

Contents

PELVIC ORGANS/WOMAN’S HEALTH 2
VISCERA 3
CRANIUM/TMJ 7
HEADACHES 10
LABRUM 11
OSTEOARTHRITIS/KNEE 12
MANUAL THERAPY LUMBAR & GENERAL 14
MANUAL THERAPY EXTREMITIES 15
LOWER LIMB NEUROMOILIZATION 16
PAIN 17

PELVIC ORGANS/WOMAN'S HEALTH

Probiotics and mastitis

Int Breastfeed J. 2016 Jul 21;11:19. doi: 10.1186/s13006-016-0078-5. eCollection 2016.

Probiotics and mastitis: evidence-based marketing?

Amir LH¹, Griffin L², Cullinane M¹, Garland SM³.

Author information

Abstract

Probiotics are defined as live micro-organisms, which when administered in adequate amounts, confer health benefits on the host.

Scientists have isolated various strains of Lactobacilli from human milk (such as *Lactobacillus fermentum* and *Lactobacillus salivarius*), and the presence of these organisms is thought to be protective against breast infections, or mastitis. Trials of probiotics for treating mastitis in dairy cows have had mixed results: some successful and others unsuccessful. To date, only one trial of probiotics to treat mastitis in women and one trial to prevent mastitis have been published.

Although trials of probiotics to prevent mastitis in breastfeeding women are still in progress, health professionals in Australia are receiving marketing of these products. High quality randomised controlled trials are needed to assess the effectiveness of probiotics for the prevention and/or treatment of mastitis.

KEYWORDS: Mastitis; Microbiome; Probiotics; Treatment

PMID: [27446229](#)

VISCERA

Mediterranean diet

Ann Intern Med. 2016 Jul 19. doi: 10.7326/M16-0361.

Effects on Health Outcomes of a Mediterranean Diet With No Restriction on Fat Intake: A Systematic Review and Meta-analysis.

Bloomfield HE, Koeller E, Greer N, MacDonald R, Kane R, Wilt TJ.

Abstract

BACKGROUND:

Mediterranean diets may be healthier than typical Western diets.

PURPOSE:

To summarize the literature comparing a Mediterranean diet with unrestricted fat intake with other diets regarding their effects on health outcomes in adults.

DATA SOURCES:

Ovid MEDLINE, CINAHL, and the Cochrane Library from 1990 through April 2016.

STUDY SELECTION:

Controlled trials of 100 or more persons followed for at least 1 year for mortality, cardiovascular, hypertension, diabetes, and adherence outcomes, as well as cohort studies for cancer outcomes.

DATA EXTRACTION:

Data extracted by 1 investigator was verified by another. Two reviewers assessed risk of bias and strength of evidence.

DATA SYNTHESIS:

Two primary prevention trials found no difference in all-cause mortality between diet groups. One large primary prevention trial found that a Mediterranean diet resulted in a lower incidence of major cardiovascular events (hazard ratio [HR], 0.71 [95% CI, 0.56 to 0.90]), breast cancer (HR, 0.43 [CI, 0.21 to 0.88]), and diabetes (HR, 0.70 [CI, 0.54 to 0.92]). Pooled analyses of primary prevention cohort studies showed that compared with the lowest quantile, the highest quantile of adherence to a Mediterranean diet was associated with a reduction in total cancer mortality (risk ratio [RR], 0.86 [CI, 0.82 to 0.91]; 13 studies) and in the incidence of total (RR, 0.96 [CI, 0.95 to 0.97]; 3 studies) and colorectal (RR, 0.91 [CI, 0.84 to 0.98; 9 studies]) cancer. Of 3 secondary prevention studies reporting cardiovascular outcomes, 1 found a lower risk for recurrent myocardial infarction and cardiovascular death with the Mediterranean diet. There was inconsistent, minimal, or no evidence pertaining to any other outcome, including adherence, hypertension, cognitive function, kidney disease, rheumatoid arthritis, and quality of life.

LIMITATIONS:

Few trials; medium risk-of-bias ratings for many studies; low or insufficient strength of evidence for outcomes; heterogeneous diet definitions and components.

CONCLUSION:

Limited evidence suggests that a Mediterranean diet with no restriction on fat intake may reduce the incidence of cardiovascular events, breast cancer, and type 2 diabetes mellitus but may not affect all-cause mortality.

IBS management

J Am Assoc Nurse Pract. 2016 Jul;28(7):393-404. doi: 10.1002/2327-6924.12387.

Diarrhea-predominant irritable bowel syndrome: Diagnosis, etiology, and new treatment considerations.

Lacy BE¹, Moreau JC¹.
Author information

Abstract

PURPOSE:

To provide an overview of irritable bowel syndrome (IBS), specifically the efficacy and tolerability of treatment options for diarrhea-predominant IBS (IBS-D).

DATA SOURCES:

Research articles available via PubMed were reviewed.

CONCLUSIONS:

IBS is a chronic multifactorial disorder that has a negative impact on patient-related quality of life. Genetic factors, psychosociologic factors, alterations in the gut microbiota, and changes in immune, motor, and sensory responses to various stimuli all may be involved in the development of IBS. While pharmacologic therapies for IBS-D have historically been limited (e.g., alosetron), newer therapies (eluxadoline and rifaximin), both approved in the United States in 2015, may be considered for appropriate patients for the management of IBS-D.

IMPLICATIONS FOR PRACTICE:

Nurse practitioners play an important role in the diagnosis, care, and management of patients with IBS-D. The goals of therapy should be to reach a correct diagnosis before initiating therapy, provide reassurance to the patient, educate the patient on potential treatment options, improve IBS-D symptoms, minimize risk of harm with treatment, and maximize patient-related quality of life. The authors present a treatment algorithm to guide nurse practitioners on the management of patients with IBS-D.

KEYWORDS: Diarrhea; eluxadoline; gastrointestinal; irritable bowel syndrome; microbiota; rifaximin

Changes in preferences after dieting

Obesity (Silver Spring). 2016 Jul 19. doi: 10.1002/oby.21570.

Changes in liking for sweet and fatty foods following weight loss in women are related to prop phenotype but not to diet.

Burgess B^{1,2}, Rao SP², Tepper BJ¹.

Author information

Abstract

OBJECTIVE:

Changes in perceived intensity and liking of tasted foods have not been studied during weight loss from dieting. These outcomes were examined during a 6-month lifestyle intervention in women who had been classified by sensitivity to the bitter taste marker, 6-n-propylthiouracil (PROP), and then randomized to a low-fat or low-carbohydrate diet.

METHODS:

Sixty-nine women (BMI = 34.4 kg/m² ; age = 44.2 years) followed the low-fat diet (n = 31) or low-carbohydrate diet (n = 38). At baseline and at 3, and 6 months, they rated overall liking and intensity of attributes in strawberry milk and salad dressing varying in sucrose (0%, 15%, and 30% wt/vol) or fat (10%, 30%, 50% wt/vol) content, respectively.

RESULTS:

Perceived intensity of the attributes did not change. For all participants, the 15% and 30% sucrose milk samples were equally liked at baseline and 3 months, but by 6 months, the 15% sucrose sample was highest liked (P < 0.007). Also, the 50% fat sample was most liked at baseline and least liked by 6 months (P = 0.04), and this effect was most pronounced in the nontasters (P < 0.02). There were no effects of diet prescription on liking.

CONCLUSIONS: Weight loss from dieting resulted in a hedonic shift for foods with lower sucrose and fat content.

PMID: 27430708

Gut brain connection

Evidence that independent gut-to-brain and brain-to-gut pathways operate in the irritable bowel syndrome and functional dyspepsia: A 1-year population-based prospective study

Alimentary Pharmacology and Therapeutics, 07/26/2016 Koloski NA, et al.

With the aim to figure out if there is a distinct brain-to-gut functional gastrointestinal disorders (FGIDs) (where psychological symptoms begin first) and separately a distinct gut-to-brain FGID (where gut symptoms start first). As per this study, while brain-gut pathways are bidirectional, a major subset begin with gut symptoms first and only then psychological distress develops, embroiling primary gut mechanisms as drivers of the gut and extra-intestinal features in many cases.

CRANIUM/TMJ

Brain wave music and pain

Oral Dis. 2016 Jul 15. doi: 10.1111/odi.12542.

The effects of customised brainwave music on orofacial pain induced by orthodontic tooth movement.

Huang R¹, Wang J², Wu D³, Long H¹, Yang X^{1,2}, Liu H¹, Gao X¹, Zhao R¹, Lai W¹.
Author information

Abstract

OBJECTIVES:

To evaluate the effects of listening to brainwave music (BWM), which is composed by individual electroencephalogram (EEG) signals, in relieving orthodontic pain, compared to cognitive behavioral therapy (CBT), an established psychotherapy in pain management.

METHODS:

Thirty-six participants matched for age, gender, and anxiety/pain levels, were randomly assigned to the BWM group (N=12), the CBT group (N=12), or the control group (N=12). Baseline resting EEG data were fabricated into BWM for the BWM group. EEG signals and pain perception (assessed by Visual Analog Scale, VAS) of participants were recorded for the first week after orthodontic appliances placement. EEG data were analysed by multiple approaches.

RESULTS:

BWM and CBT groups presented significantly lower pain perception than the control group on days 1-4. According to EEG analysis outcomes, the BWM group showed improved functional connectivity among different brain regions, lower EEG complexity and enhanced power in theta and alpha bands, compared to CBT and control groups, especially on day 2. Differences were clustered in the prefrontal, frontal, parietal, and occipital regions, while the EEG parameters had negligible linear association with VAS scores.

CONCLUSIONS:

BWM is effective in controlling orthodontic pain, possibly via restoring functional connectivity and brain regularity influenced by pain. This article is protected by copyright. All rights reserved.

KEYWORDS: electroencephalograms; orofacial pain; orthodontic tooth movement; pain; therapies

PMID: 27417074

Carries

BMC Oral Health. 2016 Jul 2;17(1):2. doi: 10.1186/s12903-016-0234-8.

Dental caries risk indicators in early childhood and their association with caries polarization in adolescence: a cross-sectional study.

Zemaitiene M¹, Grigalauskiene R², Andruskeviciene V², Matulaitiene ZK², Zubiene J², Narbutaite J², Slabsinskiene E².

Author information

Abstract

BACKGROUND:

Based on the hypothesis that biological and social risks accumulate during life, it is important to identify possible dental caries risk indicators from the life course of early childhood and assess their association with caries polarization in adolescence.

METHODS:

A cross-sectional design was applied to the study, and a multistage cluster sampling method used to draw a representative sample of 1063 18-year-old Lithuanian adolescents. The dental examinations were performed according to the methodology for oral status evaluation recommended by the World Health Organization. Parents of the participating adolescents completed a self-administered questionnaire about their children's life course during early childhood. The interdependence of characteristics was evaluated by chi-square (χ^2) and Student's (t) criteria. A multivariate logistic regression model with the Significant Caries (SiC) index as an outcome was performed.

RESULTS:

The mean scores for the number of decayed, missing, and filled teeth (DMFT) and decayed teeth (DT) in the SiC positive group were higher than the corresponding values in the SiC negative group (6.14 [SD, 2.30] and 1.67 [SD, 2.02] vs 1.28 [SD, 1.11] and 0.34 [SD, 0.69], $p < 0.001$, respectively). Three dental caries risk indicators were identified that were independently associated with a SiC positive outcome: gender (OR = 1.32 [95 % CI: 1.01-1.73]), earlier eruption of the first primary tooth (OR = 1.43 [95 % CI: 1.03-1.97]), and past caries experience in the primary dentition (OR = 1.62 [95 % CI: 1.22-2.14]).

CONCLUSIONS:

These study findings provide reliable evidence that gender, earlier eruption of the first primary tooth, and past caries experience in the primary dentition should be considered to be dental caries risk indicators and may have an adverse effect on caries polarization in adolescence.

KEYWORDS: Adolescence; Caries polarization; Dental caries risk indicators; Early childhood
PMID: [27412383](https://pubmed.ncbi.nlm.nih.gov/27412383/)

Chronic pain in TMJ

Eur J Pain. 2016 Jul 26. doi: 10.1002/ejp.916.

Predictors for future clinically significant pain in patients with temporomandibular disorder: A prospective cohort study.

Forssell H¹, Kauko T², Kotiranta U^{3,4}, Suvinen T^{1,3}.

Author information

Abstract

BACKGROUND:

Up to 30% of patients with temporomandibular disorder (TMD) run the risk of progressing to chronic pain with significant disability. This prospective cohort study assessed the effects of baseline pain and general health and psychosocial factors on the presence of clinically significant pain in patients with TMD pain at 1 year after initial consultation.

METHODS:

263 primary care patients with TMD pain were included. At the baseline, patients completed a pain questionnaire including a wide range of putative prognostic factors, which were assessed using validated self-report scales. The outcome, clinically significant pain at 1 year was defined as grades IV and III and grades II and I with any disability points on the Graded Chronic Pain Scale (GCPS). Multivariable logistic regression was used to study the association between the outcome and each predictor variable.

RESULTS:

At 1 year, 26.9% of the patients reported clinically significant pain. The number of previous healthcare visits (OR 1.19, 95% CI 1.02-1.39), pain intensity/dysfunction of other pain conditions (OR 1.35, 95% CI 1.07-1.69), the number of other pain conditions (OR 1.31, 95% CI 0.98-1.74), the number of disability days (OR 1.05, 95% CI 1.00-1.12), and perceived ability to control pain (OR 0.79, 95% CI 0.61-1.01) were associated with the outcome. The area under the curve (AUC) for the whole model indicated acceptable discriminative ability (0.74, 95% CI 0.66-0.82).

CONCLUSIONS:

Reporting several previous healthcare visits and comorbid pains with high pain intensity and disability signal increased risk for poor prognosis of TMD pain.

SIGNIFICANCE:

About 27% of primary care TMD pain patients reported clinically significant pain at 1 year after initial consultation. Reporting several previous healthcare visits and comorbid pains with high pain intensity and disability were associated with poor prognosis of TMD pain.

PMID: 27461164

HEADACHES

Migraine and stroke

Cephalalgia. 2016 Apr 26. pii: 0333102416642602.

Migraine and incidence of ischemic stroke: A nationwide population-based study.

Peng KP¹, Chen YT², Fuh JL³, Tang CH⁴, Wang SJ⁵.

Author information

Abstract

BACKGROUND:

The association between migraine and the incidence of ischemic stroke varies in different subgroups of patients. We aimed to clarify this association using a population-based database.

METHOD:

A nationwide cohort study was conducted using data from the Taiwan National Health Insurance Research Database. Two cohorts were extracted: a neurologist-diagnosed migraine cohort, and a non-headache, propensity score-matched comparison cohort. All participants were enrolled in this study between 2005 and 2009, and were followed through the end of 2010, death, or the occurrence of ischemic stroke. Adjusted hazard ratios (aHRs) and 95% confidence intervals (CIs) were calculated with a Cox proportional hazards model to compare the between-group risks.

RESULTS:

Both cohorts (n = 119,017 each) were followed for a mean period of 3.6 ± 1.3 years. A total of 744 migraine patients (429,741 person-years) and 617 matched comparison individuals (436,141 person-years) developed ischemic stroke during the research period. Compared to the comparison cohort, patients with migraine were at an increased risk of ischemic stroke (aHR: 1.24, 95% CI: 1.12-1.38, $p < 0.001$). Subgroup analysis by age and sex revealed the highest risk in women aged ≤ 45 years (aHR: 3.44, 95% CI: 2.20-5.39, $p < 0.001$), especially among those with migraine with aura (aHR: 4.58, 95% CI: 2.45 - 8.56, $p < 0.001$). A trend for increased stroke risk was observed in men aged ≤ 45 years (aHR: 1.54, 95% CI: 0.96-2.48, $p = 0.075$).

CONCLUSION:

Migraine is associated with an increased risk of ischemic stroke, especially in younger (age ≤ 45 years) women with migraine with aura. The trend toward ischemic stroke in younger men merits further exploration.

KEYWORDS: Asian; Stroke; aura; migraine

PMID: 27118220

LABRUM

Testing for

Arthroscopy. 2016 Jul 20. pii: S0749-8063(16)30249-3. doi: 10.1016/j.arthro.2016.05.015.

The "3-Pack" Examination Is Critical for Comprehensive Evaluation of the Biceps-Labrum Complex and the Bicipital Tunnel: A Prospective Study.

Taylor SA¹, Newman AM², Dawson C³, Gallagher KA⁴, Bowers A⁵, Nguyen J⁴, Fabricant PD⁴, O'Brien SJ⁴.

Author information

Abstract

PURPOSE:

To determine the diagnostic value of the 3-Pack examination for biceps-labrum complex (BLC) disease, assess interobserver reliability, and generate an evidence-based diagnostic and therapeutic algorithm.

METHODS:

A total of 145 consecutive patients were enrolled in this prospective comparative study. The study included 116 chronically symptomatic patients indicated for arthroscopic subdeltoid transfer of the long head of the biceps tendon to the conjoint tendon and 29 asymptomatic comparison subjects. Each patient underwent examination that included the 3-Pack (active compression test [O'Brien sign], throwing test, and bicipital tunnel palpation) and traditional examination (Speed test; Yergason test; full can test; empty can test) in a blinded, randomized fashion by 3 investigators. Intraoperative BLC disease was prospectively categorized by location (inside, junctional, or bicipital tunnel).

RESULTS:

3-Pack tests were highly sensitive (73% to 98%), but less specific (46% to 79%) for BLC in all 3 locations than some of the traditional tests, which were less sensitive (20% to 67%), but more specific (83% to 100%) for BLC disease in all 3 locations. With regard to hidden bicipital tunnel lesions, palpation and O'Brien sign were highly sensitive (97.8% and 95.7% respectively) and revealed high negative predictive value (NPV, 96.4% and 92.6% respectively). Speed and Yergason tests, conversely, were poorly sensitive but had high specificities (86.7% and 97.9%, respectively) and positive predictive value (76% and 92.3%, respectively). Inter-rater reliabilities were substantial to almost perfect for the 3-Pack examination (kappa 70% to 85%) and fair to moderate for the 4 traditional examinations (kappa 25% to 56%).

CONCLUSIONS:

The 3-Pack has excellent inter-rater reliability, sensitivity, and NPV and is a critical screening tool for BLC disease in all zones. Hidden extra-articular bicipital tunnel disease can reliably be excluded based on negative tenderness to palpation or a negative O'Brien sign (NPV 93% to 96%).

LEVEL OF EVIDENCE: Level III, case control study.

PMID: 27450901

OSTEOARTHRITIS/KNEE

Hyaluronic acid

Hyaluronic acid intra-articular injection and exercise therapy: effects on pain and disability in subjects affected by lower limb joints osteoarthritis. A systematic review by the Italian Society of Physical and Rehabilitation Medicine (SIMFER)

European Journal of Physical and Rehabilitation Medicine, 07/25/2016 Hyaluronic acid intraarticular injection and exercise therapy: Effects on pain and disability in subjects affected by lower limb joints osteoarthritis. A systematic review by the Italian Society of Physical and Monticone M, et al. –

In this systematic reeview, the physicians tried to evaluate impacts of intra-articular viscosupplementation on disability in subjects with OA undergoing physical and rehabilitative interventions and further they found the evidence which suggest that information on pain and quality of life were also collected. However, physical therapy agents seemed to have greater effects than intra-articular viscosupplementation on disability and pain.

Methods

- They reviewed a total of 115 references and studies .
- They systematically searched database from PubMed, Medline, EMBASE and CINAHL for English language full-text randomized controlled trials comparing intra-articular viscosupplementation alone or associated with physical and rehabilitative interventions to viscosupplementation alone, sham treatment, waiting lists, and any type of rehabilitative interventions.

Results

- It was revealed that three trials compared HA injection and physical therapy in knee OA, with disability and pain improvements in all studies, and between-group differences in favor of physical therapy in two studies; two trials compared HA injection and home exercises in knee OA, with improvements in pain, disability and quality of life in all studies, without between-group differences; two trials compared HA injection plus physical therapy agents and exercises to exercises plus physical therapy agents in knee OA, with improvements in disability and pain in both studies, and between-group differences in favor of the inclusion HA in one study; one trial compared HA injection and home exercises in ankle OA, with improvements in disability and pain in both arms without between-group differences

Aquatic therapy

Osteoarthritis Cartilage. 2016 May 19. pii: S1063-4584(16)30084-X. doi: 10.1016/j.joca.2016.05.007. [Epub ahead of print]

Efficacy of progressive aquatic resistance training for tibiofemoral cartilage in postmenopausal women with mild knee osteoarthritis: a randomised controlled trial.

Munukka M¹, Waller B², Rantalainen T³, Häkkinen A⁴, Nieminen MT⁵, Lammentausta E⁶, Kujala UM⁷, Paloneva J⁸, Sipilä S⁹, Peuna A¹⁰, Kautiainen H¹¹, Selänne H¹², Kiviranta I¹³, Heinonen A¹⁴.
Author information

Abstract

OBJECTIVE:

To study the efficacy of aquatic resistance training on biochemical composition of tibiofemoral cartilage in postmenopausal women with mild knee osteoarthritis (OA).

DESIGN:

Eighty seven volunteer postmenopausal women, aged 60-68 years, with mild knee OA (Kellgren-Lawrence grades I/II and knee pain) were recruited and randomly assigned to an intervention (n = 43) and control (n = 44) group. The intervention group participated in 48 supervised aquatic resistance training sessions over 16 weeks while the control group maintained usual level of physical activity. The biochemical composition of the medial and lateral tibiofemoral cartilage was estimated using single-slice transverse relaxation time (T2) mapping and delayed gadolinium-enhanced magnetic resonance imaging of cartilage (dGEMRIC index). Secondary outcomes were cardiorespiratory fitness, isometric knee extension and flexion force and knee injury and OA outcome (KOOS) questionnaire.

RESULTS:

After 4-months aquatic training, there was a significant decrease in both T2 -1.2 ms (95% confidence interval (CI): -2.3 to -0.1, P = 0.021) and dGEMRIC index -23 ms (-43 to -3, P = 0.016) in the training group compared to controls in the full thickness posterior region of interest (ROI) of the medial femoral cartilage. Cardiorespiratory fitness significantly improved in the intervention group by 9.8% (P = 0.010).

CONCLUSIONS:

Our results suggest that, in postmenopausal women with mild knee OA, the integrity of the collagen-interstitial water environment (T2) of the tibiofemoral cartilage may be responsive to low shear and compressive forces during aquatic resistance training. More research is required to understand the exact nature of acute responses in dGEMRIC index to this type of loading. Further, aquatic resistance training improves cardiorespiratory fitness.

TRIAL REGISTRATION NUMBER:

ISRCTN65346593.

KEYWORDS: Aquatic exercise; Cartilage; Magnetic resonance imaging (MRI); Osteoarthritis; Randomised controlled trial

PMID: [27211862](#)

MANUAL THERAPY LUMBAR & GENERAL

Red flags

Physical therapists' assessments, analyses and use of behavior change techniques in initial consultations on musculoskeletal pain: direct observations in primary health care

BMC Musculoskeletal Disorders, 07/29/2016 Emilson C, et al.

Authors investigated and explained PTs' assessments, analyses and their use of behavioral change techniques (BCTs) in initial consultations with patients who seek primary health care due to musculoskeletal pain. Red and yellow flags were assessed by PTs in the current study, but their interpretation and integration of the findings in analyses and treatment were incomplete, indicating a need of further strategies to implement behavioral medicine in Swedish primary health care physical therapy.

Methods

- Data was used from video recordings of 12 primary health care PTs, to apply for descriptive and explorative research design.
- Based on a specific protocol with definitions of PTs' assessment of physical and psychological prognostic factors (red and yellow flags, respectively), analysis of the clinical problem, and use of BCTs, a deductive analysis was performed.
- Additionally, an inductive analysis was performed to identify and describe the variation in the PTs' clinical practice.

Results

- In a majority of the cases, red and yellow flags were evaluated.
- Mostly, the analyses were based on biomedical assessments and none of the PTs performed functional behavioral analyses.
- of the PTs used BCTs, mainly instruction and information, to facilitate physical activity and improved posture.
- Authors selected the four most clinically relevant cases to illustrate the variation in the PTs' clinical practice.
- The results are based on 12 experienced primary health care PTs in Sweden, limiting the generalizability to similar populations and settings.

MANUAL THERAPY EXTREMITIES

Knee OA MT minimal help

Osteoarthritis Cartilage. 2016 Aug;24(8):1340-9. doi: 10.1016/j.joca.2016.03.001. Epub 2016 Mar 10.

Exercise, manual therapy, and use of booster sessions in physical therapy for knee osteoarthritis: a multi-center, factorial randomized clinical trial.

Fitzgerald GK¹, Fritz JM², Childs JD³, Brennan GP⁴, Talisa V⁵, Gil AB⁶, Neilson BD⁷, Abbott JH⁸.

Author information

Abstract

OBJECTIVE:

(1) Do treatment effects differ between participants receiving manual therapy (MT) with exercise compared to subjects who don't, (2) are treatment effects sustained better when participants receive booster sessions compared to those who don't over a one year period in subjects with knee osteoarthritis (KOA)?

DESIGN:

Multi-center, 2 × 2 factorial randomized clinical trial. 300 participants with knee OA were randomized to four groups: exercise-no boosters (Ex), exercise-with boosters (Ex+B), manual therapy+exercise-no boosters (MT+Ex), manual therapy+exercise-with boosters (MT+Ex+B). The primary outcome was the Western Ontario and McMaster osteoarthritis index (WOMAC) at 1 year. Secondary outcomes included knee pain, physical performance tests, and proportions of participants meeting treatment responder criteria.

RESULTS:

There were no differences between groups on the WOMAC at 1 year or on any performance-based measures. Secondary analyses indicated a) better scores on the WOMAC and greater odds of being a treatment responder at 9 weeks for participants receiving MT, b) greater odds of being a treatment responder at 1 year for participants receiving boosters. Exploratory interaction analysis suggested knee pain decreases for participants receiving boosters and increases for participants not receiving boosters from 9 weeks to 1 year.

CONCLUSIONS:

MT or use of boosters with exercise did not result in additive improvement in the primary outcome at 1 year. Secondary outcomes suggest MT may have some short term benefit, and booster sessions may improve responder status and knee pain at 1 year. However, the role of booster sessions remains unclear in sustaining treatment effects and warrants further study.

CLINICAL TRIALS:

gov ([NCT01314183](https://clinicaltrials.gov/ct2/show/study/NCT01314183)).

KEYWORDS: Booster sessions; Exercise; Knee; Manual therapy; Osteoarthritis; Physical therapy

PMID: [26973326](https://pubmed.ncbi.nlm.nih.gov/26973326/)

LOWER LIMB NEUROMOILIZATION

Slump Test

Slump Test: Effect of Contralateral Knee Extension on Response Sensations in Asymptomatic Subjects and Cadaver Study**Abstract**

Study design: Part 1: Randomized single blind study on the effect of contralateral knee extension on sensations produced by the slump test (ST) in asymptomatic subjects. Part 2: Cadaver study simulating the nerve root behavior of part 1.

Objective: Part 1: Test if contralateral knee extension consistently reduces normal stretch sensations with the ST .Part 2: Ascertain in cadavers an explanation for the results. Background: In asymptomatic subjects, contralateral knee extension reduces stretch sensations with the ST. In sciatica patients, contralateral SLR also can temporarily reduce sciatica. We studied this methodically in asymptomatic subjects before considering a clinical population.

Methods: Part 1: Sixty-one asymptomatic subjects were tested in either control (ST), sham, or intervention (contralateral ST) groups and their sensation response intensity compared. Part 2: Caudal tension was applied to the L5 nerve root of three cadavers and tension behavior of the contralateral neural tissue recorded visually.

Results: Part 1: Reduction of stretch sensations occurred in the intervention group but not in control and sham groups ($p \leq .001$).Part 2: Tension in the contralateral lumbar nerve roots and dura reduced in a manner consistent with the responses in the intervention (contralateral ST) group.

Conclusion: Part 1: In asymptomatic subjects, normal thigh stretch sensations with the ST reduced consistently with the contralateral ST, showing that this is normal and may now be compared with patients with sciatica. Part 2: Contralateral reduction in lumbar neural tension with unilateral application of tension-producing movements also occurred in cadavers, supporting the proposed explanatory hypothesis.

PAIN

Eye tracking in adolescents

Eur J Pain. 2016 Jul 27. doi: 10.1002/ejp.920. [Epub ahead of print]

Child attention to pain and pain tolerance are dependent upon anxiety and attention control: An eye-tracking study.

Heathcote LC¹, Lau JY², Mueller SC³, Eccleston C⁴, Fox E¹, Bosmans M³, Vervoort T³.

Author information

Abstract

BACKGROUND:

Pain is common and can be debilitating in childhood. Theoretical models propose that attention to pain plays a key role in pain outcomes, however, very little research has investigated this in youth. This study examined how anxiety-related variables and attention control interacted to predict children's attention to pain cues using eye-tracking methodology, and their pain tolerance on the cold pressor test (CPT).

METHODS:

Children aged 8-17 years had their eye-gaze tracked whilst they viewed photographs of other children displaying painful facial expressions during the CPT, before completing the CPT themselves. Children also completed self-report measures of anxiety and attention control.

RESULTS:

Findings indicated that anxiety and attention control did not impact children's initial fixations on pain or neutral faces, but did impact how long they dwelled on pain versus neutral faces. For children reporting low levels of attention control, higher anxiety was associated with less dwell time on pain faces as opposed to neutral faces, and the opposite pattern was observed for children with high attention control. Anxiety and attention control also interacted to predict pain outcomes. For children with low attention control, increasing anxiety was associated with anticipating more pain and tolerating pain for less time.

CONCLUSIONS:

This is the first study to examine children's attention to pain cues using eye-tracking technology in the context of a salient painful experience. Data suggest that attention control is an important moderator of anxiety on multiple outcomes relevant to young people's pain experiences.

SIGNIFICANCE:

This study uses eye tracking to study attention to pain cues in children. Attention control is an important moderator of anxiety on attention bias to pain and tolerance of cold pressor pain in youth.

PMID: 27463940