

The impact of massage therapy on endocrinological parameters of pain perception, on the stress axis and the well-being of adult persons

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Citation

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Review question

How deep is the impact of massage therapy on endocrinological parameters of pain perception, on the stress axis and the well-being of adult persons?

Searches

Databases including MEDLINE/PubMed, PEDro, CINAHL, EMBASE, the Cochrane Central Register of Controlled Trials (CENTRAL) and some more will be searched from 1985 to February 2018. In order to identify the grey literature/unpublished studies, relevant studies will be sought via a review of trial registries, e.g. ClinicalTrials.gov. Also, relevant articles written in English and published in clinical journals will be searched by hand. Finally, the reference lists of the reviewed articles will additionally be searched in order to identify other clinical trials fulfilling the criteria to be included in our research. The search filter will be set to "title/abstract" and "language" will be set to English and German. These searches will be re-run just before the final analyses in order to obtain further studies retrieved to be examined.

Specific Search Query for MEDLINE (https://www.physicalrelaxation.com/PUBMED)
massage OR "massage" OR "massage therapy" OR "physical relaxation" OR "relaxation" OR "relaxation therapy" OR hormone OR endocrine OR neuroendocrine OR neurohormonal OR oxytocin OR serotonin OR 5-HIAA OR hydroxyindoleacetic OR opiate OR cannabinoid* OR endocannabinoid* OR endorphin OR beta-endorphin OR adrenalin OR noradrenalin OR adrenocorticotrophic OR adrenocorticotrophin OR acth OR cortisol OR hydrocortisone OR corticotropin OR corticotropin-releasing OR cortico-releasing OR CRF OR hypothalamic-pituitary-adrenal OR HPA OR hypothalamo-hypophyseal OR pituitary OR pituitary-adrenal OR "chromogranin A" OR catecholamines OR norepinephrine OR epinephrine OR dopamine OR enkephalin OR enkephalin OR arginine OR vasopressin) NOT (heart OR cardiac OR gastro* OR scalp OR perineal OR rectal OR transrectal OR prostat* OR uterine OR vaginal OR sexual* OR sperm OR penile OR romantic OR thai OR shiatsu OR chinese OR "deep friction" OR scar OR acupuncture OR aromatherapy OR "parotid gland" OR adolescent OR child* OR infant* OR baby OR preterm OR prenatal OR neonatal OR premature OR pediatric* OR pregnanc* OR gravidit* OR maternal OR parent-child OR parental OR mother-infant OR "family interaction")

Types of study to be included

Randomized controlled trials and quasi-experimental trials with two groups.

Condition or domain being studied

Pain, stress conditions and well-being.

Participants/population

Any healthy adult or diseased person or athletes. An adult is defined for the purposes of this study as being over the ages of 18 years.

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Intervention(s), exposure(s)

This study aims to evaluate the effect of “Swedish“, „classical“ or „western“ massage therapy. Practitioners perform their techniques through the use of manual techniques to deform soft-tissues: gliding, kneading, compression, friction, vibration and percussion.

Massage therapy may include the use of myofascial trigger point manipulation or fascial manipulation, but not use the application of aromas, essential oils and tools that may influence the treatment in any way.

Comparator(s)/control

Any comparator/control condition will be included.

Primary outcome(s)

Endocrinological parameters of pain perception, effects on the stress axis and the well-being of individuals.

Initial screenings will include all timing and effect measures.

Timing and effect measures

Timing and effect measures will be included in the study.

Secondary outcome(s)

Physiological outcomes: stress related parameters as blood pressure, heart rate, heart rate variability, skin resistance, threshold of pain.

Psychological outcomes: e.g. well-being, depressiveness, aggressiveness, anxiety, stress.

Timing and effect measures

Timing and effect measures will be included in the study.

Data extraction (selection and coding)

All the investigators will be trained in the review methodology according to the Cochrane Handbook for Systematic Reviews of Interventions (Higgins et al. 2008) to ensure objectivity and consistency in reporting across all reviewers. Using the pre-defined study eligibility criteria, two reviewers (BR, BMOe) will independently screen abstracts of the citations yielded from the literature search. Both reviewers will then recommend full-text selection. Once this selection will have been reviewed, independent recommendations will be given by each of the reviewers.

Disagreements about recommendations and/or inclusion into the research will be resolved through discussions between the two reviewers trying to find a consensus. If no consensus can be reached in the discussions, a third reviewer (ST or PRD) will be consulted and will make the final decision.

All articles marked for inclusion will be entered into the review phase, during which the full-text articles will be obtained to assess quality and conduct data extraction. In the case of unclear or missing data, the authors of the respective publications are to be contacted. If the authors will not respond, the reviewers will extract only the available information.

Risk of bias (quality) assessment

Methodological quality will be independently assessed by two reviewers (BR, BMOe), using the Cochrane Risk of bias tool 2.0. Disagreements about the quality assessment will be resolved through discussions between the two reviewers trying to find a consensus. If no consensus can be reached in the discussions, a third reviewer (ST or PRD) will be consulted and will make the final decision. The terms ‘Low’, ‘Unclear’, and ‘High’ refer to low, uncertain, and high risks of bias, respectively.

Strategy for data synthesis

Both reviewers (BR, BMOe) create a final list of data extraction points relevant to the research question. The meta-analysis will be performed using RevMan 5.2 software (Cochrane Collaboration). Based on guidelines in the Cochrane Handbook, Mean Difference (MD) and Standardized Mean Difference (SMD) with Standard Deviation (SD) will be used to measure the effect induced by massage Therapy on continuous outcomes.

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The I² tests will be used to measure statistical heterogeneity. A random effect model will be used to compute the meta-analysis.

Analysis of subgroups or subsets

Subgroup analysis will be performed on subjects, intervention, primary and secondary outcomes.

Contact details for further information

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Organisational affiliation of the review

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Anticipated or actual start date

01 February 2018

Anticipated completion date

01 October 2018

Funding sources/sponsors

None.

Conflicts of interest

None known

Language

(there is not an English language summary)

Country

Germany

Stage of review

Review_Ongoing

Subject index terms status

Subject indexing assigned by CRD

Subject index terms

Adult; Endocrinology; Humans; Massage; Pain Perception; Physical Therapy Modalities

Date of registration in PROSPERO

09 February 2018

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Details of any existing review of the same topic by the same authors

Stage of review at time of this submission

Stage	Started	Completed
Preliminary searches	Yes	Yes
Piloting of the study selection process	Yes	No
Formal screening of search results against eligibility criteria	No	No
Data extraction	No	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

Versions

09 February 2018

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