of bias used to assess studies Methods appear appropriate	8 RCTs (474 participants, all women with breast cancer)	Hot flushes in cancer patients Acupuncture involving needle insertion Control: usual-care and/or placebo	All studies showed a significant within group improvement but current evidence is insufficient to assess overall effects No studies had a low risk of bias.

Chen 2016	<p>Systematic review with meta-analysis</p> <p>Searches of English and Chinese databases to 2015</p> <p>Cochrane risk of bias to assess quality</p> <p>Risk of bias appears unclear of high for all included studies.</p> <p>Methods appear appropriate but confusing presentation of results and conclusions</p>	12 RCTs (672 participants); 9 trials included in meta-analysis	<p>Hot flushes in women with breast cancer</p> <p>Intervention described as acupuncture</p> <p>Various control interventions</p>	<p>Significant difference in frequency of hot flushes (acupuncture superior to controls [MD, -1.52, 95% CI: -2.47—0.58, P = 0.002]) based on 6 RCTs.</p> <p>But evidence on efficacy of acupuncture judged insufficient due to poor quality and quantity.</p> <p>Two trials reported slight bleeding or bruising at the needle site. 14 (15%) participants with fatigue, pruritus, and nausea were reported in one trial.</p>
Chiu 2016	<p>Systematic review and meta-analysis</p> <p>Searches of English and Chinese databases to 2014</p> <p>Cochrane risk of bias to assess quality</p> <p>3 studies were judged at low risk of bias, others unclear or high risk</p> <p>Methods appear appropriate.</p>	7 RCTs (342 participants)	<p>Menopause-related symptoms (particularly hot flushes) in breast cancer survivors</p> <p>Acupuncture (traditional Chinese acupuncture and electroacupuncture)</p> <p>Control: inactive or active treatments</p>	<p>No significant difference between acupuncture and sham on the frequency and severity of hot flushes in the short-term (Mean difference = -0.41; 95% CI, -0.95 to 0.12; P = .13; 3 RCTs) or intermediate (at least 3 months) term</p>
Chien 2017	<p>Systematic review with meta-analysis</p> <p>Searches of 7 databases from inception through March 2017</p> <p>Studies judged as medium-to-high quality, based on the modified Jadad scale</p>	13 RCTs (844 breast cancer patients). 8 trials included in meta-analysis	<p>Hot flush and menopause symptoms in women with breast cancer.</p> <p>Needle acupuncture</p> <p>Various controls</p>	<p>Acupuncture had no significant effect on the frequency and the severity of hot flushes (p = 0.34; p = 0.33).</p> <p>None of the studies reported severe adverse events.</p>

<p>Wang 2018</p>	<p>Systematic review and meta-analysis Searches of 7 English and Chinese databases to January 2015 States assessment of risk of bias using the modified Jadad score but presents risk of bias table. 3 studies judged low risk, other as unclear Meta-analysis appears to use inappropriate methods</p>	<p>18 studies included in qualitative synthesis (10 RCTs and 8 observational studies). 4 studies included in meta-analysis</p>	<p>Hot flashes (HFs) among breast cancer (BC) patients Acupuncture versus sham acupuncture or no acupuncture or traditional treatments</p>	<p>States that, based on a validated outcome measure, there was significant difference between real acupuncture sham acupuncture (posttreatment: MD = -4.40, 95% CI: -6.77—2.03; follow-up: MD = -4.30, 95% CI: -6.52—2.08))</p>
<p>Qan'ir 2019</p>	<p>Systematic review Searches of 5 databases to June 2018 Cochrane methods used for review. Non-RCTs included</p>	<p>15 studies (RCTs and quasi-experimental)</p>	<p>Managing hot flashes associated with androgen deprivation therapy (ADT) in men with prostate cancer. Acupuncture and other therapies</p>	<p>Evidence is insufficient to support interventions for ADT-associated hot flashes in men with prostate cancer.</p>
<p>Chien 2020</p>	<p>Systematic review with meta-analysis Searches of 7 databases to February 2019. Assessment was carried out using modified Jadad criteria. All were judged of medium to high quality.</p>	<p>13 RCTs (943 breast cancer patients) (8 included in meta-analysis)</p>	<p>Maintenance effect of acupuncture on breast cancer-related menopause symptoms (including hot flashes). Acupuncture or electroacupuncture Various control interventions</p>	<p>Acupuncture had no significant long-term maintenance effect on the frequency or severity of hot flashes ($p = 0.29$; $p = 0.34$). No adverse events were reported.</p>
<p>Liu 2020</p>	<p>Searches of 7 databases to May 2018. Cochrane's risk of bias tool was used for assessment. Methodological quality of the included studies was generally poor</p>	<p>16 RCTs involving 2,349 participants (6 trials of acupuncture)</p>	<p>Nonhormonal flush management for breast cancer survivors Range of therapies including acupuncture</p>	<p>Network meta-analysis showed that acupuncture was ranked the optimal nonhormonal therapy for both hot flash frequency and hot flash score. The safety analysis showed that there were few related adverse events during acupuncture</p>

Yuanqing 2020	Searches of 4 databases to April 2020 Assessed the risk of bias using the Cochrane Risk of Bias tool States that RCTs had an overall low risk of bias (but 3 of those assessing hot flushes were high and the other were unclear) Evidence was downgraded by the GRADE system for inconsistency, indirectness, and imprecision.	20 RCTs with 2001 patients (10 trials of hot flushes, 7 included in meta-analysis)	Management of hormone therapy-related side effects in breast cancer patients Acupuncture versus a control or placebo	Acupuncture led to moderate improvements in hot flushes (SMD = -0.28; 95% CI = -0.45 to -0.11; P = .00)
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