

· 综述 ·

瑜伽辅助应用于临床康复治疗的国外研究进展

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源自印度的瑜伽与中国太极拳一样,注重身心整合,有研究证实,瑜伽练习不仅可以改善运动系统、神经内分泌系统、心血管系统和呼吸系统的功能,还具有增强免疫力、调节心理状态的效果^[1-2]。在美国,瑜伽已成为补充替代医学的重要组成部分,应用于多种疾病的干预,如慢性腰痛(chronic low back pain, CLBP)、类风湿性关节炎(rheumatoid arthritis, RA)、膝关节骨性关节炎(knee osteoarthritis, KOA)、高血压、冠心病、2 型糖尿病、乳腺癌等的辅助治疗与康复^[3-5]。本文针对瑜伽练习对各种疾病的治疗效果及其国外相关研究进行综述,旨在为国内医务工作者的临床治疗和科学研究提供参考。

瑜伽与 CLBP

CLBP 是指一组以下背、腰骶和臀部疼痛、不适为主要症状的综合征,是康复科和骨科的常见疾病之一。Sherman 等^[6]将 228 例腰疼痛患者分为瑜伽练习组、伸展操练习组和自我保健书籍学习组,3 组患者根据分组情况分别进行瑜伽练习、伸展操练习和自我保健,每日 1 次,每次 20 min,连续治疗 12 周,并于入组后第 26 周采用 Roland 功能障碍问卷(Roland and Morris disability questionnaire, RMDQ)进行随访评价,结果发现,瑜伽练习组和伸展操练习组的疼痛改善状况显著优于自我保健书籍学习组,差异有统计学意义($P < 0.01$),但瑜伽练习组和伸展操练习组 2 组间比较,差异无统计学意义($P > 0.05$)。Pushpika 等^[7]将瑜伽治疗与常规护理干预 CLBP 进行比较,使用疼痛强度、疼痛频率、睡眠、生活自理、工作、娱乐等主观评分结合脊柱前屈、侧屈的测量,结果显示,瑜伽组的各项指标总体缓解 79%,明显好于护理组,差异有统计学意义($P < 0.01$)。

Tekur 等^[8]在印度辩喜瑜伽大学(Vivekananda Yoga Anusandhana Samsthana, SVYASA)进行了一项为期 7d 的短期密集型瑜伽干预实验,以探讨瑜伽练习对 CLBP 患者疼痛、脊柱功能和灵活性的作用。该研究将 80 例 CLBP 患者随机分为瑜伽组和物理锻炼组,居住在集体宿舍进行密集练习,瑜伽组练习内容包括冥想、基础体位法、唱诵和呼吸法等,物理锻炼组进行步行、特定姿势练习、健康讲座和音乐欣赏等,训练时间为早上 5:00 至 22:00,练习 7 d 后,瑜伽组的 Oswestry 功能障碍指数(Oswestry disability index, ODI)以及脊柱角度均显著优于物理锻炼组,差异有统计学意义($P < 0.01$)。同期,该课题组还采用世界卫生组织生命质量测定简表(the World Health Organization quality

of life, WHOQOL)、知觉压力量表和直腿抬高试验对 2 组患者的生命质量和腰部功能进行了评测和相关性分析^[9],结果发现,CLBP 患者的生命质量和压力呈负相关,瑜伽组患者生命质量和腰部功能均显著优于物理锻炼组,差异均有统计学意义($P < 0.01$)。

艾扬格瑜伽(Iyengar Yoga)是美国和欧洲最流行的瑜伽种类之一^[10]。Williams 等^[11]将 CLBP 患者 60 例随机分为艾扬格瑜伽组和健康教育组,艾扬格瑜伽练习组的训练项目包括仰卧、坐姿、站立、前屈、扭转和反转等 29 种体式,其中不包括向后弯腰动作,健康教育组则仅进行健康教育,2 组均干预 16 周,并于干预结束 15 周后评价其功能性障碍程度、疼痛强度、用药、疼痛相关的态度和行为以及脊柱运动范围等,结果发现,艾扬格瑜伽组患者的疼痛强度与脊柱功能均显著优于健康教育组,差异均有统计学意义($P < 0.01$)。

还有研究尝试将哈他瑜伽(Hatha Yoga)应用于 CLBP 患者。Saper 等^[12]在波士顿 2 个多种族低收入社区招募了中等程度的 CLBP 患者 30 例(平均年龄 44 岁,女性及黑人为主),将其分为瑜伽治疗组和常规护理组,瑜伽治疗组每周进行 1 次哈他瑜伽干预,每次 75 min,连续干预 12 周,常规护理组则进行连续 12 周的常规护理,结果显示,哈他瑜伽组患者的疼痛程度和镇痛药服用剂量均显著改善,与常规护理组比较,差异均有统计学意义($P < 0.01$)。英国 Tilbrook 等^[13]也进行了类似的随机对照研究(哈他瑜伽辅助常规护理与单纯的常规护理进行比较),他们将干预时间延长至 1 年,并于干预 3、6、12 个月后使用 Roland 功能障碍问卷(Roland-Morris disability questionnaire, RMDQ)、亚伯丁背部疼痛量表(Aberdeen back pain scale, ABPS)、疼痛自我效能感问卷(pain self-efficacy questionnaire, PSEQ)对 2 组患者进行评价,结果显示,哈他瑜伽练习配合常规护理较单纯常规护理,3 项指标的改善均更为显著,且随着时间推移差异更为显著,差异均有统计学意义($P < 0.01$)。该课题后续根据哈他瑜伽练习配合常规护理的患者仅有 60% 完成了 12 个月的瑜伽练习,又采用不同分析方法对参与任一阶段锻炼的患者数据进行再次分析,结果显示,依从子总体的平均因果效应分析(complier average causal effect analysis, CACE)比“符合方案分析”及按实际处理分析(per-protocol and on-treatment analyses)更为严谨^[14],为此类研究提供了统计方法学的参考依据。

以上的临床研究表明,12 周以上规律的瑜伽练习对腰痛症状改善作用较为明显,方法包括有针对性的瑜伽体式和呼吸法以及艾扬格瑜伽和哈他瑜伽。

瑜伽与 RA 和 KOA

瑜伽被较多地应用于在 RA 的临床辅助治疗。Badsha 等^[15]在迪拜针对 RA 患者 47 例进行了 8 周的程序化随机对照研究,对照组采用常规治疗,实验组在常规治疗的基础上增加以

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椅子上练习为主的胜王瑜伽(Rajia Yoga),每周练习 2 次,每次 1 h。治疗 8 周后,采用健康评定问卷(health assessment questionnaire, HAQ)、生命质量指数(quality of life, QOL)、SF-36 简表评估生命质量和 28 项疾病活动性评分(disease activity score, DAS28)评价胜王瑜伽对 2 组患者的疗效,结果显示,实验组患者的 DAS28 指数和 HAQ 指数较对照组改善更为显著,差异均有统计学意义($P < 0.01$),而 QOL 评分 2 组间差异无统计学意义($P > 0.05$)。有学者进行了一项每周 3 次、每次 75 min,为期 10 周的小型干预研究,结果显示,瑜伽干预可改善 RA 患者的 HAQ 指数,缓解关节疼痛和由疾病所致的抑郁状态^[16]。Evans 等^[17]针对 18 岁~35 岁的青年 RA 患者进行了 6 周的艾扬格瑜伽干预和 2 个月的随访,结果显示,青年 RA 患者的 HAQ 指数、SF-36 简表以及疼痛障碍指数(pain disability index, PDI)较组内治疗前均显著改善,差异均有统计学意义($P < 0.01$),即艾扬格瑜伽可作为年轻 RA 患者的补充疗法,但还需要更多样本的支持。后续研究中,Evans 等^[18]针对 18 岁~35 岁的青年 RA 患者进行了艾扬格瑜伽干预,每周 2 次,每次 90 min,连续干预 6 周,本次研究 Evans 等增加了血压、心率、DAS28 和风湿性关节炎自我效能量表(arthritis self-efficacy scale, ASES)等评价指标,结果再次肯定了艾扬格瑜伽对 RA 的疗效,即艾扬格瑜伽可显著减轻 RA 患者的临床症状、舒缓情绪、提高生命质量。还有研究提出,哈他瑜伽可作为 RA 门诊患者辅助治疗方法^[19]。

瑜伽对 KOA 的辅助治疗也有一定效果。Ebnezar 等^[20]进行了一项针对骨关节炎患者的大型随机对照研究,250 例 KOA 患者(35~80 岁)被随机分为哈他瑜伽组和物理治疗组,2 组分别进行每天 20 min,持续 3 个月的干预,结果表明,哈他瑜伽治疗在改善关节疼痛、膝关节活动度、肿胀、关节摩擦、关节功能等方面优于经皮电刺激疗法和超声波疗法。Witt 等^[21]用包括坐在椅子上的瑜伽体式练习结合印度阿育吠陀(Ayurvedic)治疗法对 KOA 进行辅助治疗,用西安大略和麦克马斯特骨关节炎指数(Western Ontario and McMaster University Osteoarthritis Index, WOAMAC)指数、PDI 指数和 QOL 指数等进行评价,结果也肯定了瑜伽辅助治疗对 KOA 的作用。

可能是由于活动受限、关节疼痛等因素的影响,患者依从性较低,目前瑜伽干预 KOA 的大样本随机对照研究较少。对 RA 及 KOA 患者而言,改良的哈他瑜伽和胜王瑜伽体式练习相对安全。Middleto 等^[22]在美国主持了一项国家关节肌肉骨骼及皮肤病研究所项目,该研究旨在从患者的接受度和可行性方面,探讨瑜伽在 KOA 临床治疗的应用前景,以期获得更多的临床数据支持。

瑜伽与高血压、冠心病

瑜伽练习具有控制血压的效果。Wolff 等^[23]将 83 例 20~80 岁的高血压患者随机分为瑜伽练习学习班组、居家简易瑜伽练习组和对照组,进行了为期 12 周的干预实验,对照组维持常规治疗方案,瑜伽练习班增加较为复杂的哈他瑜伽练习,居家练习组增加相对简单的昆达利尼瑜伽(Kundalini Yoga)练习,结果发现,瑜伽练习学习班组患者的血压和生命质量无明显改变,而居家瑜伽练习组的血压和生命质量改善明显,与对照组比较,差异均有统计学意义($P < 0.05$)。该研究认为,哈他瑜伽体式复杂,对身体柔韧性要求高,不适合高血压患者,而动作简单、适合居家

练习的昆达利尼瑜伽则更为适合。有研究比较了 3 个月阿斯汤噶瑜伽(Ashtanga Yoga)与无氧操练习对轻度高血压患者的干预效果,结果发现,阿斯汤噶瑜伽对控制体重、降低血脂和控制血压等有一定作用,但与其他运动比较,差异无统计学意义($P > 0.05$)^[24]。该研究提示,阿斯汤噶瑜伽可能对心脑血管病疾病也有一定作用。

一项针对冠心病患者 170 例的随机对照研究显示^[25],经过为期 6 个月,每周 5 次的瑜伽呼吸法和瑜伽洁净法练习后,患者的血管收缩压、舒张压及心率均得到控制,总胆固醇($P < 0.01$),甘油三酯($P < 0.01$),高密度脂蛋白($P < 0.01$)和低密度脂蛋白($P < 0.05$)均显著改善,该研究认为,瑜伽呼吸法和放松类体式练习有益于冠状动脉疾病患者。Pullen 等^[26]针对心衰患者进行了瑜伽干预,结果发现,经过每周 2 次、每次 40 min、持续 12 周的瑜伽体式结合呼吸法练习后,心力衰竭患者的明尼苏达心衰生命质量问卷(Minnesota living with heart failure questionnaire, MLHFQ)评分以及炎症因子指标均显著改善,该研究提出,瑜伽可作为心衰常规治疗的辅助。另有 2 项研究也提示,瑜伽练习对心血管疾病具有辅助治疗作用^[27-28]。

Holger 等^[29]对瑜伽在心血管疾病的应用及其疗效进行了荟萃分析,共纳入 44 项临床实验和 3168 例心血管患者,最终分析指出,尽管多项随机临床研究存在偏移系数高、方法缺陷等问题,但瑜伽作为普通心血管疾病患者的临床辅助干预手段,其具备一定疗效的结论可以采信。

瑜伽与 2 型糖尿病

随着肥胖的不断普遍化,2 型糖尿病(type 2 diabetes mellitus, T2DM)及其引发的并发症危害日益严重。越来越多的证据表明,瑜伽不仅有助于 T2DM 及其并发症的临床管理,还可控制 2 型糖尿病的发展,改善糖耐量异常,降低胰岛素抵抗,但尚缺乏大型的随机对照临床试验来证实^[30]。Hegde 等^[31]针对 T2DM 患者进行了为期 3 个月的哈他瑜伽体位法干预,结果发现,瑜伽练习可控制 T2DM 患者的血糖水平,降低其氧化应激水平和 BMI 指数,且对糖尿病前期的患者也有一定作用。有研究发现,综合瑜伽治疗可显著降低绝经后女性糖尿病患者的空腹血糖、总胆固醇、甘油三酯和低密度脂蛋白-胆固醇水平,其疗效显著优于单纯的药物治疗^[32]。Hegde 等^[33]在糖尿病前期患者的随机对照研究中发现,以社区为试点的哈他瑜伽体式干预可以有效地控制患者氧化应激水平,降低其 BMI 指数、腰围、血压以及血糖水平,但该结果还有待更大样本量的支持。Rao 等^[34]在研究中将 T2DM 患者 227 例按随机数字表法分为整合瑜伽组和体育锻炼组,整合瑜伽组遵循瑜伽生活规范,有规律地练习瑜伽体式、呼吸法和冥想,体育锻炼组则采用健身体操进行锻炼,结果发现,2 组患者各练习 9 个月后,整合瑜伽组整体干预效果明显优于体育锻炼组。McDermott 等^[35]的研究也认为,瑜伽生活方式干预 T2DM 可减轻患者的体重和腰围,控制其空腹血糖,且疗效优于步行锻炼。Gaurav 等^[36]在 Rao 等^[34]研究基础上,对整合瑜伽组 T2DM 患者进行了 4 年的随访,结果发现,坚持瑜伽练习生活方式的患者空腹血糖控制情况优于未能坚持瑜伽练习生活方式的患者,且空腹血糖和压力呈正相关($r = 0.42$, $P < 0.05$),该研究结果提示,瑜伽练习可改善 T2DM 患者的精神状态和对生活的热情,而血糖指标和压力是影响坚持瑜伽练习的

重要因素。Kyizom 等^[37]观察了瑜伽呼吸法结合体式练习对 T2DM 患者事件相关电位潜伏期和振幅的影响,结果发现,瑜伽组(体式+呼吸法+清洁法+常规药物治疗)患者的事件相关电位 N200 和 P300 的潜伏期以及振幅均显著优于常规药物治疗组(单纯的常规药物治疗),提示常规药物治疗结合瑜伽练习可改善糖尿病患者的认知功能。

综上所述,可以认为,T2DM 患者遵循瑜伽倡导的生活方式,有规律地练习瑜伽体式和呼吸法可使其肢体放松、压力缓解,有助于控制血糖,改善其认识功能和精神状态,从而达到辅助治疗糖尿病的目的。

瑜伽与乳腺癌

有研究显示,瑜伽干预可作为肿瘤(如乳腺癌)的辅助治疗方案。Carson 等^[38](瑜伽觉知练习 8 周)、Bower 等^[39](艾扬格瑜伽练习 12 周)和 Banasik 等^[40](艾扬格瑜伽 8 周)的瑜伽干预研究均显示,规律的瑜伽练习可改善乳腺癌存活者的持续疲劳症状,增加活力。Littman 等^[41]研究结果显示,6 个月的哈他瑜伽练习不足以改善乳腺癌患者的疲劳症状,须进行更长时间的练习。Moadel 等^[42]的研究提出,增加瑜伽练习的强度才可改善乳腺癌患者的疲劳症状。Chandwani 等^[43]的研究也发现,6 周的瑜伽练习可以改善乳腺癌患者的生命质量,但未见疲劳状态的明显改善。Danahauer 等^[44]的研究则发现,治疗 12 周后,瑜伽练习组(能量修复瑜伽+常规药物治疗)的情绪和药物治疗的副反应情况均优于常规药物组($P < 0.05$),但 2 组间的疲劳症状差异无统计学意义($P > 0.05$)。

在对乳腺癌症患者进行治疗的过程中,心理健康问题常被忽略。Mackenzie 等^[45]的研究结果显示,经 6 个月的瑜伽冥想干预,乳腺癌患者的不安情绪、抑郁症状及健康相关生命质量(health-related quality of life, HRQL)均显著改善。Kovačić 等^[46]的研究结果也显示,系统的瑜伽生活方式可改善乳腺癌术后患者的焦虑情绪、压力和自我认知度。还有研究认为,瑜伽呼吸法不仅可以提高乳腺肿瘤化疗患者的生命质量,还可改善其焦虑、抑郁、睡眠障碍等症状^[47]。Cramer 等^[48]对瑜伽干预乳腺癌的临床研究进行了荟萃分析,共纳入 12 项随机对照研究和 472 例患者,结果发现,短期的瑜伽练习可作为乳腺癌患者的辅助恢复方法,其疗效基本可以肯定。

小结

已有大量临床实验证实,瑜伽可作为疾病的辅助治疗手段,但实验设计和研究方法等方面还有值得商讨之处。如入选标准和干预周期不统一,评价方法主要采用问卷和主观打分,患者的依从性低和随访流失等问题,使结果难以让人完全信服。近年来,有研究者尝试采用更为严谨、偏差性较小的统计方法来解决上述部分问题。这对于研究中国传统健身方式(如太极拳)的疾病干预极具参考价值。

应用于临床干预的瑜伽种类呈多样化,包括艾扬格瑜伽、哈他瑜伽、瑜伽清洁法、阿斯汤噶瑜伽、昆达利尼瑜伽、能量修复瑜伽以及瑜伽生活方式等,其中艾扬格瑜伽应用较多。由于目前的实验设计中,一般将常规药物治疗的非锻炼组、健康教育,或者其它运动作为对照组,较少采用不同瑜伽种类进行比较,因此

尚难确定哪种瑜伽更具针对性的疗效。

艾扬格瑜伽以著名瑜伽导师 B. K. S. Iyengar 的名字命名,又称为辅助瑜伽,其最大特点是借助椅子、靠垫、砖头等辅助工具,使瑜伽体式变得简单,更加适合不同人群的生理特点。艾扬格瑜伽其实是哈他瑜伽经典体式的人性化革新,因此受众面较广。针对 KOA 患者,可采用改良的、椅子上的改良瑜伽体式练习,以降低膝关节的承受力。阿斯汤噶瑜伽的难度和强度均非常高(如倒立类、力量类练习),无基础的健康人也很难完成,因此不太适合于心血管及关节问题的患者^[49]。昆达利尼瑜伽是由一系列的瑜伽动作组合组成的,呼吸法和唱诵较多,对柔韧性要求不高,可建议心血管疾病、肿瘤以及压力大者练习。如何从上百种的瑜伽体式,以及呼吸法和冥想练习中,根据疾病的特点制定个性化的瑜伽练习处方,可能是未来需要解决的问题。

瑜伽倡导科学的生活方式,从饮食习惯到日常作息,均有明确的规定;而瑜伽呼吸控制法和瑜伽冥想还具有心理疏导的作用。如何借鉴国外研究成果,将瑜伽治疗运用于临床实践中,减轻患者的痛苦,降低药物治疗的频率和减少副反应,是国内医务工作者需要努力的方向。

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· 外刊摘英 ·

Antidepressant use and cognitive decline

BACKGROUND AND OBJECTIVE Depression is consistently associated with cognitive impairment and increased risk for dementia. This study was designed to better understand the association between pharmacologic treatment of depression and cognitive decline.

METHODS Data for this study were derived from the nationally representative Health and Retirement Study (HRS) and the HRS Prescription Drug Study (PDS), which included serial assessments of cognitive function, depression and antidepressant treatment. Data were drawn from the 2004, 2006, 2008 and 2010 findings of the HRS and from the 2005 and 2007 findings of the PDS. Baseline depression status was determined using the 2004 wave of the HRS.

RESULTS Of the 3,714 respondents, 12% were taking antidepressant medication at baseline. No significant differences were detected in cognition scores between the patients taking antidepressants and those who were not. At six year follow-up, both users and nonusers of antidepressants had experienced a cognitive decline. Adjusted analysis revealed that cognitive decline did not differ between those taking and those not taking antidepressant medications.

CONCLUSION This longitudinal study of a population representative cohort of older adults found that antidepressant use is not associated with changes in cognitive function over a six-year period.

【摘自:Saczynski JS, Rosen AB, McCommon RJ, et al. Antidepressant use and cognitive decline: the health and retirement study. *Amer J Med*, 2015, 128(7): 739-746.】

Obesity paradox in type ii diabetes

BACKGROUND AND OBJECTIVE The association between obesity and an increased risk for cardiovascular disease is well established. However, there is growing evidence that overweight patients with cardiovascular disease survive longer than do their normal weight counterparts, an effect referred to as the "obesity paradox". This study was designed to determine whether such a paradox exists among patients with diabetes mellitus (DM).

METHODS Patients with known type II DM diabetes, followed in a British clinic, were enrolled in an electronic database from 1995 to 2005. Data collected included comorbid conditions, age, diabetes history and duration, smoking history, height, weight and blood pressure, collected at the time of the initial visit. This cohort was followed for clinical events until 2011. The primary outcome measure was all-cause mortality, with the secondary outcome being hospitalizations for cardiovascular events.

RESULTS A total of 10,568 patients with an average age of 63 years were followed for an average of 10.6 years. Overweight or obese patients had a higher rate of cardiac events requiring hospitalizations than did those with normal weight. However, the risk for cerebrovascular accidents was greater only in those with a body mass index of 30 to 34.9 kg/m² and among those in the 57 to 67 year age group. Assessment of mortality risk of those hospitalized for these events revealed a survival advantage for higher body mass index categories ($P < 0.001$). A Cox regression analysis demonstrated that those who were overweight had a reduced mortality risk as compared to normal weight individuals, while those who were obese had a similar mortality risk as those with normal weight. The lower mortality risk conferred by being overweight or obese developed around age of 60 years.

CONCLUSION This study of patients with type II diabetes found that being overweight or obese was associated with a higher risk of nonfatal cardiovascular events, but not a higher risk of mortality.

【摘自:Costanzo P, Cleland JG, Pellicori P, et al. The Obesity Paradox in Type II Diabetes Mellitus: Relationship with Body Mass Index to Prognosis. *Ann Intern Med*, 2015, 162(9): 610-618.】