

2. LBP

PT and LBP helps

Arch Phys Med Rehabil. 2019 Jan 23. pii: S0003-9993(19)30010-3. doi: 10.1016/j.apmr.2018.11.025.

The Impact of Timing of Physical Therapy for Acute Low Back Pain on Health Services Utilization: A Systematic Review.

Arnold E¹, La Barrie J², DaSilva L², Patti M², Goode A², Clewley D².

OBJECTIVE:

To synthesize literature about the impact of early physical therapy (PT) for acute low back pain (LBP) on subsequent health services utilization (HSU), compared to delayed PT or usual care.

DATA SOURCES:

Electronic databases (MEDLINE, CINAHL, and EMBASE) were searched from their inception to May 2018.

STUDY SELECTION:

Study selection included randomized control trials and prospective and retrospective cohort studies that investigated the association between early PT and HSU compared to delayed PT or usual care. Two independent authors screened titles, abstracts, and full text articles for inclusion based on eligibility criteria, and a third author resolved discrepancies. Eleven out of 1,146 articles were included.

DATA EXTRACTION:

Two independent reviewers extracted data on participants, timing of PT, comparisons to delayed PT or usual care, and downstream HSU, and a third reviewer assessed the information to ensure accuracy and reach consensus. Risk of bias was assessed with the Downs and Black checklist using the same method.

DATA SYNTHESIS:

Eleven studies met eligibility criteria. Early PT is within 30 days of the index visit for acute LBP. Five out of six studies that compared early PT to delayed PT found that early PT reduces future HSU. Random effects meta-analysis indicated a significant reduction in opioid use, spine injection, and spine surgery. Five studies compared early PT to usual care and reported mixed results.

CONCLUSIONS:

Early PT for acute LBP reduces HSU and cost, reduces opioid use, and may improve healthcare efficiency. This review may assist patients, healthcare providers, healthcare systems, and 3rd party payers in making decisions for the treatment of acute LBP.

BPS model and LB P

Pain Pract. 2019 Feb;19(2):224-241. doi: 10.1111/papr.12735. Epub 2018 Dec 2.

Effectiveness of Primary Care Interventions Using a Biopsychosocial Approach in Chronic Low Back Pain: A Systematic Review.

van Erp RMA¹, Huijnen IPJ^{1,2}, Jakobs MLG³, Kleijnen J⁴, Smeets RJEM^{1,5}.

BACKGROUND AND OBJECTIVE:

Recent systematic reviews show promising effects for multidisciplinary biopsychosocial (BPS) interventions in patients with chronic low back pain (CLBP). Nowadays, BPS interventions have also been developed for primary care physiotherapy settings. Our aim was to systematically review the evidence on the effectiveness of primary care BPS interventions in improving functional disability, pain, and work status for patients with CLBP. Secondly, we aimed to provide an elaborated overview of BPS intervention designs, physiotherapist training programs, and process-related factors (practical implementation).

METHODS:

We searched in scientific databases and reference lists. Randomized controlled trials (RCTs) evaluating primary care physiotherapist-led BPS interventions in adults (≥ 18 years) with nonspecific CLBP (≥ 12 weeks) were included.

RESULTS:

Our search resulted in 943 references; 7 RCTs were included (1,426 participants). Results show moderate-quality evidence (3 trials; 991 participants) that a BPS intervention is more effective than education/advice for reducing disability and pain in the short, medium, and long term. Low-quality evidence (4 trials; 435 participants) was found for no difference with physical activity treatments.

CONCLUSIONS:

BPS interventions seem more effective than education/advice and were found to be as effective as physical activity interventions in patients with CLBP. BPS interventions with a clear focus on psychosocial factors (understanding pain, unhelpful thoughts, coping styles, and goal setting) seem most promising. Sufficient delivery of BPS elements is expected when physiotherapists participate in training programs with extensive support prior and during delivery (manual, supervision, and informative resources).

Cortico steroids not effective

Pain Med. 2018 Dec 12. doi: 10.1093/pm/pny225.

Intra-articular Steroids vs Saline for Lumbar Z-Joint Pain: A Prospective, Randomized, Double-Blind Placebo-Controlled Trial.

Kennedy DJ¹, Fraiser R², Zheng P³, Huynh L², Levin J², Smuck M², Schneider BJ¹.

OBJECTIVE:

To determine if intra-articular (IA) injection of corticosteroids is effective in reducing the need for radiofrequency ablation (RFA) in those with dual comparative medial branch block (MBB)-confirmed lumbar z-joint pain.

DESIGN:

This was a randomized, double blind, placebo-controlled study.

SETTING:

Two academic medical centers.

SUBJECTS:

Fifty-six consecutive subjects who had $\geq 80\%$ pain relief during an initial screening MBB were recruited.

METHODS:

Patients received a second confirmatory MBB and concurrent IA injection of either corticosteroid or saline per randomization. Twenty-nine of 56 received intra-articular corticosteroid (triamcinolone 20 mg), of whom 24 also had a positive confirmatory MBB per Spine Interventional Society guidelines, with $\geq 80\%$ pain relief from both MBBs. Twenty-seven of 56 received IA saline into the z-joint during the confirmatory MBB, of whom 22 also had a positive confirmatory MBB. The primary outcome measure was the categorical need for RFA due to insufficient pain relief with intra-articular injection, and the secondary outcome was time to RFA.

RESULTS:

There was no statistically significant difference in the need for an RFA between the groups (16/24 steroid, 67%, 95% confidence interval [CI] = 47-82%) vs 15/22 saline (68%, 95% CI = 47-84%, $P = 1.00$). The average time to RFA was also not different, at 6.00 weeks for steroids vs 6.55 weeks for saline ($P = 0.82$).

CONCLUSIONS:

Intra-articular corticosteroids were not effective in reducing the need for or the time to a radiofrequency ablation of the medial branches in those with dual MBB-confirmed lumbar z-joint pain.

Emotional stress and LBP

Pain Pract. 2019 Feb 9. doi: 10.1111/papr.12772.

Emotional distress correlates among patients with chronic non-specific low back pain: A hierarchical linear regression analysis.

Du S^{1,2}, Hu Y¹, Bai Y², Hu L³, Dong J⁴, Jin S², Zhang H².

BACKGROUND:

Chronic low back pain (CLBP) has become a worldwide health concern, and emotional distress is an important issue for CLBP management. However, it remains poorly understood how emotional distress happens and develops. This study aimed to systematically explore the correlates of emotional distress of CLBP patients.

METHODS:

The study was a multisite, cross-sectional survey with a sample of 252 CLBP patients in urban communities. A battery of questionnaires were used to collect data. Univariate analysis, Pearson correlation analysis, and hierarchical linear regression analysis were performed.

RESULTS:

The mean score of emotional distress among 252 CLBP patients was (13.85±6.50). Hierarchical regression analysis indicated that CLBP patients' demographic factors, psycho-behavioral factors, and social support were associated with their emotional distress, uniquely explaining 16.5%, 18.4%, and 6.2% of the variance, respectively. Five factors were found to be associated with patients' emotional distress: pain intensity ($\beta=0.257$, $P<0.001$), passive coping ($\beta=0.297$, $P<0.001$), active coping ($\beta=-0.254$, $P<0.001$), self-efficacy ($\beta=-0.155$, $P=0.005$), and social support ($\beta=-0.268$, $P<0.001$).

CONCLUSIONS:

CLBP patients suffered from clinically significant emotional distress. Patients' demographics, psycho-behavioral factors, and social support were all related to emotional distress. The findings help identify the characteristics of CLBP patients at high risk of emotional distress and formulate corresponding countermeasures. This article is protected by copyright. All rights reserved.

PHARMACOLOGY

Utilization of pain medications and its effect on quality of life, health care utilization and associated costs in individuals with chronic back pain**Authors** Desai R, Hong YR, Huo J**DOI** <https://doi.org/10.2147/JPR.S187144>

Purpose: Pain medications are widely prescribed to treat chronic back pain (CBP). However, the effect of using pain medications on individuals with CBP has received very little attention.

Objective: The aim of this study was to determine the patterns of pharmacological treatment in the population with CBP and assess its impact on quality of life, health care utilization and associated costs in USA.

Patients and methods: Retrospective, cross-sectional data obtained from the Medical Expenditure Panel Survey (MEPS), from 2011 to 2015, were utilized for this study. Pharmacological treatment for CBP was categorized into three mutually exclusive categories: 1) opioids only, 2) nonsteroidal anti-inflammatory drugs (NSAIDs) only, 3) opioids and NSAIDs (combination). The effect of the use of these treatments was also evaluated.

Results: A total of 5,203 individuals with CBP were identified. Of these, 2,568 (49.4%) utilized opioids only, 1,448 (27.8%) utilized NSAIDs only and 1,187 (22.8%) utilized both pain medications. Lower health-related quality-of-life scores on both the Short Form Health Survey-12 version 2 (SF-12v2) components (mental component summary score: 44.42 vs 46.67, $P<0.001$; physical component summary score: 35.34 vs 40.11, $P<0.001$) were observed for the opioid-only group compared to the NSAID-only group. In addition, individuals utilizing opioids only had greater utilization of inpatient services, office-based services, outpatient services and emergency room visits along with higher related health care costs.

Conclusion: Future researchers need to investigate the long-term risks and benefits of opioids, and policy makers should evaluate the prescribing guidelines to aim for a more patient-centered care.

7. PELVIC ORGANS/WOMAN'S HEALTH

Breastfeeding and health

BJOG. 2019 Mar;126(4):526-534. doi: 10.1111/1471-0528.15538. Epub 2018 Dec 27.

Breastfeeding and long-term maternal metabolic health in the HUNT Study: a longitudinal population-based cohort study.

Velle-Forbord V¹, Skråstad RB^{1,2}, Salvesen Ø³, Kramer MS^{4,5}, Morken NH^{6,7}, Vanky E^{1,8}.

OBJECTIVE:

Breastfeeding (BF) has been reported to improve long-term maternal metabolic health in observational studies, but not in the randomised controlled PROBIT study. Research also suggests that maternal pre-pregnant metabolic health may affect BF. We aimed to disentangle effects of BF on long-term maternal metabolic health from effects of pre-pregnant metabolic health on BF duration and long-term metabolic health.

DESIGN:

Longitudinal population-based cohort study.

SETTING:

Nord-Trøndelag county, Norway.

POPULATION:

Women with a first live-born baby (1987-2008) participating in the Nord-Trøndelag Health Study (HUNT).

METHODS:

Odds ratios (ORs) for short BF duration (<3 months) by pre-pregnant body mass index (BMI), waist circumference (WCF), blood pressures (BPs), and heart rate (HR) were adjusted for age and smoking using logistic regression. Mixed linear models were used to estimate effects of BF duration (<3, 3-6, >6 months) on mean values of metabolic health parameters from baseline to follow-up.

MAIN OUTCOME MEASURES:

Mean change in BMI, WCF, BPs, HR, serum-glucose, and serum-lipids from baseline to follow-up by BF duration categories.

RESULTS:

We analysed 1403 women with a median follow-up of 12 years (interquartile range 11-22). Pre-pregnant WCF and HR correlated inversely with BF duration. Pre-pregnant BMI had a u-shaped correlation-pattern with BF duration. We observed similar between-group differences in metabolic health parameters at baseline and at follow-up, which implies that mean change in metabolic health parameters was similar across BF groups. Those women who started out with the best health had the longest BF duration and ended up with the best health, and those women who started out with the poorest health had shortest BF duration and ended up with the poorest health.

CONCLUSIONS:

Our results do not support a causal relationship between long BF duration and improved metabolic health. It is more likely that pre-pregnant metabolic health affects both BF duration and long-term metabolic health. Reverse causality can explain previously observed improved long-term metabolic health after BF.

Maternal depression

Arch Womens Ment Health. 2019 Feb;22(1):85-91. doi: 10.1007/s00737-018-0883-5. Epub 2018 Jul 3.

Impact of maternal depression on perinatal outcomes in hospitalized women-a prospective study.

Hermon N¹, Wainstock T², Sheiner E³, Golan A⁴, Walfisch A³.

Scarce data exists regarding the prevalence of antenatal depression in hospitalized pregnant women, and its effect on perinatal outcome.

We aimed to estimate the risk of maternal depression among women hospitalized in a high-risk pregnancy department, and to evaluate its potential association with adverse perinatal outcome.

A depression screening self-questionnaire-based prospective study was performed, in which hospitalized pregnant women who screened positive for depression were compared to those who screened negative. The Edinburgh Postnatal Depression Scale (EPDS) was used for antenatal depression screening. Pregnancy course and perinatal outcome were compared between the groups. A multivariate logistic regression model was constructed to control for clinically relevant confounders. During the study period, 279 women met the inclusion criteria. Among them, 28.3% (n = 79) screened positive for depression (≥ 10 points on the EPDS).

In the univariate analysis, a significantly higher incidence of preterm delivery (< 37 weeks), low birthweight (< 2500 g), low Apgar scores (at 1 and 5 min), and neonatal intensive care unit (NICU) admissions were noted among the screen positive group. In the multivariate regression model, controlled for maternal age, ethnicity, gestational diabetes mellitus, preeclampsia, past preterm delivery, and gestational age upon admission, maternal antenatal depression during hospitalization was noted as an independent risk factor for preterm delivery (adjusted OR 3.32, 95%CI 1.16-9.52, $p = 0.026$). Maternal antenatal depression during hospitalization is very common and appears to play a significant and independent role in the prediction of preterm delivery.

Mother's exercise and birth weight

BJOG. 2019 Mar;126(4):459-470. doi: 10.1111/1471-0528.15476. Epub 2018 Oct 22.

Associations between maternal physical activity in early and late pregnancy and offspring birth size: remote federated individual level meta-analysis from eight cohort studies.

Pastorino S¹, Bishop T¹, Crozier SR², Granström C³, Kordas K⁴, Küpers LK^{5,6}, O'Brien EC⁷, Polanska K⁸, Sauder KA⁹, Zafarmand MH^{10,11,12}, Wilson RC¹³, Agyemang C¹⁰, Burton PR¹³, Cooper C^{2,14}, Corpeleijn E⁵, Dabelea D¹⁵, Hanke W⁸, Inskip HM^{2,14}, McAuliffe FM⁷, Olsen SF³, Vrijkotte TG¹⁰, Brage S¹, Kennedy A^{16,17}, O'Gorman D¹⁴, Scherer P¹, Wijndaele K¹, Wareham NJ¹, Desoye G¹⁸, Ong KK¹.

OBJECTIVE:

Evidence on the impact of leisure time physical activity (LTPA) in pregnancy on birth size is inconsistent. We aimed to examine the association between LTPA during early and late pregnancy and newborn anthropometric outcomes.

DESIGN:

Individual level meta-analysis, which reduces heterogeneity across studies.

SETTING:

A consortium of eight population-based studies (seven European and one US) comprising 72 694 participants.

METHODS:

Generalised linear models with consistent inclusion of confounders (gestational age, sex, parity, maternal age, education, ethnicity, BMI, smoking, and alcohol intake) were used to test associations between self-reported LTPA at either early (8-18 weeks gestation) or late pregnancy (30+ weeks) and the outcomes. Results were pooled using random effects meta-analyses.

MAIN OUTCOME MEASURES:

Birth weight, large-for-gestational age (LGA), macrosomia, small-for-gestational age (SGA), % body fat, and ponderal index at birth.

RESULTS:

Late, but not early, gestation maternal moderate to vigorous physical activity (MVPA), vigorous activity, and LTPA energy expenditure were modestly inversely associated with BW, LGA, macrosomia, and ponderal index, without heterogeneity (all: $I^2 = 0\%$). For each extra hour/week of MVPA, RR for LGA and macrosomia were 0.97 (95% CI: 0.96, 0.98) and 0.96 (95% CI: 0.94, 0.98), respectively. Associations were only modestly reduced after additional adjustments for maternal BMI and gestational diabetes. No measure of LTPA was associated with risk for SGA.

CONCLUSIONS:

Physical activity in late, but not early, pregnancy is consistently associated with modestly lower risk of LGA and macrosomia, but not SGA.

TWEETABLE ABSTRACT:

In an individual participant meta-analysis, late pregnancy moderate to vigorous physical activity modestly reduced birth size outcomes.

Hysterectomy increases risk of osteoporosis**Increased the risk of osteoporosis with hysterectomy: A longitudinal follow-up study using a national sample cohort**

Hyo Geun Choi, M.D., Ph.D. Yoon Jung Jung, M.D. Suk Woo Lee, M.D., Ph.D.

DOI: <https://doi.org/10.1016/j.ajog.2019.02.018>

A structured abstract**Background**

Premenopausal hysterectomy is associated with a decreased ovarian reserve, follicular atresia, and subsequently reduced long-term estrogen secretion. Therefore, women who undergo hysterectomy will experience greater gradual bone mineral loss than women with an intact uterus and have an increased risk of osteoporosis.

Objective

This study aimed to evaluate the association between hysterectomy without/with bilateral oophorectomy (BO) and the occurrence of osteoporosis using a national sample cohort from South Korea.

Study Design

Using the national cohort study from the Korean National Health Insurance Service, we extracted data for patients who had undergone hysterectomy ($n = 9,082$) and for a 1:4 matched control group ($n = 36,328$) and then analyzed the occurrence of osteoporosis. The patients were matched according to age, sex, income, region of residence, and past medical history. A Cox proportional hazards model was used to analyze the hazard ratios (HRs) and 95% confidence intervals (CIs). Subgroup analyses were performed based on age and BO status. The age of the participants was defined as the age at the time of hysterectomy.

Results

The adjusted HR for osteoporosis was 1.45 (95% CI = 1.37-1.53, $P < .001$) in the hysterectomy group. The adjusted HRs for osteoporosis in the different age subgroups of this group were 1.84 (95% CI = 1.61-2.10) for ages 40-44 years, 1.52 (95% CI = 1.39-1.66) for ages 45-49 years, 1.44 (95% CI = 1.28-1.62) for ages 50-54 years, 1.61 (95% CI = 1.33-1.96, all $P < .001$) for ages 55-59 years and 1.08 (95% CI = 0.95-1.23, $P = .223$) for ages ≥ 60 years. The adjusted HRs for osteoporosis according to hysterectomy/oophorectomy status were 1.43 (95% CI = 1.34-1.51) in the hysterectomy without BO group and 1.57 (95% CI = 1.37-1.79) in the hysterectomy with BO group.

Conclusion

The occurrence of osteoporosis was increased in patients who had undergone hysterectomy compared to that in matched control subjects regardless of BO status.

Hysterectomy and reduced ovarian CA risk

J Natl Cancer Inst. 2019 Feb 11. doi: 10.1093/jnci/djz015. [

The Association between hysterectomy and ovarian cancer risk: A population-based record-linkage study.

Dixon-Suen SC^{1,2}, Webb PM^{1,2}, Wilson LF¹, Tuesley K^{1,2}, Stewart LM^{3,4}, Jordan SJ^{1,2}.

BACKGROUND:

Recent studies have called into question the long-held belief that hysterectomy without oophorectomy protects against ovarian cancer. This population-based longitudinal record-linkage study aimed to explore this relationship, overall and by age at hysterectomy, time period, surgery type, and indication for hysterectomy.

METHODS:

We followed the female adult Western Australian population (837,942 women) across a 27-year period using linked electoral, hospital, births, deaths, and cancer records. Surgery dates were determined from hospital records, and ovarian cancer diagnoses (n = 1,640) were ascertained from cancer registry records. We used Cox regression to estimate hazard ratios (HRs) and 95% confidence intervals (CIs) for the association between hysterectomy and ovarian cancer incidence.

RESULTS:

Hysterectomy without oophorectomy (n = 78,594) was not associated with risk of invasive ovarian cancer overall (HR = 0.98, 95% CI = 0.85-1.11), or with the most common serous subtype (HR = 1.05, 95% CI = 0.89-1.23). Estimates did not vary statistically significantly by age at procedure, time period or surgical approach. However, among women with endometriosis (5.8%) or with fibroids (5.7%), hysterectomy was associated with substantially decreased ovarian cancer risk, overall (HR = 0.17, 95% CI = 0.12-0.24 and HR = 0.27, 95% CI = 0.20-0.36, respectively) and across all subtypes.

CONCLUSIONS:

Our results suggest that for most women, having a hysterectomy with ovarian conservation is not likely to substantially alter their risk of developing ovarian cancer. However, our results, if confirmed, suggest that ovarian cancer risk reduction could be considered as a possible benefit of hysterectomy when making decisions about surgical management of endometriosis or fibroids.

Night shift work affect sexual life

Rotating night shift work and menopausal age

Human Reproduction

Stock D, et al. | February 13, 2019

In view of the link of night work with reproductive dysfunction, including disruption of menstrual cycle patterns, researchers investigated whether rotating night shift schedules are associated with age at menopause among a large, national cohort of shift working nurses.

In this cohort study of 80,840 women from the Nurses' Health Study 2 (NHS2), 27,456 women (34%) reached natural menopause during the follow-up.

Observations suggest a modest acceleration in reproductive senescence in correlation with working rotating night shifts with sufficient frequency among women who may already be predisposed to earlier menopause.

8. VISCERA

Exercise good for IBS

Moderate-intensity aerobic and resistance exercise is safe and favorably influences body composition in patients with quiescent Inflammatory Bowel Disease: a randomized controlled cross-over trial

Owen Croninley Barton, Carthage Moran, Donal Sheehan, Ronan Whiston, Helena Nugent, Yvonne McCarthy, Catherine B. Molloy, Orla O'Sullivan, Paul D. Cotter, Michael G. Molloy and Fergus Shanahan

BMC Gastroenterology 2019 **19**:29
<https://doi.org/10.1186/s12876-019-0952-x>

Background

Overweight and metabolic problems now add to the burden of illness in patients with Inflammatory Bowel Disease. We aimed to determine if a program of aerobic and resistance exercise could safely achieve body composition changes in patients with Inflammatory Bowel Disease.

Methods

A randomized, cross-over trial of eight weeks combined aerobic and resistance training on body composition assessed by Dual Energy X-ray Absorptiometry was performed. Patients in clinical remission and physically inactive with a mean age of 25 ± 6.5 years and Body Mass Index of 28.9 ± 3.8 were recruited from a dedicated Inflammatory Bowel Disease clinic. Serum cytokines were quantified, and microbiota assessed using metagenomic sequencing.

Results

Improved physical fitness was demonstrated in the exercise group by increases in median estimated $\text{VO}_{2\text{max}}$ (Baseline: 43.41mls/kg/min; post-intervention: 46.01mls/kg/min; $p = 0.03$). Improvement in body composition was achieved by the intervention group ($n = 13$) with a median decrease of 2.1% body fat compared with a non-exercising group ($n = 7$) (0.1% increase; $p = 0.022$). Lean tissue mass increased by a median of 1.59 kg and fat mass decreased by a median of 1.52 kg in the exercising group. No patients experienced a deterioration in disease activity scores during the exercise intervention. No clinically significant alterations in the α - and β -diversity of gut microbiota and associated metabolic pathways were evident.

Conclusions

Moderate-intensity combined aerobic and resistance training is safe in physically unfit patients with quiescent Inflammatory Bowel Disease and can quickly achieve favourable body compositional changes without adverse effects.

Firefighters increase risk of CA

Int J Cancer. 2019 Feb 8. doi: 10.1002/ijc.32199.

Cancer incidence and mortality among firefighters.

Jalilian H¹, Ziaei M², Weiderpass E^{3,4,5,6}, Rueegg CS⁷, Khosravi Y⁸, Kjaerheim K⁴.

Firefighters are exposed to both known and suspected carcinogens. This study aims to systematically review the literature on the association of firefighting occupation and cancer incidence and mortality, overall and for specific cancer sites.

A systematic review using PubMed, Embase, and Web of Science was performed up to January 1, 2018. We extracted risk estimates of cancers and calculated summary incidence risk estimates (SIRE), summary mortality risk estimates (SMRE), and their 95% confidence intervals (CI). Publication bias and risk of bias in individual studies were assessed using Begg's and Egger's tests and the Newcastle-Ottawa scale (NOS), respectively. We included 50 papers in the review and 48 in the meta-analysis. We found significantly elevated SIREs for cancer of the colon (1.14; CI 1.06 to 1.21), rectum (1.09; CI 1.00 to 1.20), prostate (1.15; CI 1.05 to 1.27), testis (1.34; CI 1.08 to 1.68), bladder (1.12; CI 1.04 to 1.21), thyroid (1.22; CI 1.01 to 1.48), pleura (1.60; CI 1.09 to 2.34), and for malignant melanoma (1.21; CI 1.02 to 1.45). We found significant SMREs of 1.36 (1.18 to 1.57) and 1.42 (1.05 to 1.90) for rectal cancer and Non-Hodgkin's lymphoma, respectively.

Considering the significantly elevated risk of some cancers in this occupational group, we suggest improving preventive measures and securing adequate and relevant medical attention for this group. Further studies with more accurate and in-depth exposure assessments are indicated. This article is protected by copyright. All rights reserved.

13 D. SLEEP**Sleep disorders increases risk of prostate CA****Sleep disorders associated with risk of prostate cancer: a population-based cohort study**

- Wei-Sheng Chung and Cheng-Li Lin

*BMC Cancer*2019**19**:146

<https://doi.org/10.1186/s12885-019-5361-6>

Background

Disrupted sleep rhythms may lead to cancer development. We conducted a population-based cohort study to evaluate the incidence and risk of prostate cancer in patients with sleep disorders (SDs).

Methods

Patients newly diagnosed with SDs between 2000 and 2010 were enrolled from the Taiwan Longitudinal Health Insurance Database. A non-SD cohort age-matched (5-y intervals), comorbidities, and medications was randomly sampled from the general population at a 1:1 ratio. The follow-up period extended from the index date of SDs to the diagnosis of prostate cancer, censoring, or the end of 2013. We used Cox proportional hazards models to calculate the risk of prostate cancer.

Results

In total, 41,444 patients were enrolled in each cohort. The mean age of the SD cohort was 48.0 years and that of the non-SD cohort was 47.8 years, with 58.2% of both cohorts aged younger than 50 years. The incidence of prostate cancer increased with age. The overall incidence of prostate cancer was higher in the SD cohort than in the non-SD cohort (9.56 vs 6.36 per 10,000 person-y), with an adjusted hazard ratio of 1.42 (95% CI = 1.20–1.69). Age-specific analysis revealed a 1.35-fold increased risk of prostate cancer in the patients aged ≥ 65 years in the SD cohort compared with the non-SD counterparts (95% CI = 1.10–1.65).

Conclusions

Patients with SDs are associated with increased risk of prostate cancer.

14. HEADACHES

Most used tests

Phys Ther. 2019 Jan 28. doi: 10.1093/ptj/pzz007.

Which Examination Tests Detect Differences in Cervical Musculoskeletal Impairments in People With Migraine? A Systematic Review and Meta-Analysis.

Szikszay TM¹, Hoenick S², von Korn K³, Meise R⁴, Schwarz A⁵, Starke W⁶, Luedtke K⁷.

BACKGROUND:

Most patients with migraine report associated neck pain. Whether neck pain is a symptom of migraine or an indicator for associated cervical musculoskeletal impairment has not yet been determined. Physical examination tests to detect cervical impairments in people with headache have been suggested, but results have not been evaluated systematically and combined in meta-analyses.

PURPOSE:

The purpose of this study was to identify musculoskeletal impairments in people with migraine and people who were healthy (healthy controls) by reviewing published data on physical examination results.

DATA SOURCES:

PubMed, CINAHL, Web of Science, and the Cochrane Register of Clinical Trials were searched for studies published prior to December 2017.

STUDY SELECTION:

Publications investigating physical examination procedures that are feasible for use in a physical therapy setting for patients with migraine and healthy controls were independently selected by 2 researchers.

DATA EXTRACTION:

One researcher extracted the data into predesigned data extraction tables. Entries were checked for correctness by a second researcher. The Downs and Black Scale was used for risk-of-bias assessment by 2 reviewers independently.

DATA SYNTHESIS:

Thirty-five studies (involving 1033 participants who were healthy [healthy controls] and 1371 participants with migraine) were included in the qualitative synthesis, and 18 were included in the meta-analyses (544 healthy controls and 603 participants with migraine). Overall, studies were rated as having a low to moderate risk of bias. Included studies reported 20 different test procedures. Combined mean effects indicated that 4 of the tests included in the meta-analyses distinguished between patients and controls: range of cervical motion, flexion-rotation, pressure pain thresholds, and forward head posture in a standing position.

LIMITATIONS:

Manual joint testing and evaluation of trigger points were the 2 most frequently investigated tests not included in the meta-analyses because of heterogeneity of reporting and procedures.

CONCLUSIONS:

Three tests confirmed the presence of musculoskeletal impairments in participants with migraine when combined in meta-analyses. Pressure pain thresholds added information on sensory processing. Additional tests might be useful but require standardized protocols and reporting.

HA management

Eur J Pain. 2019 Feb 1. doi: 10.1002/ejp.1374

Non-pharmacological Management of Persistent Headaches Associated with Neck Pain: A Clinical Practice Guideline from the Ontario Protocol for Traffic Injury Management (OPTIMa) Collaboration.

Côté P^{1,2,3}, Yu H^{2,4}, Shearer HM^{2,5}, Randhawa K^{2,5}, Wong JJ^{2,4,5}, Mior S^{3,5}, Ameis A³, Carroll LJ⁶, Nordin M⁷, Varatharajan S^{2,5}, Sutton D^{2,5}, Southerst D⁸, Jacobs C^{2,9}, Stupar M², Taylor-Vaisey A², Gross DP^{10,11}, Brison RJ^{12,13}, Paulden M¹⁴, Ammendolia C^{15,16}, Cassidy JD^{17,18}, Loisel P^{5,19}, Marshall S²⁰, Bohay RN²¹, Stapleton J²², Lacerte M^{23,24}.

OBJECTIVES:

To develop an evidence-based guideline for the non-pharmacological management of persistent headaches associated with neck pain (i.e., tension-type or cervicogenic).

METHODS:

This guideline is based on systematic reviews of high-quality studies. A multidisciplinary expert panel considered the evidence of clinical benefits, cost-effectiveness, societal and ethical values, and patient experiences when formulating recommendations. Target audience includes clinicians; target population is adults with persistent headaches associated with neck pain.

RESULTS:

When managing patients with headaches associated with neck pain, clinicians should: 1) rule out major structural or other pathologies, or migraine as the cause of headaches; 2) classify headaches associated with neck pain as tension-type headache or cervicogenic headache once other sources of headache pathology has been ruled out; 3) provide care in partnership with the patient and involve the patient in care planning and decision-making; 4) provide care in addition to structured patient education; 5) consider low load endurance craniocervical and cervicoscapular exercises for tension-type headaches (episodic or chronic) or cervicogenic headaches >3 months duration; 6) consider general exercise, multimodal care (spinal mobilization, craniocervical exercise, and postural correction), or clinical massage for chronic tension-type headaches; 7) do not offer manipulation of the cervical spine as the sole form of treatment for episodic or chronic tension-type headaches; 8) consider manual therapy (manipulation with or without mobilization) to the cervical and thoracic spine for cervicogenic headaches >3 months duration. However, there is no added benefit in combining spinal manipulation, spinal mobilization, and exercises; and 9) reassess the patient at every visit to assess outcomes and determine whether a referral is indicated.

CONCLUSIONS:

Our evidence-based guideline provides recommendations for the conservative management of persistent headaches associated with neck pain. The impact of the guideline in clinical practice requires validation. This article is protected by copyright. All rights reserved.

Aura's

Headache. 2019 Feb 8. doi: 10.1111/head.13486.

Relating Photophobia, Visual Aura, and Visual Triggers of Headache and Migraine.

Hayne DP^{1,2}, Martin PR³.

OBJECTIVE:

This study investigated a potential association between visual factors and symptoms related to migraine. It was predicted that photophobia and visual aura would be positively associated with interictal light sensitivity and visual headache triggers (flicker, glare, and eyestrain), and that these 2 visual symptoms would also be associated.

BACKGROUND:

Previous studies have found independent neurophysiological associations between several visual factors and symptoms related to headache disorders. Many of these connections appear to be associated with increased cortical hypersensitivity, a phenomenon that might be in part due to repeated avoidance and reduced tolerance to triggers. If true, and if associations between visual factors and symptoms can be established, this may have implications for an exposure-based treatment for migraine symptoms.

METHODS:

Four hundred and ninety-one participants (411 female, 80 male) were recruited through Griffith University (AUS), Headache Australia, Pain Australia, and through social media. Participants were grouped based on the presence of headache disorder symptoms and the presence or absence of photophobia and/or visual aura. A cross-sectional online survey design was utilized to gather information pertaining to interictal light sensitivity, visual triggers, and visual symptoms.

RESULTS:

With respect to interictal light sensitivity and photophobia, a significant difference ($P < .001$, eta squared [η^2] = 0.084) was found between the 3 groups, where headache disorder participants with photophobia (group A1; mean [M] = 2.5, standard deviation [SD] = 0.97) reported significantly greater light sensitivity than participants with headache disorder and no photophobia (A2; M = 1.68, SD = 0.62) and control group participants (A3; M = 1.82, SD = 0.85). This pattern was repeated for participants reporting flicker as a headache trigger ($P < .001$, $\eta^2 = 0.061$), with group A1 (M = 2.45, SD = 1.24) significantly higher than groups A2 (M = 1.68, SD = 0.83) and A3 (M = 1.68, SD = 0.89), and was also seen for glare as a headache trigger ($P < .001$, $\eta^2 = 0.092$), with group A1 (M = 2.92, SD = 0.96) significantly higher than A2 (M = 2.31, SD = 0.89) and A3 (M = 2.09, SD = 0.93). This pattern of results was not replicated for headache disorder participants with and without visual aura. A significant association ($P < .001$) was found between photophobia and visual aura in headache disorder participants based on a chi-square test of independence, with 86/136 participants reporting either both or neither visual symptom.

CONCLUSIONS:

This study supports a link between certain visual phenomena in headache disorder populations, and supports future research into exposure-based treatments for migraine symptoms.

Vestibular HA's

Headache. 2019 Feb 8. doi: 10.1111/head.13484

The Spectrum of Vestibular Migraine: Clinical Features, Triggers, and Examination Findings.

Beh SC¹, Masrouf S¹, Smith SV², Friedman DI^{1,3}.

OBJECTIVE:

To assess the ictal symptoms, interictal symptoms, psychiatric comorbidities, and interictal neuro-otologic examination findings in vestibular migraine (VM).

METHODS:

Retrospective chart review of 491 patients seen from August 2014 until March 2018 at a tertiary neurology referral center for vestibular disorders to identify patients fulfilling the 2012 VM criteria.

RESULTS:

One hundred and thirty-one patients (105 women) were identified. Mean age of VM onset was 44.3 (\pm 13.7) years. Preceding the onset of vestibular symptoms, most had migraine (57.3%) and motion sickness (61.1%). It was common to have a family history of migraine (50.8%) and episodic vestibular symptoms (28.1%). Common ictal symptoms were triggered (visually induced and head-motion) and spontaneous vertigo, accompanied by photophobia and phonophobia (118/131 [90.1%] patients), nausea (105/131 [80.2%] patients), aural symptoms (79/131 [60.3%] patients), and headache (65/131 [49.6%] patients). Interictally, many experienced visually induced (116/131 [88.6%] patients), head-motion (86/131 [65.6%] patients), and persistent (67/131 [51.1%] patients) dizziness. Psychiatric comorbidities include anxiety (92/131 [70.2%] patients), depression (53/131 [40.5%] patients), insomnia (38/131 [29.0%] patients), phobic disorders (15/131 [11.5%] patients), and psychogenic disorders (11/131 [8.4%] patients). Common triggers were stress (52/131 [39.7%] patients), bright lights (35/131 [26.7%] patients), weather changes (34/131 [26.0%] patients), and sleep deprivation (34/131 [26.0%] patients). Interictal neuro-otologic examination was abnormal in 56/131 (42.7%), usually hyperventilation-induced, head-shaking-induced, vibration-induced, and positional nystagmus. The most common balance-test finding was impaired sharpened Romberg's test (22/130 [16.9%] patients).

CONCLUSIONS:

In this single center study, we found that VM typically affects women in their 40s, with a personal and family history of migraine. Typical ictal symptoms were triggered and spontaneous vertigo, associated with photophobia and phonophobia, nausea, aural symptoms, and headache. Interictal vestibular symptoms, comorbid psychiatric disorders, and non-specific interictal neuro-otologic findings were common.

Botox for HA's

Efficacy of botulinum toxin in tension-type headaches: A systematic review of the literature Pain Practice — Freund B, et al. | February 12, 2019

In this systematic review, researchers assessed the efficacy of botulinum toxin in cases of chronic tension-type headaches (CTTH). They included 22 studies, including 9 non-randomized, uncontrolled studies, 8 randomized, placebo-controlled and double-blinded trials (RCT), 3 RCTs with a cross-over, open label period, one comparative, randomized, single-blinded evaluation, and one retrospective study with prospective evaluation of headache response to cosmetic botulinum toxin.

These studies yielded low quality of evidence regarding botulinum toxin in TTH. However, some data suggest it as efficacious. The evidence did not support a lack of efficacy of botulinum toxin in TTH. In the treatment of CTTH, using the paradigm for botulinum toxin in chronic migraine may prove productive.

16. CONCUSSIONS

Concussion lead to a higher risk of suicide

JAMA Neurol. 2018 Nov 12. doi: 10.1001/jamaneurol.2018.3487.

Association of Concussion With the Risk of Suicide: A Systematic Review and Meta-Analysis.

Fralick M^{1,2}, Sy E^{3,4}, Hassan A⁵, Burke MJ⁶, Mostofsky E^{7,1}, Karsies T⁸.

IMPORTANCE:

Concussion is the most common form of traumatic brain injury (TBI). While most patients fully recover within 1 week of injury, a subset of patients might be at a higher risk of suicide.

OBJECTIVE:

To assess the risk of suicide after concussion.

DATA SOURCES:

We performed a systematic search of Medline (PubMed), Embase, PsycINFO, and Published International Literature on Traumatic Stress (PILOTS) from 1963 to May 1, 2017. We also searched Google Scholar and conference proceedings and contacted experts in the field to seek additional studies.

STUDY SELECTION:

Studies that quantified the risk of suicide, suicide attempt, or suicidal ideation after a concussion and/or mild TBI were included. Studies that included children and adults, including military and nonmilitary personnel, were included. Two authors independently reviewed all titles and abstracts to determine study eligibility.

DATA EXTRACTION AND SYNTHESIS:

Study characteristics were extracted independently by 2 trained investigators. Study quality was assessed using the Newcastle-Ottawa Scale. Study data were pooled using random-effects meta-analysis.

MAIN OUTCOMES AND MEASURES:

The primary exposure was concussion and/or mild TBI, and the primary outcome was suicide. Secondary outcomes were suicide attempt and suicidal ideation.

RESULTS:

Data were extracted from 10 cohort studies (n = 713 706 individuals diagnosed and 6 236 010 individuals not diagnosed with concussion and/or mild TBI), 5 cross-sectional studies (n = 4420 individuals diagnosed and 11 275 individuals not diagnosed with concussion and/or mild TBI), and 2 case-control studies (n = 446 individuals diagnosed and 8267 individuals not diagnosed with concussion and/or mild TBI). Experiencing concussion and/or mild TBI was associated with a 2-fold higher risk of suicide (relative risk, 2.03 [95% CI, 1.47-2.80]; I² = 96%; P < .001). In 2 studies that provided estimates with a median follow-up of approximately 4 years, 1664 of 333 118 individuals (0.50%) and 750 of 126 114 individuals (0.59%) diagnosed with concussion and/or mild TBI died by suicide. Concussion was also associated with a higher risk of suicide attempt and suicide ideation. The heightened risk of suicide outcomes after concussion was evident in studies with and without military personnel.

CONCLUSIONS AND RELEVANCE:

Experiencing concussion and/or mild TBI was associated with a higher risk of suicide. Future studies are needed to identify and develop strategies to decrease this risk.

PMID: 30419085 DOI: 10.1001/jamaneurol.2018.3487

27. HIP**Athletes and return to play after hip surgery****Prognosis Following Hip Arthroscopy Varies in Professional Athletes Based on Sport**

Robert A. Christian, M.D. Ryan J. Lubbe, B.S. Danielle S. Chun, M.D. Ryan S. Selley, M.D.,
Michael A. Terry, M.D. Wellington K. Hsu, M.D.

DOI: <https://doi.org/10.1016/j.arthro.2018.10.113>

Purpose

To evaluate return to play (RTP) and performance-based outcomes in professional athletes across 4 major North American team sports following hip arthroscopy.

Methods

Professional athletes of the National Football League, Major League Baseball (MLB), National Basketball Association, and National Hockey League (NHL) who underwent hip arthroscopy were identified using an established protocol of public reports. Sport-specific statistics were collected before and after hip arthroscopy for each athlete, leading to a performance score. RTP was defined as the first regular or postseason game played following surgery.

Results

A total of 151 arthroscopic hip procedures were performed on 131 professional athletes. The overall RTP rate after arthroscopic hip surgery was found to be 88.7% (134 of 151 arthroscopic hip surgeries), with no significant difference between sports. The median number of seasons played after hip arthroscopy were 2.7, 2.3, 1.1, and 0.9 for the National Football League, National Basketball Association, MLB, and NHL cohorts, respectively, with no significant difference between sports. MLB and NHL cohorts experienced a decrease in games played in the first season following hip arthroscopy ($P = .04$, $P = .01$), whereas NHL players also experienced a decrease in games played in seasons 2 and 3 postoperatively ($P = .001$). Performance scores decreased in the NHL cohort for all seasons postoperatively ($P < .001$, $P = .003$). No other statistically significant differences were found when comparing players of different sports.

Conclusions

Although professional athletes demonstrate a high rate of RTP following hip arthroscopy across the 4 major North American team sports, hockey players demonstrate the worst prognosis following hip arthroscopy, with sustained decreases in games played and performance in the first 3 seasons postoperatively.

30 A. HIP IMPINGEMENT

Arthroscopic surgery superior to PT

Arthroscopic hip surgery compared with physiotherapy and activity modification for the treatment of symptomatic femoroacetabular impingement: multicentre randomised controlled trial

BMJ 2019; 364 doi: <https://doi.org/10.1136/bmj.1185> (Published 07 February 2019) Cite

Abstract

Objective To compare arthroscopic hip surgery with physiotherapy and activity modification for improving patient reported outcome measures in patients with symptomatic femoroacetabular impingement (FAI).

Design Two group parallel, assessor blinded, pragmatic randomised controlled trial.

Setting Secondary and tertiary care centres across seven NHS England sites.

Participants 222 participants aged 18 to 60 years with symptomatic FAI confirmed clinically and with imaging (radiography or magnetic resonance imaging) were randomised (1:1) to receive arthroscopic hip surgery (n=112) or a programme of physiotherapy and activity modification (n=110). Exclusion criteria included previous surgery, completion of a physiotherapy programme targeting FAI within the preceding 12 months, established osteoarthritis (Kellgren-Lawrence grade ≥ 2), and hip dysplasia (centre-edge angle < 20 degrees).

Interventions Participants in the physiotherapy group received a goal based programme tailored to individual patient needs, with emphasis on improving core stability and movement control. A maximum of eight physiotherapy sessions were delivered over five months. Participants in the arthroscopic surgery group received surgery to excise the bone that impinged during hip movements, followed by routine postoperative care.

Main outcome measures The primary outcome measure was the hip outcome score activities of daily living subscale (HOS ADL) at eight months post-randomisation, with a minimum clinically important difference between groups of 9 points. Secondary outcome measures included additional patient reported outcome measures and clinical assessment.

Results At eight months post-randomisation, data were available for 100 patients in the arthroscopic hip surgery group (89%) and 88 patients in the physiotherapy programme group (80%). Mean HOS ADL was 78.4 (95% confidence interval 74.4 to 82.3) for patients randomised to arthroscopic hip surgery and 69.2 (65.2 to 73.3) for patients randomised to the physiotherapy programme. After adjusting for baseline HOS ADL, age, sex, and study site, the mean HOS ADL was 10.0 points higher (6.4 to 13.6) in the arthroscopic hip surgery group compared with the physiotherapy programme group ($P < 0.001$). No serious adverse events were reported in either group.

Conclusions Patients with symptomatic FAI referred to secondary or tertiary care achieve superior outcomes with arthroscopic hip surgery than with physiotherapy and activity modification.

32 A. KNEE/ACL**Posteromedial meniscocapsular separation**

J Am Acad Orthop Surg. 2019 Feb 15;27(4):e184-e192. doi: 10.5435/JAAOS-D-17-00327.

Incidence of Posteromedial Meniscocapsular Separation and the Biomechanical Implications on the Anterior Cruciate Ligament.

Edgar C¹, Kumar N, Ware JK, Ziegler C, Reed DN, DiVenere J, Obopilwe E, Cote MP, Arciero RA.

PURPOSE:

To report the incidence of posterior medial meniscocapsular junction (PMCJ) separation in patients with anterior cruciate ligament (ACL) injury and to evaluate its biomechanical effect on the ACL.

METHODS:

Three hundred thirty-seven consecutive patients undergoing isolated primary ACL reconstruction were retrospectively analyzed for PMCJ lesion. Forty-four patients were identified with PMCJ lesion and studied. Eight cadaver knees underwent biomechanical testing to determine anterior tibial displacement and anteromedial bundle ACL strain in the intact, PMCJ lesion, and PMCJ repair states at 0°, 30°, 60°, and 90° of flexion. Mixed-effects linear regression with Bonferroni correction was used for statistical analysis.

RESULTS:

PMCJ tear incidence with ACL disruption was 13.1%. Specimen with PMCJ tears had statistically increased anterior tibial translation at 30° (1.2 mm; $P < 0.01$) and statistically increased ACL strain at 30° (24%; $P < 0.01$) and 90° (50%; $P < 0.01$). With PMCJ repair, translation reduced ($P > 0.05$) by 12%, 18%, and 10% at 0°, 30°, and 90° of flexion, respectively. PMCJ repair reduced ($P < 0.05$) ACL strain by 40%, 39%, 43%, and 31% at 0°, 30°, 60°, and 90° of flexion, respectively.

CONCLUSIONS:

A PMCJ lesion was observed in 13% of ACL injuries. This injury contributes to increased ACL strain, and PMCJ repair markedly reduces ACL strain to preinjury levels.

56. ATHLETICS**Elite athletes have longer telomeres**

Exp Gerontol. 2019 Feb 6. pii: S0531-5565(18)30645-4. doi: 10.1016/j.exger.2019.01.023.

Elite athletes have longer telomeres than sedentary subjects: A meta-analysis.

Abrahin O¹, Cortinhas-Alves EA², Vieira RP³, Guerreiro JF⁴.

The aim of this meta-analysis was to investigate the effects of high levels of physical activity (in elite athletes) and sedentary lifestyle on telomere length.

Our meta-analysis was carried out using the following electronic databases: PubMed, Cochrane Library, LILACS, Science Direct and EBSCO. After study selection, nine articles were included in our meta-analysis. All of the included subjects were elite athletes (with experience in national or international competitions) or sedentary subjects, which served as the control group.

The analysis showed that elite athletes (n = 306) had longer telomeres (P = 0.001) compared with the control group (n = 322). The difference in the standardized means was 0.91 (95% CI = 0.43-1.33; I² 83.4% P value for heterogeneity = 0.001), favoring the athlete group.

The analysis of the funnel plot did not detect any risk of publication bias in the studies that reported differences in means. Our results suggest that high level chronic physical training may provide protective effects on telomere length.

59. PAIN**Personality disorders and pain**

Pain Med. 2018 Apr 3. doi: 10.1093/pm/pny052.

Borderline Personality Disorder Features Are Associated with Concurrent Pain-Related Disability in a Chronic Pain Sample.

Reynolds CJ^{1,2}, Tragesser SL¹.

OBJECTIVE:

To determine whether core features of borderline personality disorder are associated with increased rates of being on disability benefits due to chronic pain conditions.

SUBJECTS:

A total of 147 patients currently in treatment for chronic pain at a multimodal chronic pain clinic.

METHODS:

We tested for a concurrent relationship between borderline personality disorder features and employment status using self-report measures.

RESULTS:

Borderline personality disorder features were associated with increased likelihood of currently being on disability due to pain conditions (odds ratio [OR] = 23.13, 95% confidence interval [CI] = 1.68-318.73), on disability due to other conditions (OR = 33.65, 95% CI = 2.15-526.13), and unemployed (OR = 20.14, 95% CI = 1.38-294.93), even while controlling for pain severity and interference, depression, and trait anxiety. A follow-up analysis revealed that these associations were due to the negative relationships facet of borderline personality disorder features.

CONCLUSIONS:

Borderline personality disorder features, particularly negative relationships, are associated with increased rates of pain disability, general disability, and unemployment in a chronic pain sample. Future research should examine mechanisms by which the maladaptive interpersonal behaviors and cognitions of borderline personality disorder might result in worse long-term employment outcomes of chronic pain.

Catastrophizing

Clin J Pain. 2019 Mar;35(3):279-293. doi: 10.1097/AJP.0000000000000676.

Pain Catastrophizing and Function In Individuals With Chronic Musculoskeletal Pain: A Systematic Review and Meta-Analysis.

Martinez-Calderon J¹, Jensen MP², Morales-Asencio JM^{3,4}, Luque-Suarez A^{1,4}.

OBJECTIVES:

Pain catastrophizing (PC) is the most consistent psychosocial factor predicting of adjustment to chronic pain and may contribute to the development and long-term maintenance of chronic pain. The aim of this review was systematically review and critically appraise the concurrent and longitudinal associations between PC and both pain intensity and disability in individuals with chronic musculoskeletal pain (CMP).

MATERIALS AND METHODS:

An electronic search of PubMed, Scopus, AMED, CINAHL, PsycINFO, and PubPsych databases, as well as gray literature, was undertaken from inception until September 2018. Cross-sectional and longitudinal studies reporting on the associations between measures of PC, pain intensity, and disability were selected for review.

RESULTS:

A total of 85 observational studies (92% cross-sectional) were included, with a total sample of 13,628 participants with CMP. Very low-quality evidence (based on the GRADE criteria) indicated that higher levels of PC were often, but not always, significantly associated with and prospectively predicted both chronic pain intensity and disability. Heterogeneity was large after conducting multiple meta-analyses.

DISCUSSION:

Despite the very low quality of the available evidence, the general consistency of the findings highlights the potential role that PC may play in delaying recovery from CMP. Research that uses higher quality study designs and procedures would allow for more definitive conclusions regarding the impact of PC on pain and function.

Parents and adolescents pain

Parent Factors are Associated With Pain and Activity Limitations in Youth With Acute Musculoskeletal Pain

A Cohort Study

Clementi, Michelle A., PhD^{*}; Faraji, Pari, MD[†]; Poppert Cordts, Katrina, PhD^{*}; MacDougall, Kelsey, MA[‡]; Wilson, Anna, PhD^{*}; Palermo, Tonya M., PhD^{§-||}; Lewandowski Holley, Amy, PhD^{*}

The Clinical Journal of Pain: March 2019 - Volume 35 - Issue 3 - p 222–228

doi: 10.1097/AJP.0000000000000668

Objectives: Biopsychosocial models emphasize the influence of parent/family factors on pediatric chronic pain. Little is known about how parent factors differ across the acute to chronic pain continuum, or contribute to youths' pain experience in the acute pain period. The purpose of the study was to describe parent factors in youth with acute musculoskeletal pain (n=84) compared with youth with chronic pain (n=60) and youth without pain (n=61). Further, within the acute pain sample, we tested parent factors as predictors of child pain characteristics, as well as the moderating role of child sex on associations.

Methods: Participants were 205 youth (age, 10 to 17) and one biological parent per child.

Children reported on their own pain and activity limitations. Parents reported on their own chronic pain, somatization, and protective pain responses.

Results: Parents of youth with acute pain had higher prevalence of chronic pain and greater somatization than parents of youth without pain. Parents of youth with acute and chronic pain did not differ. Linear regressions within the acute pain sample revealed presence of parent chronic pain and protective behavior were associated with child pain. Moreover, parent somatization was associated with child activity limitations. Within the acute pain sample, associations between parent protectiveness and child pain were moderated by child sex, with relationships stronger for female children.

Discussion: Findings highlight the importance of parent factors on pain experiences of youth with acute musculoskeletal pain. Future longitudinal research can elucidate temporal associations that underlie how parent factors may impact transition from acute to chronic pain.

New pain model

Clin J Pain. 2019 Mar;35(3):212-221. doi: 10.1097/AJP.0000000000000670.

The Multimodal Assessment Model of Pain: A Novel Framework for Further Integrating the Subjective Pain Experience Within Research and Practice.

Wideman TH¹, Edwards RR², Walton DM³, Martel MO⁴, Hudon A⁵, Seminowicz DA⁶.

OBJECTIVES:

Pain assessment is enigmatic. Although clinicians and researchers must rely upon observations to evaluate pain, the personal experience of pain is fundamentally unobservable. This raises the question of how the inherent subjectivity of pain can and should be integrated within assessment. Current models fail to tackle key facets of this problem, such as what essential aspects of pain are overlooked when we only rely on numeric forms of assessment, and what types of assessment need to be prioritized to ensure alignment with our conceptualization of pain as a subjective experience. We present the multimodal assessment model of pain (MAP) as offering practical frameworks for navigating these challenges.

METHODS:

This is a narrative review.

RESULTS:

MAP delineates qualitative (words, behaviors) and quantitative (self-reported measures, non-self-reported measures) assessment and regards the qualitative pain narrative as the best available root proxy for inferring pain in others. MAP offers frameworks to better address pain subjectivity by: (1) delineating separate criteria for identifying versus assessing pain. Pain is identified through narrative reports, while comprehensive assessment is used to infer why pain is reported; (2) integrating compassion-based and mechanism-based management by both validating pain reports and assessing underlying processes; (3) conceptualizing comprehensive pain assessment as both multidimensional and multimodal (listening/observing and measuring); and (4) describing how qualitative data help validate and contextualize quantitative pain measures.

DISCUSSION:

MAP is expected to help clinicians validate pain reports as important and legitimate, regardless of other findings, and help our field develop more comprehensive, valid, and compassionate approaches to assessing pain.

62 A. NUTRITION/VITAMINS**Nuts help insulin problems**

Am J Clin Nutr. 2019 Feb 5. doi: 10.1093/ajcn/nqy236.

The effect of nuts on markers of glycemic control: a systematic review and meta-analysis of randomized controlled trials.

Tindall AM¹, Johnston EA¹, Kris-Etherton PM¹, Petersen KS¹.

BACKGROUND:

Observational evidence suggests higher nut consumption is associated with better glycemic control; however, it is unclear if this association is causal.

OBJECTIVES:

We aimed to conduct a systematic review and meta-analysis of randomized controlled trials to examine the effect of tree nuts and peanuts on markers of glycemic control in adults.

METHODS:

A systematic review and meta-analysis of randomized controlled trials was conducted. A total of 1063 potentially eligible articles were screened in duplicate. From these articles, 40 were eligible for inclusion and data from these articles were extracted in duplicate. The weighted mean difference (WMD) between the nut intervention and control arms was determined for fasting glucose, fasting insulin, glycated hemoglobin (HbA1c), and homeostasis model assessment of insulin resistance (HOMA-IR) using the DerSimonian and Laird random-effects method. For outcomes where a limited number of studies were published, a qualitative synthesis was presented.

RESULTS:

A total of 40 randomized controlled trials including 2832 unique participants, with a median duration of 3 mo (range: 1-12 mo), were included. Overall consumption of tree nuts or peanuts had a favorable effect on HOMA-IR (WMD: -0.23; 95% CI: -0.40, -0.06; I² = 51.7%) and fasting insulin (WMD: -0.40 μ IU/mL; 95% CI: -0.73, -0.07 μ IU/mL; I² = 49.4%). There was no significant effect of nut consumption on fasting blood glucose (WMD: -0.52 mg/dL; 95% CI: -1.43, 0.38 mg/dL; I² = 53.4%) or HbA1c (WMD: 0.02%; 95% CI: -0.01%, 0.04%; I² = 51.0%).

CONCLUSIONS:

Consumption of peanuts or tree nuts significantly decreased HOMA-IR and fasting insulin; there was no effect of nut consumption on HbA1c or fasting glucose. The results suggest that nut consumption may improve insulin sensitivity. In the future, well-designed clinical trials are required to elucidate the mechanisms that account for these observed effects.

Mediterranean diet improves cardiac function and reduces arterial stiffness**Mediterranean-Style Diet Improves Systolic Blood Pressure and Arterial Stiffness in Older Adults**

Results of a 1-Year European Multi-Center Trial

Amy Jennings2019 <https://doi.org/10.1161/HYPERTENSIONAHA.118.12259> Hypertension. 2019;73:578–586

Abstract

We aimed to determine the effect of a Mediterranean-style diet, tailored to meet dietary recommendations for older adults, on blood pressure and arterial stiffness. In 12 months, randomized controlled trial (NU-AGE [New Dietary Strategies Addressing the Specific Needs of Elderly Population for Healthy Aging in Europe]), blood pressure was measured in 1294 healthy participants, aged 65 to 79 years, recruited from 5 European centers, and arterial stiffness in a subset of 225 participants.

The intervention group received individually tailored standardized dietary advice and commercially available foods to increase adherence to a Mediterranean diet. The control group continued on their habitual diet and was provided with current national dietary guidance. In the 1142 participants who completed the trial (88.2%), after 1 year the intervention resulted in a significant reduction in systolic blood pressure (-5.5 mm Hg; 95% CI, -10.7 to -0.4 ; $P=0.03$), which was evident in males (-9.2 mm Hg, $P=0.02$) but not females (-3.1 mm Hg, $P=0.37$). The -1.7 mm Hg (95% CI, -4.3 to 0.9) decrease in diastolic pressure after intervention did not reach statistical significance. In a subset ($n=225$), augmentation index, a measure of arterial stiffness, was improved following intervention (-12.4 ; 95% CI, -24.4 to -0.5 ; $P=0.04$) with no change in pulse wave velocity. The intervention also resulted in an increase in 24-hour urinary potassium (8.8 mmol/L; 95% CI, 0.7 – 16.9 ; $P=0.03$) and in male participants (52%) a reduction in pulse pressure (-6.1 mm Hg; 95% CI, -12.0 to -0.2 ; $P=0.04$) and 24-hour urinary sodium (-27.1 mmol/L; 95% CI, -53.3 to -1.0 ; $P=0.04$).

In conclusion, a Mediterranean-style diet is effective in improving cardiovascular health with clinically relevant reductions in blood pressure and arterial stiffness.

Mortality and sugar intake

Association between added sugar intake and mortality is nonlinear and dependent on sugar source in 2 Swedish population-based prospective cohorts

Stina Ramne Joana Alves Dias Esther González-Padilla Kjell Olsson Bernt LindahlGunnar Engström Ulrika Ericson Ingegerd Johansson Emily Sonestedt

The American Journal of Clinical Nutrition, Volume 109, Issue 2, 1 February 2019, Pages 411–423, <https://doi.org/10.1093/ajcn/nqy268>

Background

Although sugar consumption has been associated with several risk factors for cardiometabolic diseases, evidence for harmful long-term effects is lacking. In addition, most studies have focused on sugar-sweetened beverages (SSBs), not sugar per se.

Objective

The aim of this study was to examine the associations between added and free sugar intake, intake of different sugar sources, and mortality risk.

Methods

Two prospective population-based cohorts were examined: the Malmö Diet and Cancer Study (MDCS; $n = 24,272$), which collected dietary data by combining a food diary, interview, and food-frequency questionnaire (FFQ), and the Northern Swedish Health and Disease Study (NSHDS; $n = 24,475$), which assessed diet with an FFQ. Sugar intakes defined as both added and free sugar and different sugar sources were examined. The associations with mortality were examined using a multivariable Cox proportional hazards regression.

Results

Higher sugar consumption was associated with a less favorable lifestyle in general. The lowest mortality risk was found with added sugar intakes between 7.5% and 10% of energy (E%) intake in both cohorts. Intakes $>20E\%$ were associated with a 30% increased mortality risk, but increased risks were also found at intakes $<5E\%$ [23% in the MDCS and 9% (nonsignificant) in the NSHDS]. Similar U-shaped associations were found for both cardiovascular and cancer mortality in the MDCS. By separately analyzing the different sugar sources, the intake of SSBs was positively associated with mortality, whereas the intake of treats was inversely associated.

Conclusions

Our findings indicate that a high sugar intake is associated with an increased mortality risk. However, the risk is also increased among low sugar consumers, although they have a more favorable lifestyle in general. In addition, the associations are dependent on the type of sugar source.