Table des matières

dry eye syndrome

Œil sec : évaluation de l'acupuncture

1. Systematic Review and Meta-analysis

1.1. Generic Acupuncture

1.1.1. Wang 2024 (combined with artificial tears)

Wang Y, Peng J, Xiao L, Deng Y, Lu J, Zhou YS, Yang YJ, Peng QH. Effectiveness of acupuncture combined with artificial tears in managing dry eye syndrome: A systematic review and meta-analysis. Medicine (Baltimore). 2024 Jan 5;103(1):e36374. https://doi.org/10.1097/MD.0000000000036374

Backgound	Dry eye syndrome is an ocular surface disease with high incidence. Acupuncture combined with artificial tears is effective for treating dry eye syndrome. This study aimed to evaluate the evidence for the efficacy of acupuncture combined with artificial tears in dry eye syndrome by conducting a systematic review and meta-analysis.
Methods	A systematic online search was performed from the date of database establishment to July 1, 2023. The study groups that addressed acupuncture combined with artificial tears for patients with dry eye syndrome (DES) and the control groups that addressed artificial tears were analyzed. The main outcomes were tear breakup time (BUT) and Schirmer I test (SIT), assessed as previously described.
Results	**Sixteen randomized or controlled trials** met the selection criteria, and 1383 patients with DES were included in this study. The analysis results showed that BUT [Standard mean difference (SMD) = 1.25, 95% confidence interval (CI) (1.14, 1.37), P < .0001], SIT [SMD = 1.55, 95% CI (1.08, 2.02), P < .0001], and corneal fluorescein staining [SMD = -2.08, 95% CI (-2.96, -1.20), P < .00001] significantly improved in the trial groups compared with the control groups. The acupuncture treatment was more effective in reducing the levels of IL-6 (P < .0001) and TNF-α (P < .00001). The overall efficacy rate was better in the trial group than in the control group [odds ratio = 4.09, 95% CI (3.04, 5.51), P < .00001]. However, no significant difference was observed in the ocular surface disease index (P = .15) between the trial and control groups.
Conclusion	The results of this study indicated that acupuncture combined with artificial tears could be considered safe, effective to patients with DES.

1.1.2. Prinz 2022

Prinz J, Maffulli N, Fuest M, Walter P, Hildebrand F, Migliorini F. Acupuncture for the management of dry eye disease. Front Med. 2022 Dec;16(6):975-983. https://doi.org/10.1007/s11684-022-0923-4.

Background	The effectiveness of using acupuncture for dry eye disease (DED) is controversial. Thus, this systematic review investigated the effectiveness and feasibility of using acupuncture for DED in accordance with the 2020 PRISMA statement.

Methods	The outcomes of interests were (1) to evaluate the efficacy of acupuncture in improving the ocular surface disease index (OSDI), Schirmer I test score, and tear breakup time from baseline to the last follow-up; (2) to determine possible complications of using acupuncture; and (3) to investigate the superiority of acupuncture over other commonly used treatments for DED. Data from 394 patients were collected.
Results	Results showed that acupuncture significantly prolonged the tear breakup time ($P < 0.0001$), significantly increased the Schirmer I test score ($P < 0.0001$), and significantly reduced the OSDI ($P < 0.0001$) from baseline to the last follow-up. Compared with the control group, the acupuncture group had significantly greater Schirmer I test score ($P < 0.0001$), significantly longer tear breakup time ($P = 0.0004$), and significantly lower OSDI ($P = 0.002$).
Conclusions	These results suggest that acupuncture is effective and feasible in improving symptoms and signs of DED. No severe adverse effects of acupuncture were observed.

1.1.3. Na 2021

Na JH, Jung JH, Park JG, Song PH, Song CH. Therapeutic effects of acupuncture in typical dry eye: a systematic review and meta-analysis. Acta Ophthalmol. 2021 Aug;99(5):489-498. https://doi.org/10.1111/aos.14651

Background	Acupuncture is a treatment option for dry eye syndrome (DES), but its efficacy remains still controversial. We assessed the effectiveness of this treatment for typical DES without specific aetiologies.
Methods	Eight databases up through June 2018 were searched for randomized clinical trials (RCTs) comparing treatments of acupuncture with artificial tears. The risk of bias was assessed using Cochrane criteria, and a random effects model was used for meta-analyses on tear-film breakup time (BUT), Schirmer test, corneal fluorescein staining (CFS), ocular surface disease index, visual analogue scale and score of symptoms (SOS). Subgroup and sensitivity analyses were conducted to explore the heterogeneity, and publication bias was assessed by funnel plot using Egger's test.
Results	Twenty-one RCTs in **19 studies (n = 1542 eyes)** met our eligible criteria. The results demonstrated the superiority of acupuncture in improving the symptoms of BUT, Schirmer test, CFS and SOS, compared to artificial tears acting alone. The BUT and Schirmer test were also more improved in acupuncture combination with artificial tears than artificial tears alone. Further subgroup analyses suggest that acupuncture applied at 2.0–3.0 times per week for 21–30 days may be optimal for treating typical DES.
Conclusions	This provides useful information for guiding acupuncture in the clinical trials.

1.1.3.1. Wang 2021

Wang TN, Zhao JY, Yang YC, Zhou ZX, Feng YH, Chen JT, Ma HF. [Acupuncture and moxibustion treatment for dry eye disease: a network Meta-analysis of rando-mized controlled trial]. Zhen Ci Yan Jiu. 2021 Dec 25;46(12):1057-66. Chinese. https://doi.org/10.13702/j.1000-0607.20210292

Objective	A network Meta-analysis based on Bayesian theory was used to evaluate efficacy and safety of acupuncture and moxibustion in the treatment of dry eye disease(DED), so as to provide evidence-based research basis for clinical application.

Methods	Randomized controlled trials (RCT) for acupuncture and moxibustion treatment of DED published from the inception of database to November 25, 2020 were searched from PubMed, Embase, Cochrane Library, Web of Science, Sinomed, CNKI, Wanfang and VIP Database. Two reviewers independently screened the literatures, extracted the data. The quality of the included literature was evaluated, and network Meta-analysis was performed by using Stata14.0 and R4.0.3 software.
Results	A total of **71 literatures were identified, including 5 536 patients** with DED, covering 11 different interventions. Network Meta-analysis showed that acupuncture+traditional Chinese medicine+artificial tears was the best treatment option in terms of the clinical effective rate, breakup time of tear film (BUT), Schirmer I test (SIT) with surface under cumulative ranking area value. Acupuncture+traditional Chinese medicine+artificial tears was better than artificial tears in the clinical effective rate (odds ratio□OR□=12.34, 95% confidence interval□CI□□4.72, 36.89□), BUT(mean differenc□MD□=2.76, 95%CI□0.16, 5.40□), SIT(MD=4.76, 95%CI□1.23, 8.29□).
Conclusion	Acupuncture and moxibustion in the treatment of DED are generally better than artificial tears, and acupuncture-moxibustion combined with other traditional Chinese medicine therapy has the best effect.

1.1.4. Wei 2020

Wei QB, Ding N, Wang JJ, Wang W, Gao WP. Acupoint selection for the treatment of dry eye: A systematic review and meta-analysis of randomized controlled trials. Exp Ther Med. 2020;19(4):2851-2860. [207791]. doi

Background	The effectiveness of acupuncture in the treatment of dry eye has been confirmed, but the association between acupoint selection and therapeutic effect has remained to be elucidated.
Objective	In the present study, a systematic review and meta-analysis were performed to evaluate the effect of periocular acupoints and periocular acupoints plus body acupoints compared with AT for the treatment of dry eye disease (DED).
Methods	The PubMed, Cochrane Library, Embase, Ovid, China National Knowledge Infrastructure and Chonqing VIP Information, Co., Ltd. databases were searched with entries until 10 July 2018 considered. Only randomized controlled trials (RCTs) were included. Meta-analyses were performed to compare the effects of acupuncture with those of conventional treatment (including AT or other non-acupuncture therapies). The primary outcomes, including tear break-up time (BUT), Schirmer's I test (SIT) result and Symptom scores were analyzed. Subgroup analysis was performed for periocular acupoints only and periocular acupoints plus body acupoints.
Results and conclusions	A total of **12 studies comprising 900 participants** were included. In the primary meta-analysis, a significant improvement in the BUT [n=1,209, weighted mean difference (WMD)=1.01, 95% CI: 0.56-1.84, P<0.00001], SIT result (n=1,107, WMD=1.98, 95% CI: 0.44-3.34, P<0.00001) and Symptom scores (n=402, WMD=-1.02, 95% CI: -1.33 to -0.72, P<0.00001) was obtained to evaluate the clinical efficacy of acupuncture and AT. Furthermore, periocular acupoints plus body acupoints were more effective in the treatment of DED. However, the total sample size of subjects with only periocular acupoints in the treatment of DED was too small to get any firm conclusions. Further large RCTs are warranted.

1.1.5. Zhang 2020

Zhang Chaoyuan, Yu Yanling, Peng Zijing, Zheng Wenjiang, Liu Bi'e,Tang Chunzhi, Xu Lianyang, Zhang Hong. [Meta - Analysis of Acupuncture Combined with Artificial Tears in Treating Dry Eyes].

Journal of Clinical Acupuncture and Moxibustion. 2020;36(6):59. [214498].

Objective	To systematically review the clinical efficacy of acupuncture combined with artificial tears in the treatment of dry eyes, and to explore the rules of acupoints selection.
Methods	The clinical randomized controlled trials about acupuncture combined with artificial tears in treating dry eyes were searched in data - bases, including CNKI, VIP, WanFang, Sinomed (CBM), PubMed, Embase and Cochrane Library. The retrieving time limitation was from the establishrnent of the databases to February 20, 2019. Literatures were screened independently by two researchers according to the PRISMA flow diagram, and the methodological qua1ity of included studies was evaluated. Meta - analysis was performed using Stata/SE 14. 0 software. The frequency of acupoints and mendians were calculated by using Excel software.
Results	A total of **13 RCTs** were included involving **842 patients**. In terms of Meta - analysis, acupuncture combined with artificia1 tears could significantly improve the total effective rate compared to single artificial tears therapy [RR = 1. 33, 95% CI (1. 17, 1. 52) ,P = 0] , it could increase the amount of tear secretion(Schirmer I test, S I T) [WMD = 2. 34, 95% CI(1. 46, 3. 21) ,P =0], it a1so could prolong tear break - up time (BUT) [WMD = 1. 42, 95% CI (0. 84, 2. 00) , P = 0]. No significant adverse reactions were observed in either group. The frequency of acupoints counted more than 7 times were Cuanzhu (BL2), Taiyang(EX - HN5), Jingming(BL1), Sibai (ST2), Sizhukong (TE23) and Sanyinjiao (5P6). The points used frequently were from Bladder Meridian of Foot -Taiyang and Stomach Meridian of Foot - Yangming, as well as extra points.
Conclusion	Acupuncture combined with artificial tears in treating dry eyes is superior to simple application of artificial tears in terms of total effective rate and ocular surface function, which is with a high safety. The majonty of selected acupoints is mainly around eye area, followed by limbs and body trunk. However, due to the low quality of the included researches, more high - quality randomized controlled trials are needed for further validation.

1.1.6. Kim 2018 ☆☆

Kim BH, Kim MH, Kang SH, Nam HJ. Optimizing acupuncture treatment for dry eye syndrome: a systematic review. BMC Complement Altern Med. 2018;18(1):145. [165748].

Background	In a former meta-analysis review, acupuncture was considered a potentially effective treatment for dry eye syndrome (DES), but there were heterogeneities among the outcomes. We updated the meta-analysis and conducted subgroup analysis to reduce the heterogeneity and suggest the most effective acupuncture method based on clinical trials.
Methods	We searched for randomized controlled trials (RCTs) in 10 databases (MEDLINE, EMBASE, CENTAL, AMED, SCOPUS, CNKI, Wangfang database, Oriental Medicine Advanced Searching Integrated System (OASIS), Koreamed, J-stage) and searched by hand to compare the effects of acupuncture and artificial tears (AT). We also conducted subgroup analysis by (1) method of intervention (acupuncture only or acupuncture plus AT), (2) intervention frequency (less than 3 times a week or more than 3 times a week), (3) period of treatment (less than 4 weeks or more than 4 weeks), and (4) acupoints (BL1, BL2, ST1, ST2, TE23, Ex-HN5). The Bucher method was used for subgroup comparisons.

Results	**Nineteen studies with 1126 patients** were included. Significant improvements on the Schirmer test (weighted mean difference[WMD], 2.14; 95% confidence interval[CI], 0.93 to 3.34; p = 0.0005) and break up time (BUT) (WMD, 0.98; 95% CI, 0.79 to 1.18; p < 0.00001) were reported. In the subgroup analysis, acupuncture plus AT treatment had a weaker effect in BUT but a stronger effect on the Schirmer test and a better overall effect than acupuncture alone. For treatment duration, treatment longer than 1 month was more effective than shorter treatment. With regard to treatment frequency, treatment less than three times a week was more effective than more frequent treatment. In the acupoint analysis, acupuncture treatment including the BL2 and ST1 acupoints was less effective than treatment that did not include them. None of those factors reduced the heterogeneity.
Conclusions	**Acupuncture was more effective than AT** in treating DES but showed high heterogeneity. Intervention differences did not influence the heterogeneity.

1.1.7. Jiang 2017

Jiang Hui-ru, Liu Su-jun, Liu Peng, Xu Si-wei, Yang Yang, Zhang Kai-yong, Shou Yin, Zhang Bi-meng. Acupuncture for dry eye syndrome: a meta-analysis of randomized controlled trials Journal of Acupuncture and Tuina Science. 2017;15(4):263-269. [27825].

Objective	To summarize and critically assess the evidence from randomized controlled trials (RCTs) of acupuncture in treating dry eye syndrome (DES) according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement and the Cochrane Collaboration recommendations.
Methods	A search of PubMed, the Cochrane Central Register of Controlled Trials, ClinicalTrials.gov and Embase was made from their inception to August 2016, as well as Chinese, Japanese, and Korean databases. Two reviewers independently selected RCTs and assessed the methodological quality. Meta-analysis and the level of evidence were processed by RevMan 5.3 and the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach.
Results	After selection, **8 trials** were subjected to our systematic review. The methodological quality was low generally. The 3-10 weeks follow-up showed that acupuncture improved the tear film break-up time (BUT) (MD=1.33, 95%CI=1.01-1.66, 619 participants). The mean difference of Schirmer's test was 1.73 mm (95%CI=1.28-2.18, 618 participants) between the acupuncture group and the control group. The subjective variables exhibited no significant differences.
Conclusion	The low methodological quality of the trials does not suggest drawing firm conclusions on the value of acupuncture therapy for DES. Acupuncture treatment may have some effects on the tear film BUT and Schirmer's test, but not on the subjective symptoms. Well-planned large-scale high-quality RCTs are needed to make it clear whether acupuncture is effective in treating DES.

1.1.8. Sheng 2015 ☆

Sheng Xueyan, Yan Xingke, Xing Jiaming. [Meta-analysis on acupuncture for dry eyes based on the clinical literatures: a randomized controlled trial]. Journal of Gansu College of Traditional Chinese Medicine. 2015;1:56-60. [186999].

Objective	To assess the evidence of efficacy and safety of acupuncture for dry eyes and analyze the current situation of its clinical setting.

Methods	The clinical literatures about acupuncture treatment for dry eyes in Wanfang, Chongqing Weipu Database for Chinese Technical Periodicals (VIP), China National Knowledge Infrastructure (CNKI), Pubmed and CBM clinical literature were searched systemically. Randomized controlled trials (RCT) and controlled clinical trials (CCT) that compared the effect of acupuncture for dry eyes with drug treatment were enrolled into the study. The methodological quality of included trials were assessed based on the modified Jadad scale. Valid data were facilitated by using Rev Man 5. 2.
Results	**8 trials involving 553 participants** satisfied the minimum criteria for meta-analysis. The evidence showed that the overall effective rate of treatment within the group receiving acupuncture was higher than that in drug group, there were statistically significant differences (P<0. 05).
Conclusion	**The overall effective rate of acupuncture for dry eyes is significantly superior to drug treatment**, and has no obvious adverse reactions. But given the lack of high quality randomized controlled research, and the existence of literature publication bias, it needs more well-designed, randomized controlled clinical trials to confirm the effect.

1.1.9. Yang 2015

Yang L, Yang Z, Yu H, Song H. Acupuncture therapy is more effective than artificial tears for dry eye syndrome: evidence based on a meta-analysis. Evid Based Complement Alternat Med. 2015;2015:143858. https://doi.org/10.1155/2015/143858

Backgound	The efficacy of acupuncture in dry eye syndrome patients remains controversial.
Methods	Pubmed, Ovid, Cochrane libraries, CNKI, Wanfang, and CQVIP databases were electronically searched until October 1, 2014. Outcomes including tear break-up time (BUT), Schirmer I test (SIT), and cornea fluorescein staining (CFS) were analyzed. A meta-analysis was performed using both fixed- and random-effects models based on heterogeneity across studies.
Results	**Seven studies** were included in this study; 198 and 185 patients were randomly treated with acupuncture and artificial tears, respectively. The overall BUT of patients in acupuncture group was significantly longer than that of the artificial tears group after treatment (P < 0.00001). The SIT was significantly higher in the acupuncture group than that in the artificial tears group after treatment (P = 0.001). The CFS of patients in acupuncture group was significantly improved compared to that in artificial group (P < 0.0001).
Conclusions	Acupuncture therapy is effective for the dry eye patients, partly better than artificial tear treatment.

1.1.10. Su 2014 ☆☆

¤Su Jing, Liu Xinquan, Miao Wanhong. [Acupuncture therapy in treating keratoconjunctivitis sicca: a systematic review]. China Journal of Chinese Ophthalmology. 2014;1:40-46. [186907].

Objective	To evaluate the effectiveness of acupuncture treatment for keratoconjunctivitis sicca.
Methods	The databases such as PubMed, CNKI, VIP and WanFang Data were searched for collecting randomized controlled clinical trials which used acupuncture therapy for treating keratoconjunctivitis sicca from the date of Jan 2004 to Dec 2012. Studies were screened, data were extracted and the methodological quality was assessed by two reviewers independently. We used RevMan 5. 1 software to complete Meta-analyses.

Results	**Twelve trials involving 694 patients** were included. Meta-analysis showed that acupuncture therapy could increase the difference of ocular surface symptom index between pre-treatment and post-treatment (SMD=-0. 63, 95%CI [-0. 91, -0. 35], P<0. 000 01) compared with artificial tears. The meta-analysis indicated that acupuncture therapy had increased the tear output before and after treatment compared with artificial tears significantly (SMD =1. 27, 95% CI [0. 79, 1. 76], P <0. 000 01). It also indicated that acupuncture therapy could increase the difference of tear film break-up time between pre-treatment and post-treatment (SMD=0. 87, 95%CI [0. 51, 1. 23], P<0. 000 01) compared with artificial tears. The meta-analysis indicated that acupuncture therapy could not increase the range of corneal fluorescein staining scores change before and after treatment compared with artificial tears significantly (SMD=0. 01, 95%CI [-0. 24, 0. 26], P=0. 96). It also indicated that acupuncture therapy could increase the overall effect rate between pretreatment and post-treatment (SMD=0. 87, 95%CI [0. 51, 1. 23], P<0. 000 01) compared with artificial tears.
Conclusions	**According to evidences, acupuncture therapy could relieve Keratoconjunctivitis Sicca patients' ocular symptom significantly compared with artificial tears**. More specifically, acupuncture therapy could improve the quality of tears as well as the increase of tear output.

1.1.11. Ba 2013

Ba J, Wu Y, Li Y, Xu D, Zhu W, Yu J. Updated meta-analysis of acupuncture for treating dry eye. Med Acupunct. 2013;25:317-327. https://doi.org/10.1089/acu.2013.0968

Objective	The objective of this review was to assess the effectiveness of acupuncture as a treatment option for dry eye.
Methods	The research team conducted a meta-analysis of all randomized clinical trials (RCTs) that examined the effectiveness of acupuncture for dry eye, including Sjögren's syndrome (SS) and non-Sjögren's syndrome (non-SS). PubMed, Embase, the Cochrane Central Register of Controlled Trials (CENTRAL), the Web of Science, the China National Knowledge Infrastructure (CNKI) Database, the Weipu Database (VIP), and the WanFang Database were searched, using both electronic and manual methods to identify studies.
Results	**Eleven RCTs** met the inclusion criteria, comprising 700 subjects. The total results of the meta-analysis showed significant differences in tear break-up time, Schirmer's test, response rate, and corneal fluorescein staining. The results demonstrated that acupuncture had a superior effect on dry eye, compared with artificial tears (AT). Furthermore, significant differences were shown between the acupuncture group and the AT group over treatment periods from 3 weeks to 3 months. Sustained, while nonconsistent, improvement following acupuncture was observed during the follow-up periods.
Conclusions	This updated meta-analysis suggests that, compared with AT, acupuncture has a superior therapeutic effect on both SS syndrome and non-SS. Meanwhile, acupuncture treatment resulted in sustained improvement from 3 weeks to 3 months

1.1.12. Liu 2012 ☆

Liu Min, Liu Mailan, Yu Meiling, Lan Lei, Yin Haiyan, Luo Ling, Tang Yong, Song Jiantao. [Acupuncture therapy for dry eye: a systematic review]. Chinese Journal of Chinese Ophthalmology. 2012;4:242-246. [186938].

Objective	To evaluate the efficacy and safety of acupuncture therapy for dry eye.

Methods	We searched the randomized controlled trials of acupuncture therapy for dry eye. Search methods included electronic search, hand search and websites complement search. Languages were limited to Chinese and English. According to the Cochrane Handbook for Systematic Reviews of Interventions (5. 1. 0), we assessed the quality of the trials. The statistical analysis was managed by RevMan 5. 1. 0 software provided by Cochrane Collaboration.
Results	1. **Eight RCTs met the inclusion criteria**, including 1 medium quality study, 7 low quality studies. 2. The results of meta-analysis indicated that significant difference had been found among acupuncture alone or acupuncture with artificial tears or artificial tears alone. The efficacy of the former was prior to artificial tears in increasing tear secretion and break-up time of tears of patients with dry eye. 3. Among 8 studies which was descriptively analyzed, 2 studies showed that acupuncture with artificial tears was superior to artificial tears in improving dryness and ocular fatigue; while 5 studies indicated that acupuncture with artificial tears had the same efficacy with artificial tears in improvement of symptoms, increasing tear secretion and alleviating the ocular surface damage. One study showed that artificial tears were probably more effective than acupuncture in increasing tear film stability of patients with dry eye.
Conclusions	**Acupuncture or acupuncture with artificial tears would be a more effective treatment to improve the symptoms, increase the tear secretion and tear film stability in patients with dry eye, compared with artificial tears**. However, it still needs high-quality randomized controlled trials to verify the efficacy and safety of acupuncture therapy for dry eye.

1.1.13. Lee MS 2011 ☆

Lee Ms, Shin Bc, Choi Ty, Ernst E. Acupuncture for treating dry eye: a systematic review. Acta Ophthalmol. 2011;89(2):101-6. (eng). [156320]

Purpose	The objective of this review was to assess the effectiveness of acupuncture as a treatment option for treating the condition of dry eye.
Methods	We searched the literature using 14 databases from their inceptions to 3 December 2009, without language restrictions. We included randomized clinical trials (RCTs) comparing acupuncture with conventional treatment. Their risk of bias was assessed using Cochrane criteria.
Results	**Six RCTs met all the inclusion criteria**. Three RCTs compared the effects of acupuncture with artificial tears in patients with xerophthalmia or Sjögren syndrome. A meta-analysis of these data showed that acupuncture improved tear break-up times ($p < 0.0001$), Schirmer test scores ($p < 0.00001$), response rates ($p = 0.002$) and the region of cornea fluorescent staining ($p = 0.0001$) significantly more than artificial tears did. The other three RCTs compared the effects of acupuncture plus artificial tears with artificial tears alone. Two of these studies failed to show significant effects of acupuncture, while one reported significant effects. For Schirmer test scores and frequency of artificial tear usage, two RCTs reported superior effects of acupuncture plus artificial tears, while one RCT failed to do so.
Conclusion	**These results provide limited evidence for the effectiveness of acupuncture for treating dry eye**. However, the total number of RCTs, the total sample size and the methodological quality were too low to draw firm conclusions.

1.2. Special Acupuncture Techniques

1.2.1. Comparison of Acupuncture Techniques

1.2.1.1. Yan 2026

Yan X, Hu J, Chen Y, Lei S, Chen J, Qin M. A Network Meta-Analysis Comparing the Efficacy Differences of Different Acupuncture and Sodium Hyaluronate Eye Drops in the Treatment of Dry Eye Disease. J Pain Res. 2026;19:577237. https://doi.org/10.2147/JPR.S577237

Objective	To systematically evaluate the efficacy of different acupuncture methods and sodium hyaluronate eye drops in the treatment of dry eye disease, and to rank the interventions through a network meta-analysis.
Methods	Chinese and English databases were searched to collect randomized controlled trials (RCTs) published from the establishment of the databases to October 14, 2025. The Cochrane Risk of Bias tool was used to assess the quality of the literature. Bayesian network Meta-analysis was performed using R software to calculate relative risk (RR), mean difference (MD), and SUCRA value to evaluate the efficacy of the interventions.
Results	A total of **30 RCTs** were included, involving **2,514 patients** and 10 acupuncture methods. Network meta-analysis showed that electroacupuncture was the best in terms of total effective rate (SUCRA = 0.98). With respect to Schirmer I test (SIT) and tear film break-up time (BUT), fascia release acupuncture combined with acupuncture had the best effect (SUCRA = 0.87 and 0.95, respectively). In general, fascia release acupuncture combined with acupuncture was the optimal intervention among the evaluated modalities.
Conclusion	Acupuncture is superior to sodium hyaluronate eye drops in the treatment of dry eye disease. Fascia release acupuncture combined with acupuncture performs best in improving tear secretion and tear film stability, while electroacupuncture is most likely to be optimal in improving the overall effective rate.

1.2.1.2. Kim 2018

Kim BH, Kim MH, Kang SH, Nam HJ. Optimizing acupuncture treatment for dry eye syndrome: a systematic review. BMC Complement Altern Med. 2018;18(1):145. [165748].

Background	In a former meta-analysis review, acupuncture was considered a potentially effective treatment for dry eye syndrome (DES), but there were heterogeneities among the outcomes. We updated the meta-analysis and conducted subgroup analysis to reduce the heterogeneity and suggest the most effective acupuncture method based on clinical trials.
Methods	We searched for randomized controlled trials (RCTs) in 10 databases (MEDLINE, EMBASE, CENTAL, AMED, SCOPUS, CNKI, Wangfang database, Oriental Medicine Advanced Searching Integrated System (OASIS), Koreamed, J-stage) and searched by hand to compare the effects of acupuncture and artificial tears (AT). We also conducted subgroup analysis by (1) method of intervention (acupuncture only or acupuncture plus AT), (2) intervention frequency (less than 3 times a week or more than 3 times a week), (3) period of treatment (less than 4 weeks or more than 4 weeks), and (4) acupoints (BL1, BL2, ST1, ST2, TE23, Ex-HN5). The Bucher method was used for subgroup comparisons.

Results	Nineteen studies with 1126 patients were included. Significant improvements on the Schirmer test (weighted mean difference[WMD], 2.14; 95% confidence interval[CI], 0.93 to 3.34; p = 0.0005) and break up time (BUT) (WMD, 0.98; 95% CI, 0.79 to 1.18; p < 0.00001) were reported. In the subgroup analysis, **acupuncture plus AT treatment had a weaker effect in BUT but a stronger effect on the Schirmer test and a better overall effect than acupuncture alone. For treatment duration, treatment longer than 1 month was more effective than shorter treatment. With regard to treatment frequency, treatment less than three times a week was more effective than more frequent treatment. In the acupoint analysis, acupuncture treatment including the BL2 and ST1 acupoints was less effective than treatment that did not include them.** None of those factors reduced the heterogeneity.
Conclusions	Acupuncture was more effective than AT in treating DES but showed high heterogeneity. Intervention differences did not influence the heterogeneity.

1.2.2. Auricular Acupuncture

1.2.2.1. Huang 2023

Huang Q, Zhan M, Hu Z. Auricular Acupressure for Dry Eye Disease: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. Medicina (Kaunas). 2023 Jan 16;59(1):177. https://doi.org/10.3390/medicina59010177

Background and Objectives	The purpose of this systematic review was to summarize the current evidence to examine the safety and effectiveness of auricular acupressure on dry eye diseases.
Materials and Methods	Twenty databases were searched from their inception until November 2022. Only randomized controlled trials (RCTs) in which auricular acupressure was used for dry eye diseases were included. The selection process, data extraction and quantitative were conducted according to the guidelines.
Results	**Seven RCTs** met the inclusion criteria. Meta-analysis showed that compared to artificial tears, auricular acupressure had a favorable effect on prolonging tear breakup time (TBUT), improving the Schirmer I test (SIT) score and the score of symptoms (SOS) of patients with dry eye disease ($p < 0.05$). Furthermore, compared to the artificial tears alone, auricular acupressure plus artificial tears had a significantly greater SIT score ($p < 0.001$) and response rate ($p = 0.006$), significantly longer TBUT ($p < 0.001$), and significantly lower Ocular surface disease index (OSDI) ($p = 0.02$) and SOS ($p = 0.03$). However, there was no statistically significant difference between the auricular acupressure plus artificial tears group and the artificial tears group in terms of cornea fluorescein staining (CFS) ($p = 0.09$).
Conclusions	Auricular acupressure, as a sole intervention or in combination with artificial tears, may have a beneficial effect on dry eye disease. However, more high-quality RCTs need to be included in the future to further prove the positive effects of auricular acupressure on patients with dry eye disease.