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PREFACE

Introduction

The library of the Central Council for Research in Homoeopathy has been circulating “Current Health Literature Awareness Service” (CHLAS). The main objective is to disseminate precise information/citation about scientific articles published in various journals/magazine subscribed by this Council.

Scope

This volume covers articles on AYUSH & other systems and Allied Sciences

Arrangement of Entries

The articles are indexed under the name of the authors, arranged in alphabetical order. The entries have been made in the following order:

Author
Title
Name of Journal
year of publication; Volume (issue no.): pagination
Abstract

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(Meenakshi Bhatia)
Junior Librarian
AYUSH and Other Systems


Abstract:
Depression is one of the major health problems of our world. Recent studies have revealed the relationship between diet and depression. In Iranian traditional medicine, there is a therapeutic diet that is recommended in melancholic diseases like depression. One of the main components of this diet is meat. Meats are divided into 2 groups: recommended and abstinent. The aim of this study was to clarify the logic of this diet through comparing nutritional elements of the 2 groups with each other. For this purpose, prominent books on Iranian traditional medicine were searched for abstinent and recommended meats traditionally prescribed for depressed patients. The results of each group were compared with the other by using Mann-Whitney Test (SPSS version 16). The results showed that recommended meats contain higher amounts of polyunsaturated fatty acids ($P = .01$) especially omega-3 ($P = .03$). Both groups contain high amounts of cholesterol. Iranian traditional medicine recommends consumption of meats that contains cholesterol with omega-3 fatty acids in depression.


Abstract:
Ayurpharmacoepidemiology is a new field developed by synergy of the fields of clinical pharmacology, epidemiology, and ayurveda. It will use the effects of ayurvedic medicinal products on large populations to describe and analyze the practices, evaluate the safety and efficacy, and carry out mediceconomic evaluations. Good pharmacoepidemiology practices in ayurveda is projected to assist with issues of ayurpharmacoepidemiologic research. The embraced good pharmacoepidemiology practices guideline in this viewpoint will be able to provide valuable evidence about the health effects of ayurvedic herbs/drugs and consider different fields like pharmacovigilance, pharmacoconomics, and drug discovery with ayurvedic reverse pharmacology approach, also pass out significant data for further basic sciences study in ayurveda biology, ayurgenomics, ayurnutrigenomics, and systems biology. Several unanswered questions about ayurvedic drug use and informed interventions or policies that can be addressed by informatics database, which will eventually demonstrate the credibility and rationality of ayurceuticals in the future.


Abstract:
Older Indian diabetics lack proper health literacy making them vulnerable to complications. Assessment of health literacy was done by hospital-based cross-sectional study. Face-to-face interview was conducted by pretested structured questionnaires. Diabetes patients aged ≥60 years consisted of 56.22% males and 43.78% females; in addition, 34.2% respondents were without formal schooling. Diabetes was known to 63.56% respondents. Total knowledge and practice score of the respondents was good (18.9% and 35.1%), average (30.7% and 46.9%), and poor (50.4% and 18%), respectively. Knowledge and practice score was strongly associated (P < .01) with religion, educational status, and diabetes duration with positive relationship (R² = 0.247, P < .01) between knowledge and practice score. The study highlights lack of health literacy among older diabetics undergoing ayurveda management. Baseline statistics will pave the way toward ayurpharmacoepidemiology.


Abstract:

Most cases of chronic fissure do not respond to medical treatment. Razi and Ibn Sina were 2 of the best-known scientists of ancient Persia. The purpose of this study was to find out new scientific evidence in modern medicine about their recommendations, in order to find certain clues to conduct useful researches in the future. First, treatments of anal fissure mentioned by Razi and Ibn Sina were reviewed. Then, literature search was made in electronic databases including PubMed, Scopus, and Google Scholar. Management of anal fissure according to Razi’s and Ibn Sina’s practices is done based on 3 interventions: lifestyle modifications, drug treatments, and manual procedures. Almost all remedies suggested by Razi and Ibn Sina have shown their effects on fissure in ano via several mechanisms of action in many in vitro and in vivo studies; Still there is lack of human studies on the subject.


Abstract:

Cardiovascular disease is a leading cause of disability and death worldwide. Yoga, a mind-body exercise, utilizes breathing techniques with low-impact physical activity that may be an alternative treatment for cardiovascular disease. The purpose of this systematic review was to examine yoga interventions for patients at-risk for and/or suffering from cardiovascular disease. The inclusion criteria for interventions were (a) published in the English language between 2005 and 2015; (b) indexed in MEDLINE/PubMed, CINAHL, or Alt HealthWatch; (c) employed a quantitative design; and (d) applied a yoga intervention. Twelve interventions met the inclusion criteria, of which, all documented significant improvements in one or more factors associated with cardiovascular disease. Limitations to the studies in this review included a lack of studies adhering to the inclusion criteria, small sample sizes, and high attrition rates. Despite the limitations, this review demonstrates the clear potential yoga has as an alternative and complementary means to improve cardiovascular disease risk.


**Abstract:**
Research on wound healing agents is a developing area in biomedical sciences. Traditional Persian medicine is one of holistic systems of medicine providing valuable information on natural remedies. To collect the evidences for wound-healing medicaments from traditional Persian medicine sources, 5 main pharmaceutical manuscripts in addition to related contemporary reports from Scopus, PubMed, and ScienceDirect were studied. The underlying mechanisms were also saved and discussed. Totally, 65 herbs used in traditional Persian medicine for their wound healing properties was identified. Related anti-inflammatory, antioxidant, antimicrobial, and wound-healing activities of those remedies were studied. Forty remedies had at least one of those properties and 10 of the filtered plants possessed all effects. The medicinal plants used in wound healing treatment in traditional Persian medicine could be a good topic for further in vivo and clinical research. This might lead to development of effective products for wound treatment.


**Abstract:**
The color of urine is an important factor in urine examination, which can help physicians differentiate various diseases. Today, it is known that certain dyes, drug intoxications, and diseases can induce green urine discoloration. In the view of traditional Persian medicine, which is based on humoral medicine, green urine discoloration is generally referred to the dominance of coldness in the body. In fact, it is considered to be a result of a special kind of humoral imbalance and fluid depletion or retention in the human body. Persian scholars believed that green urine could be an indicator of intoxication or a predictor of an imminent spasm or convulsion in pediatric patients. Further investigations could result in finding new diagnostic scales of urine color based on the teachings of traditional Persian medicine.


**Abstract:**
**Objectives:** Research demonstrates the benefits of complementary and alternative medicine (CAM) in myriad environments. Yet, the majority of CAM services are offered in outpatient settings. Incorporating CAM into hospital settings may lead to increased patient comfort, well-being, and overall satisfaction with hospital admissions. Few studies have examined CAM services among inpatients. Therefore, this study assessed inpatients' preferences and beliefs regarding CAM, as well as their stated willingness to pay for these services.

**Design:** Adult patients (n = 100), ranging in age from 19–95 years (M = 53 years; SD = 19.2 years), were recruited during their hospitalization in the University of California, San Diego, Healthcare System. The inpatients completed a brief individual interview to gather their perspectives on common CAM services, including acupuncture, aromatherapy, art therapy, guided imagery, healthy food, humor therapy, massage therapy, music therapy, pet therapy, Reiki, and stress management. Inpatients were asked which CAM therapies they perceived as being potentially the most helpful,
their willingness to pay for those therapies, and their perceived beliefs regarding the use of those therapies.

**Results:** Inpatients most commonly perceived healthy food (85%), massage therapy (82%), and humor therapy (70%) to be the most helpful, and were most willing to pay for healthy food (71%), massage therapy (70%), and stress management (48%). Inpatients most commonly believed CAM treatments would provide relaxation (88%), increase well-being (86%), and increase their overall satisfaction with the hospitalization (85%).

**Conclusions:** This study suggests that CAM services may be a beneficial addition to hospitals, as demonstrated by inpatients’ interest and stated willingness to pay for these services. These findings may help organizational leaders when making choices regarding the development of CAM services within hospitals, particularly since a significant percentage of inpatients reported that CAM services would increase their overall satisfaction with the hospitalization. These results merit further attention given the need to increase cost savings while enhancing the overall patient experience in today's medical marketplace.


Abstract:

**Background:** Yoga has been found to be an effective posttraumatic stress disorder (PTSD) treatment for a variety of trauma survivors, including females with chronic PTSD.

**Aim/Purpose:** The current study builds on extant research by examining an extended trauma-sensitive yoga treatment for women with chronic PTSD. The study sought to optimize the results of a treatment protocol examined in a recent randomized controlled trial with a shorter duration and without assignment or monitoring of home practice.

**Materials and Methods:** The authors examined a 20-week trauma-sensitive yoga treatment in a non-randomized single-group treatment feasibility study for women with chronic treatment-resistant PTSD (N = 9). The authors examined PTSD and dissociative symptom reduction over several assessment periods.

**Results:** The results indicate that participants experienced significant reductions in PTSD and dissociative symptomatology above and beyond similar treatments of a shorter duration.

**Conclusions:** The findings suggest that more intensive trauma-sensitive yoga treatment characterized by longer duration and intentional assignment and monitoring of home practice may be more advantageous for individuals with severe and chronic PTSD. The implications of the findings for the potentially more substantial role of yoga as an intervention for a subset of adults with chronic treatment-resistant PTSD are discussed.


Abstract:
Listeria monocytogenes can be found in many processed foods, raw milk, dairy products, meat and meat products such as sausages, beef and fish products, seafoods, eggs, fruits, and vegetables such as radish and cabbage. This article is a review study on the Iranian medicinal plants applied for treatment of listeriosis. Information of this review article was obtained by searching various key words such as Listeria monocytogenes, medicinal plants, plant extracts and essential oils among scientific articles published in databases of Google scholar, ISI Web of Knowledge, PubMed, Scopus, SID and Magiran. Thyme, German chamomile, great chamomile, yarrow, onion, oregano, nutmeg, sage, sagebrush, hyssop, rosemary, St John's wort, safflower, ajowan, cumin, peppermint, shallot, anise, and parsnip are known antilisteriosis medicinal plants. Bioactive phytochemicals, antioxidants and monoterpenes, sesquiterpene, coumarin, flavonoids, tannins, saponins, alkaloids, and terpenoids are the main ingredients of antilisteriosis medicinal plants.


Abstract:

Indian patients’ preference for integrated homoeopathy services remains underresearched. Two earlier surveys revealed favorable attitude toward and satisfaction from integrated services. The objectives of this study were to examine knowledge, attitudes, and practice of homoeopathy and to evaluate preference toward its integration into secondary-level health care. A cross-sectional survey was conducted during May to October 2015 among 659 adult patients visiting randomly selected secondary-level conventional health care setups in Kolkata, Mumbai, Kottayam, and New Delhi (India) using a self-administered 24-item questionnaire in 4 local vernaculars (Bengali, Marathi, Malayalam, and Hindi). Knowledge and practice scores were compromised; attitude scores toward integration and legal regulation were high. Respondents were uncertain regarding side effects of homoeopathy and concurrent use and interactions with conventional medicines. A total of 82.40% (95% confidence interval = 79.23, 85.19) of the participants were in favor of integrating homoeopathy services. Preference was significantly higher in Delhi and lower in Kottayam. Probable strategic measures for further development of integrated models are discussed.


Abstract:

Glioblastoma multiforme (GBM) is one the most aggressive and lethal human neoplasms with poor prognosis and very limited positive treatment options. The antitumor effect of supercritical CO2 extract of mango ginger (Curcuma amada Roxb) (CA) with and without irinotecan (IR) was analyzed in U-87MG human glioblastoma multiforme (GBM) cells in vitro and in nude mouse xenografts. CA is highly cytotoxic to GBM cells and is synergistic with IR as indicated by the combination index values of <1 in the CompuSyn analysis. CA inhibits tumor growth rate in GBM xenografts, the inhibition rate being higher than in IR treated group. GBM xenograft mice treated with IR + CA combination showed almost complete inhibition of tumor growth rate. Gene expression analysis of xenograft tumors indicated that IR + CA treatment significantly downregulated anti-apoptotic (Bcl-2 and mutant p53), inflammation-associated (COX-2) and cell division–associated (CCNB2) genes and upregulated pro-apoptotic genes (p21 and caspase-3). These results confirmed the therapeutic efficiency of IR + CA combination against GBM and the need for further clinical investigations.

Abstract:

Mind-body practices that intentionally generate positive emotion could improve health professionals’ well-being and compassion. However, the feasibility and impact of clinician training in these practices is unknown. Data were analyzed from 3 online modules offered to health professionals: (a) Gratitude, (b) Positive Word, and (c) Loving-kindness/Compassion meditation. Paired t-tests were used to assess pre- to posttraining changes in gratitude (Gratitude Questionnaire), well-being (World Health Organization Well-Being Index), self-compassion (Neff’s Self-Compassion Scale), and confidence in providing compassionate care (Confidence in Providing Calm, Compassionate Care Scale). The 177 enrollees included diverse practitioners (nurses, physicians, social workers, and others). Training was associated with statistically significant improvements in gratitude (38.3 ± 4.6 to 39.5 ± 3.3), well-being (16.4 ± 4.0 to 17.9 ± 4.2), self-compassion (39.5 ± 8.1 to 43.1 ± 7.6), and confidence in providing compassionate care (73.3 ± 16.4 to 80.9 ± 13.8; P < .001 for all comparisons). Brief, online training appeals to diverse health professionals and improves their gratitude, well-being, self-compassion, and confidence in providing compassionate care.


Abstract:

For the first time, we have a comprehensive database on usage of AYUSH (acronym for Ayurveda, naturopathy and Yoga, Unani, Siddha, and Homeopathy) in India at the household level. This article aims at exploring the spread of the traditional medical systems in India and the perceptions of people on the access and effectiveness of these medical systems using this database. The article uses the unit level data purchased from the National Sample Survey Organization, New Delhi. Household is the basic unit of survey and the data are the collective opinion of the household. This survey shows that less than 30% of Indian households use the traditional medical systems. There is also a regional pattern in the usage of particular type of traditional medicine, reflecting the regional aspects of the development of such medical systems. The strong faith in AYUSH is the main reason for its usage; lack of need for AYUSH and lack of awareness about AYUSH are the main reasons for not using it. With regard to source of medicines in the traditional medical systems, home is the main source in the Indian medical system and private sector is the main source in Homeopathy. This shows that there is need for creating awareness and improving access to traditional medical systems in India. By and large, the users of AYUSH are also convinced about the effectiveness of these traditional medicines.


Abstract:

Usr-i-tamth in Unani (Greco-Arabic) medicine is pain associated with menstruation, and classical manuscripts are enriched with traditional knowledge for the management of usr-i-tamth
(menstrual pain/dysmenorrhea). Hence, a comprehensive search was undertaken to find classical
manuscripts for the management of menstrual pain was. We searched the Cochrane database,
PubMed/Google Scholar, and other websites for articles on complementary and alternative
medicine treatment and management of menstrual pain. The principal management as per Unani
manuscripts is to produce analgesia and to treat the cause of dysmenorrhea such as abnormal
temperament, menstrual irregularities/uterine diseases, and psychological and environmental
factors. Furthermore, Unani medicines with emmenagogue, antispasmodic, anti-inflammatory,
and analgesic properties are beneficial for amelioration of dysmenorrhea. Herbs such as Apium graveolens,
Cuminum cyminium, Foeniculum vulgare, Matricaria chamomilla and Nigella sativa possess the
aforementioned properties and are proven scientifically for their efficacy in dysmenorrhea. Thus,
validation and conservation of the traditional knowledge is essential for prospective research and
valuable for use in the contemporary era.

Tabari Narges Motahari, Yousefi Seyde Sedighe, Heydarirad Ghazaleh et al. Exercise from the
perspective of Iranian traditional medicine. *Journal of Evidence-Based Complementary &

**Abstract:**

Exercise, in Iranian traditional medicine, is 1 of the 6 principles recommended for maintaining good
health. There are some considerations that must be taken into account before, during, and after
exercise. Exercise has different terms in different individuals, seasons, and ages. According to these
principles, the interval between exercise and eating food is very important. Exercise after eating is
inappropriate, and it is recommended that the best time for exercise is after food has been
completely digested and before the next meal. According to the opinion of traditional medicine
philosophers, exercise should be done after the complete digestion of food. Exercise may be more
effective if it is done according to traditional medicine view at appropriate times and conditions
with sufficient intensity and duration.

Wang Yifei, Jin Fujun, Wang Qiaoli et al. Long-term survival of aids patients treated with only

**Abstract**

Traditional Chinese herbal medicine (TCM) has been used in Chinese society for more than 5,000
years to treat diseases from inflammation to cancer. Here, we report the case of nine living AIDS
patients in the age range of 51 to 67 who were treated with either a unique formula of TCM alone
from 2001 to 2009 or the TCM from 2001 to 2006 and then switched to occasional antiretroviral
therapy. Surprisingly, the viral loads of eight patients were at undetectable levels on June 28, 2016,
while the remaining patient had a low viral load of 29 copies/ml. The CD4+counts (170–592
cells/μl) and CD4+/CD8+ ratios (0.21–0.90) of the nine patients are excellent, contributing to their
current good health. Thus, the case study suggests that the TCM has the potential to become a
functional cure for HIV/AIDS.


**Abstract**
Three immunomodulating herbs are used as examples of the complex interaction of herbs and T helper lymphocyte subsets: Astragalus penduliflorus (often called A. membranaceus, astragalus, or huáng qí), Glycyrrhiza glabra (licorice) and Glycyrrhiza uralensis (gān cǎo, Asian licorice), and Panax ginseng (Asian ginseng). Though a surface review of studies might suggest all of these are simple Th1 inducers and should thus aggravate Th1-dominant diseases, the clinical and preclinical evidence in fact show they are helpful in these and Th2-dominant conditions. This relates to the fact that they also affect Th17 and T regulatory subsets, as well as having many other actions (e.g., modulating inflammation) that are also beneficial. Immunomodulating herbs appear to be helpful in both Th1- and Th2-dominant conditions as a result, which fits with their traditional use. Claims to the contrary simply do not fit the available evidence.


Abstract:

Hepatitis is a global health problem, with significant adverse impacts on patients’ quality of life. In this study, we aimed to review major resources of Iranian traditional medicine and determine whether the etiology and semiology of hepatitis, in particular chronic hepatitis, in traditional and conventional medicine might be aligned. Through such studies, we might be able to develop new approaches for clinical research to improve our current knowledge on the etiology and treatment of this condition. In this qualitative study, recently published studies, scientific databases, and reliable Iranian traditional medicine resources, including the Canon of Medicine, were searched. The integrative use of conventional and traditional medicine for diagnostic and therapeutic purposes could be evaluated to develop new modalities for dealing with this condition. An integrated approach is recommended in clinical research in order to find more efficient and safer treatment
Allied Section


**Abstract:**

**Objectives:** Although acupuncture and microcurrent are widely used for chronic pain, there remains considerable controversy as to their therapeutic value for neck pain. We aimed to determine the effect size of microcurrent applied to lower back acupuncture points to assess the impact on the neck pain.

**Design:** This was a cohort analysis of treatment outcomes pre- and postmicrocurrent stimulation, involving 34 patients with a history of nonspecific chronic neck pain.

**Subjects and Settings:** Consenting patients were enrolled from a group of therapists attending educational seminars and were asked to report pain levels pre-post and 48 hours after a single MPS application.

**Interventions and Measurements:** Direct current microcurrent point stimulation (MPS) applied to standardized lower back acupuncture protocol points was used. Evaluations entailed a baseline visual analog scale (VAS) pain scale assessment, using a VAS, which was repeated twice after therapy, once immediately postelectrotherapy and again after a 48-h follow-up period. All 34 patients received a single MPS session. Results were analyzed using paired t tests.

**Results and Outcomes:** Pain intensity showed an initial statistically significant reduction of 68% [3.9050 points; 95% CI (2.9480, 3.9050); p = 0.0001], in mean neck pain levels after standard protocol treatment, when compared to initial pain levels. There was a further statistically significant reduction of 35% in mean neck pain levels at 48 h when compared to pain levels immediately after standard protocol treatment [0.5588 points; 95% CI (0.2001, 0.9176); p = 0.03], for a total average pain relief of 80%.

**Conclusions:** The positive results in this study could have applications for those patients impacted by chronic neck pain.

Abstract:

Nowadays, increases in resistance of tumors to the current therapeutic agents have become a problematic issue. Therefore, efforts to discover new anticancer compounds with high sensitivity of cancer cells are extending. Animal and laboratory researches have shown that exogenous antioxidants are able to help prevent the free radical damage associated with the development of cancer. However, researches in human beings have not demonstrated convincingly that taking antioxidants can reduce the risk of developing cancer. Angiogenesis is also a natural condition that controls the formation of new blood vessels from the available vessels. Today, it is believed that most of the cancers have angiogenesis potential and their growth, metastasis, and invasion depend on angiogenesis. Several compounds with plant origin and with anti-angiogenic properties have been identified. The aim of this study is to review recently published articles about anticancer drugs obtained from plants with antioxidant and anti-angiogenesis properties.


Abstract:

Despite growing interest in understanding how social factors drive poor health outcomes, many academics, policy makers, scientists, elected officials, journalists, and others responsible for defining and responding to the public discourse remain reluctant to identify racism as a root cause of racial health inequities. In this conceptual report, the third in a Series on equity and equality in health in the USA, we use a contemporary and historical perspective to discuss research and interventions that grapple with the implications of what is known as structural racism on population health and health inequities. Structural racism refers to the totality of ways in which societies foster racial discrimination through mutually reinforcing systems of housing, education, employment, earnings, benefits, credit, media, health care, and criminal justice. These patterns and practices in turn reinforce discriminatory beliefs, values, and distribution of resources. We argue that a focus on structural racism offers a concrete, feasible, and promising approach towards advancing health equity and improving population health.


Abstract:

Background: Total joint replacements for end-stage osteoarthritis of the hip and knee are cost-effective and demonstrate significant clinical improvement. However, robust population based lifetime-risk data for implant revision are not available to aid patient decision making, which is a particular problem in young patient groups deciding on best-timing for surgery.

Methods: We did implant survival analysis on all patients within the Clinical Practice Research Datalink who had undergone total hip replacement or total knee replacement. These data were adjusted for all-cause mortality with data from the Office for National Statistics and used to generate lifetime risks of revision surgery based on increasing age at the time of primary surgery.

Findings: We identified 63 158 patients who had undergone total hip replacement and 54 276 who had total knee replacement between Jan 1, 1991, and Aug 10, 2011, and followed up these patients to a maximum of 20 years. For total hip replacement, 10-year implant survival rate was 95.6%
(95% CI 95·3–95·9) and 20-year rate was 85·0% (83·2–86·6). For total knee replacement, 10-year implant survival rate was 96·1% (95·8–96·4), and 20-year implant survival rate was 89·7% (87·5–91·5). The lifetime risk of requiring revision surgery in patients who had total hip replacement or total knee replacement over the age of 70 years was about 5% with no difference between sexes. For those who had surgery younger than 70 years, however, the lifetime risk of revision increased for younger patients, up to 35% (95% CI 30·9–39·1) for men in their early 50s, with large differences seen between male and female patients (15% lower for women in same age group). The median time to revision for patients who had surgery younger than age 60 was 4·4 years.

**Interpretation:** Our study used novel methodology to investigate and offer new insight into the importance of young age and risk of revision after total hip or knee replacement. Our evidence challenges the increasing trend for more total hip replacements and total knee replacements to be done in the younger patient group, and these data should be offered to patients as part of the shared decision making process.

**Funding:** Oxford Musculoskeletal Biomedical Research Unit, National Institute for Health Research.


**Abstract:**

syndrome/fibromyalgia) were randomized into WHEE treatment and wait-list control groups for 6 weeks. Assessments of depression, anxiety, and pain were completed before, during, and at 1 and 3 months after treatment. Wait-listed patients then received an identical course of WHEE and assessments. WHEE decreased anxiety ($P < .5$) and depression ($P < .05$) compared with the control group. The wait-list-turned-WHEE assessments demonstrated decreased pain severity ($P < .05$) and depression ($P < .04$) but not pain interference or anxiety. WHEE appears a promising method for pain, anxiety, and depression in patients with chronic pain, compared to standard medical care alone. Though a small pilot study, the present results suggest that further research appears warranted. An incidental finding was that a majority of patients with chronic pain had suffered psychological trauma in childhood and/or adulthood.


**Abstract:**

Several systematic reviews suggest that acupuncture is effective for knee osteoarthritis (OA), and furthermore a safe and cost-effective treatment for this condition. A recent clinical practice guideline (CPG) from the National Institute for Health and Care Excellence (NICE), in the United Kingdom, recommended against the use of acupuncture on the grounds that the effect size (ES) in comparison with sham acupuncture is too small. Safety data were not considered in the review, in addition the levels of evidence for acupuncture against other recommended therapies were not compared. Consequently, it is argued that this NICE guideline has limitations that lead to several potential biases in its evaluation of acupuncture, which were not addressed correctly: (1) NICE’s prior scoping process limited its review. (2) NICE introduced the method of developing recommendations based on the consideration of which interventions make “minimal important differences” of an ES of 0.5 or greater, rather than the statistical significance of the effect of an
intervention when compared with an appropriate comparison. (3) Evidence that sham acupuncture is not physiologically inert and has some level of beneficial effect, hence artificially reducing the magnitude of the ES in comparison with sham. (4) The low adverse effects profile of acupuncture. (5) Evidence from trials comparing acupuncture with usual or standard care was not considered, nor was cost-effectiveness data. (6) Lack of the usual CPG “head-to-head” comparisons between interventions. If the same criteria and methods that have been applied to acupuncture were applied to other NICE-recommended therapies for knee OA, including patient centeredness, patient education, self-management and weight loss, nonsteroidal anti-inflammatory drug (NSAIDs), and cyclooxygenase-2 inhibitor (COX-2 inhibitors), these too would no longer be recommended and opiates would become the first line of drug prescription. Given the problems with sham acupuncture, perhaps now is the time to embrace pragmatic studies and employ comparative effectiveness studies instead.


Abstract:

Background: Treatment guidelines for aphasia recommend intensive speech and language therapy for chronic (≥6 months) aphasia after stroke, but large-scale, class 1 randomised controlled trials on treatment effectiveness are scarce. We aimed to examine whether 3 weeks of intensive speech and language therapy under routine clinical conditions improved verbal communication in daily-life situations in people with chronic aphasia after stroke.

Methods: In this multicentre, parallel group, superiority, open-label, blinded-endpoint, randomised controlled trial, patients aged 70 years or younger with aphasia after stroke lasting for 6 months or more were recruited from 19 inpatient or outpatient rehabilitation centres in Germany. An external biostatistician used a computer-generated permuted block randomisation method, stratified by treatment centre, to randomly assign participants to either 3 weeks or more of intensive speech and language therapy (≥10 h per week) or 3 weeks deferral of intensive speech and language therapy. The primary endpoint was between-group difference in the change in verbal communication effectiveness in everyday life scenarios (Amsterdam–Nijmegen Everyday Language Test A-scale) from baseline to immediately after 3 weeks of treatment or treatment deferral. All analyses were done using the modified intention-to-treat population (those who received 1 day or more of intensive treatment or treatment deferral). This study is registered with ClinicalTrials.gov, number NCT01540383.

Findings: We randomly assigned 158 patients between April 1, 2012, and May 31, 2014. The modified intention-to-treat population comprised 156 patients (78 per group). Verbal communication was significantly improved from baseline to after intensive speech and language treatment (mean difference 2·61 points [SD 4·94]; 95% CI 1·49 to 3·72), but not from baseline to after treatment deferral (−0·03 points [4·04]; −0·94 to 0·88; between-group difference Cohen’s d 0·58; p=0·0004). Eight patients had adverse events during therapy or treatment deferral [one car accident [in the control group], two common cold [one patient per group], three gastrointestinal or cardiac symptoms [all intervention group], two recurrent stroke [one in intervention group before initiation of treatment, and one before group assignment had occurred]]; all were unrelated to study participation.

Interpretation: 3 weeks of intensive speech and language therapy significantly enhanced verbal communication in people aged 70 years or younger with chronic aphasia after stroke, providing an
effectively evidence-based treatment approach in this population. Future studies should examine the minimum treatment intensity required for meaningful treatment effects, and determine whether treatment effects cumulate over repeated intervention periods.

**Funding:** German Federal Ministry of Education and Research and the German Society for Aphasia Research and Treatment.


**Abstract:**

**Background:** Although the available evidence is insufficient, acupuncture is used in patients suffering from chronic asthma. The aim of this pragmatic study was to investigate the effectiveness of acupuncture in addition to routine care in patients with allergic asthma compared to treatment with routine care alone.

**Methods:** Patients with allergic asthma were included in a randomized controlled trial and randomized to receive up to 15 acupuncture sessions over 3 months or to a control group receiving routine care alone. Patients who did not consent to randomization received acupuncture treatment for the first 3 months and were followed as a cohort. All trial patients were allowed to receive routine care in addition to study treatment. The primary endpoint was the asthma quality of life questionnaire (AQLQ, range: 1–7) at 3 months. Secondary endpoints included general health related to quality of life (Short-Form-36, SF-36, range 0–100). Outcome parameters were assessed at baseline and at 3 and 6 months.

**Results:** A total of 1,445 patients (mean age 43.8 [SD 13.5] years, 58.7% female) were randomized and included in the analysis (184 patients randomized to acupuncture and 173 to control, and 1,088 in the nonrandomized acupuncture group). In the randomized part, acupuncture was associated with an improvement in the AQLQ score compared to the control group (difference acupuncture vs. control group 0.7 [95% confidence interval (CI) 0.5–1.0]) as well as in the physical component scale and the mental component scale of the SF-36 (physical: 2.5 [1.0–4.0]; mental 4.0 [2.1–6.0]) after 3 months. Treatment success was maintained throughout 6 months. Patients not consenting to randomization showed similar improvements as the randomized acupuncture group. Conclusions: In patients with allergic asthma, additional acupuncture treatment to routine care was associated with increased disease-specific and health-related quality of life compared to treatment with routine care alone.


**Abstract**

This paper reviews the evidence for the effectiveness and cost-effectiveness of policies to reduce alcohol-related harm. Policies focus on price, marketing, availability, information and education, the drinking environment, drink-driving, and brief interventions and treatment. Although there is variability in research design and measured outcomes, evidence supports the effectiveness and cost-effectiveness of policies that address affordability and marketing. An adequate reduction in temporal availability, particularly late night on-sale availability, is effective and cost-effective.
Individually-directed interventions delivered to at-risk drinkers and enforced legislative measures are also effective. Providing information and education increases awareness, but is not sufficient to produce long-lasting changes in behaviour. At best, interventions enacted in and around the drinking environment lead to small reductions in acute alcohol-related harm. Overall, there is a rich evidence base to support the decisions of policy makers in implementing the most effective and cost-effective policies to reduce alcohol-related harm.


**Abstract:**

**Objectives:** The purpose of the study was to investigate the effects of a 12-week yoga program on heart rate variability (HRV) and depressive symptoms in depressed women.

**Methods:** This was a randomized controlled trial. Twenty-six sedentary women scoring ≥14 on the Beck Depression Inventory-II were randomized to either the yoga or the control group. The yoga group completed a 12-week yoga program, which took place twice a week for 60 min per session and consisted of breathing exercises, yoga pose practice, and supine meditation/relaxation. The control group was instructed not to engage in any yoga practice and to maintain their usual level of physical activity during the course of the study. Participants' HRV, depressive symptoms, and perceived stress were assessed at baseline and post-test.

**Results:** The yoga group had a significant increase in high-frequency HRV and decreases in low-frequency HRV and low frequency/high frequency ratio after the intervention. The yoga group also reported significantly reduced depressive symptoms and perceived stress. No change was found in the control group.

**Conclusions:** A 12-week yoga program was effective in increasing parasympathetic tone and reducing depressive symptoms and perceived stress in women with elevated depressive symptoms. Regular yoga practice may be recommended for women to cope with their depressive symptoms and stress and to improve their HRV.


**Abstract:**

This study examines the effects of electroacupuncture treatment on health-related quality of life and heart rate variability in women with fibromyalgia. Twenty women with fibromyalgia received a 10-week treatment with electroacupuncture. Primary outcome measures were the Fibromyalgia Impact Questionnaire, the Short Form 36 Health Survey Questionnaire, and heart rate variability. Compared with pretreatment, there was a significant improvement in health-related quality of life; electroacupuncture significantly increases low frequency, low frequency/high frequency, and decreases high frequency, all indicating rise in sympathetic tone. Fibromyalgia patients showed a significant (P < .05) improvement in pain, fatigue, morning tiredness, stiffness, anxiety, and depression on the Fibromyalgia Impact Questionnaire scores; and physical function, physical role,
body pain, general health, and vitality scores on the Short Form 36 Health Survey Questionnaire. These changes mainly in mental status scores could be related to a new autonomic balance with sympathetic predominance at the horary of the study.


Abstract:

Widening economic inequality in the USA has been accompanied by increasing disparities in health outcomes. The life expectancy of the wealthiest Americans now exceeds that of the poorest by 10–15 years. This report, part of a Series on health and inequality in the USA, focuses on how the health-care system, which could reduce income-based disparities in health, instead often exacerbates them. Other articles in this Series address population health inequalities, and the health effects of racism, mass incarceration, and the Affordable Care Act (ACA). Poor Americans have worse access to care than do wealthy Americans, partly because many remain uninsured despite coverage expansions since 2010 due to the ACA. For individuals with private insurance, rising premiums and cost sharing have undermined wage gains and driven many households into debt and even bankruptcy. Meanwhile, the share of health-care resources devoted to care of the wealthy has risen. Additional reforms that move forward, rather than backward, from the ACA are sorely needed to mitigate health and health-care inequalities and reduce the financial burdens of medical care borne by non-wealthy Americans.


Abstract:

Background: Reoperation rates are high after surgery for hip fractures. We investigated the effect of a sliding hip screw versus cancellous screws on the risk of reoperation and other key outcomes.

Methods: For this international, multicentre, allocation concealed randomised controlled trial, we enrolled patients aged 50 years or older with a low-energy hip fracture requiring fracture fixation from 81 clinical centres in eight countries. Patients were assigned by minimisation with a centralised computer system to receive a single large-diameter screw with a side-plate (sliding hip screw) or the present standard of care, multiple small-diameter cancellous screws. Surgeons and patients were not blinded but the data analyst, while doing the analyses, remained blinded to treatment groups. The primary outcome was hip reoperation within 24 months after initial surgery to promote fracture healing, relieve pain, treat infection, or improve function. Analyses followed the intention-to-treat principle. This study was registered with ClinicalTrials.gov, number NCT00761813.

Findings: Between March 3, 2008, and March 31, 2014, we randomly assigned 1108 patients to receive a sliding hip screw (n=557) or cancellous screws (n=551). Reoperations within 24 months did not differ by type of surgical fixation in those included in the primary analysis: 107 (20%) of 542 patients in the sliding hip screw group versus 117 (22%) of 537 patients in the cancellous screws group (hazard ratio [HR] 0·83, 95% CI 0·63–1·09; p=0·18). Avascular necrosis was more common in the sliding hip screw group than in the cancellous screws group (50 patients [9%] vs 28 patients [5%]; HR 1·91, 1·06–3·44; p=0·0319). However, no significant difference was found between the number of medically related adverse events between groups (p=0·82; appendix); these events included pulmonary embolism (two patients [<1%] vs four [1%] patients; p=0·41) and sepsis (seven [1%] vs six [1%]; p=0·79).
**Interpretation:** In terms of reoperation rates the sliding hip screw shows no advantage, but some groups of patients (smokers and those with displaced or base of neck fractures) might do better with a sliding hip screw than with cancellous screws.

**Funding:** National Institutes of Health, Canadian Institutes of Health Research, Stichting NutsOhra, Netherlands Organisation for Health Research and Development, Physicians’ Services Incorporated.


**Abstract:**

Inequalities in medical care are endemic in the USA. The Affordable Care Act (ACA), passed in 2010 and fully implemented in 2014, was intended to expand coverage and bring about a new era of health-care access. In this review, we evaluate the legislation’s impact on health-care equity. We consider the law’s coverage expansion, insurance market reforms, cost and affordability provisions, and delivery-system reforms. Although the ACA improved coverage and access—particularly for poorer Americans, women, and minorities—its overall impact was modest in comparison with the gaps present before the law’s implementation. Today, 29 million people in the USA remain uninsured, and substantial inequalities in access along economic, gender, and racial lines persist. Although most Americans agree that further reform is needed, the proper direction for reform—especially following the 2016 presidential election—is highly contentious. We discuss proposals for change from opposite sides of the political spectrum, together with their potential impact on health equity.


**Abstract:**

Prevalence of complementary and alternative medicines is increasing specially in patients with chronic diseases. Therefore, based on the high prevalence of chronic disorders, the present study aimed to determine complementary and alternative medicine usage frequency and its determinant factors. This was a cross-sectional study. Five hundred clients participated in the study by using convenience sampling. A 2-part questionnaire (including demographic form and researcher-created questionnaire) was used for studying the prevalence of using complementary and alternative medicine methods, and users’ satisfaction. Findings showed that 75.4% of people used at least one complementary and alternative medicine method. Most of users consumed medicinal plants (69.4%). The most common reason of using a complementary and alternative medicine method was common cold (32.9%). The highest satisfaction belonged to massage (2.94 ± 0.74). The usage of complementary and alternative medicine was 3.22 times higher in people with academic educations when compared with illiterate people. Concerning the high usage of complementary and alternative medicine, it is necessary to train specialists in this field in order to offer such treatments in a safe manner. Also, outcomes of application of complementary and alternative medicine methods should be studied.


**Abstract:**
We conducted a representative survey among young women to determine knowledge, use, and perceptions on barriers, benefits, and risks related to selected herbal drugs (Crocus sativus, Borago officinalis, Citrus aurantium, Thymus vulgaris, Matricaria chamomilla, Lavandula angustifolia, Valeriana officinalis, Hypericum perforatum, and Panax ginseng) in Gorgan by using an internally validated questionnaire. There were 344 participants (mean age 16.3 years; 16.2% in science course). Saffron had most reported knowledge (n = 265, 77.0%) and ever use (n = 324, 94.1%). The average number of source of knowledge was 2.5; parents (n = 224, 65.1%) were the single most frequent source. Media (combined magazine, the Internet, TV, radio) was the source of knowledge for 283 (82.2%) participants. Actual use was “harmful” for the majority (n = 182, 52.9%; no idea n = 83, 24.1%). Parents and media provided knowledge on herbal drugs for most, supporting unsurprisingly high perceived knowledge but harmful actual experience. Programs to educate people are needed to not take herbal drugs lightly.


Abstract:

Syphilis is a chronic bacterial infection caused by Treponema pallidum that is endemic in low-income countries and and occurs at lower rates in middle-income and high-income countries. The disease is of both individual and public health importance and, in addition to its direct morbidity, increases risk of HIV infection and can cause lifelong morbidity in children born to infected mothers. Without treatment the disease can progress over years through a series of clinical stages and lead to irreversible neurological or cardiovascular complications. Although syphilis is an ancient disease and the principles of recommended management have been established for decades, diagnosis and management are often challenging because of its varied manifestations and difficulty in interpretation of serological tests used to confirm diagnosis and evaluate response to therapy. In North America and western Europe, incidence of syphilis has increased dramatically in the past decade among men who have sex with men, particularly those with coexistent HIV infection. Only one drug, penicillin, is recommended for syphilis treatment and response to therapy is assessed based on changes over months in serological test titres. Treatment for patients who cannot receive penicillin and management of patients who do not serologically respond to treatment are common clinical problems.


Abstract:
**Objective:** Visceral adipose tissue (VAT) and hepatic fat deposition are the most important risk factors for women’s health. Acupuncture, including electroacupuncture (EA), is used to treat obesity throughout the world. The effect of EA is evaluated mainly by body mass index (BMI) and waist circumference (WC). Few studies have assessed its effect in reducing VAT volume and hepatic fat fraction (HFF) based on an exact measurement method such as magnetic resonance imaging (MRI). This study aimed to resolve this issue.

**Methods:** Thirty subjects were randomly divided into two groups. The control group (n = 15) did not receive any intervention and maintained a normal diet and their usual exercise habits. The treatment group (n = 15) received EA three times a week for 3 months. BMI and WC were measured using different devices. VAT and HFF were measured by MRI and calculated by related software before and after the intervention.

**Results:** A marked difference was evident in group that received EA treatment in the following tests. The differences in BMI (U = 21.00, p < 0.001), WC (U = 40.50, p = 0.002), VAT volume (U = 13.00, p < 0.001), and mean HFF (U = 0.00, p < 0.001) before and after the intervention in the treatment group were distinct and significant compared with those of the control group. Three months later, the treatment group showed a lower BMI (W = 91.00, p = 0.001), WC (t = 4.755, p < 0.001), VAT volume (t = 5.164, p < 0.001), and mean HFF (W = 120.00, p = 0.001) compared with pretreatment levels. Compared with the control group, the treatment group showed a lower VAT volume (t = 60.00, p = 0.029) after 3 months of treatment. After 3 months, the control group showed higher mean HFF (t = -2.900, p = 0.012) and VAT volume (W = 11.50, p = 0.006) compared with their initial levels.

**Conclusion:** Based on MRI evaluation, this randomized controlled study proved that EA treatment reduces BMI and WC as well as VAT volume and HFF in women with abdominal obesity.


**Abstract:**

**Introduction/Aim:** Interest in the gut–brain axis and emerging evidence that the intestinal microbiota can influence central nervous system function has led to the hypothesis that probiotic supplementation can have a positive effect on mood and psychological symptoms such as depression and anxiety. Although several human clinical trials have investigated this, results have been inconsistent. Therefore, a systematic review and meta-analytic approach was chosen to examine if probiotic consumption has an effect on psychological symptoms.

**Methods:** The online databases PubMed, Scopus, and the Cochrane Library were searched for relevant studies up to July 2016. Those that were randomized and placebo controlled and measured preclinical psychological symptoms of depression, anxiety, and perceived stress in healthy volunteers pre and post supplementation with a probiotic were included. To control for differences in scales of measurement, data were converted to percentage change, and the standardized mean difference between the probiotic and control groups was investigated using Revman software. A random effects model was used for analysis. Heterogeneity was assessed using the I2 statistic. Quality assessment was undertaken using the Rosendal scale.

**Results:** Seven studies met the inclusion criteria and provided data for nine comparisons. All studies passed the quality analysis. The meta-analysis showed that supplementation with
probiotics resulted in a statistically significant improvement in psychological symptoms (standardized mean difference 0.34; 95% confidence interval 0.07–0.61, Z = 2.49) compared with placebo.

**Conclusion:** These results show that probiotic consumption may have a positive effect on psychological symptoms of depression, anxiety, and perceived stress in healthy human volunteers.


**Abstract:**

**Background:** The effectiveness of post-deployment screening for mental disorders has not been assessed in a randomised controlled trial. We aimed to assess whether post-deployment screening for post-traumatic stress disorder (PTSD), depression, anxiety, or alcohol misuse was effective. We defined screening as the presumptive identification of a previously unrecognised disorder using tests to distinguish those who probably had the disorder from those who probably did not so that those people with a probable disorder could be referred appropriately, and assessed effectiveness and consequences for help-seeking by the odds ratio at follow-up between those receiving tailored help-seeking advice and those who received general mental health advice.

**Methods:** We did a cluster randomised controlled trial among Royal Marines and Army personnel in the UK military after deployment to Afghanistan. Platoons were randomly assigned (1:1 initially, then 2:1) by stratified block randomisation with randomly varying block sizes of two and four to the screening group, which received tailored help-seeking advice, or the control group, which received general mental health advice. Initial assessment took place 6–12 weeks after deployment; follow-up assessments were done 10–24 months later. Follow-up measures were the PTSD Checklist–Civilian Version, Patient Health Questionnaire-9, Generalised Anxiety Disorder-7 scale, Alcohol Use Disorder Identification Test (AUDIT), and self-reported help-seeking from clinical and welfare providers comparing those receiving tailored advice and those receiving only general advice. All participants and all investigators other than the person who analysed the data were masked to allocation. The primary outcomes were PTSD, depression or generalised anxiety disorder, and alcohol misuse at follow-up. A key secondary outcome was assessment of whether post-deployment screening followed by tailored advice would modify help-seeking behaviour. Comparisons were made between screening and control groups, with primary analyses by intention to treat. This trial is registered with the ISRCTN Registry, number ISRCTN19965528.

**Findings:** Between Oct 24, 2011, and Oct 31, 2014, 434 platoons comprising 10 190 personnel were included: 274 (6350 personnel) in the screening group and 160 (3840 personnel) in the control group. 5577 (88%) of 6350 personnel received screening and 3996 (63%) completed follow-up, whereas 3149 (82%) of 3840 received the control questionnaire and 2369 (62%) completed follow-up. 1958 (35%) of 5577 personnel in the screening group declined to see the tailored advice, but those with PTSD (83%) or anxiety or depression (84%) were more likely than non-cases (64%) to view the advice (both p<0.0001). At follow-up, there were no significant differences in prevalence between groups for PTSD (adjusted odds ratio 0.92, 95% CI 0.75–1.14), depression or anxiety (0.91, 0.71–1.16), alcohol misuse (0.88, 0.73–1.06), or seeking support for mental disorders (0.92, 0.78–1.08).

**Interpretation:** Post-deployment screening for mental disorders based on tailored advice was not effective at reducing prevalence of mental health disorders nor did it increase help-seeking. Countries that have implemented post-deployment screening programmes for mental disorders should consider monitoring the outcomes of their programmes.
Funding: The US Army Medical Research and Materiel Command–Military Operational Medicine Research Program (USAMRMC–MOMRP).


Abstract:

**Background:** Liraglutide 3·0 mg was shown to reduce bodyweight and improve glucose metabolism after the 56-week period of this trial, one of four trials in the SCALE programme. In the 3-year assessment of the SCALE Obesity and Prediabetes trial we aimed to evaluate the proportion of individuals with prediabetes who were diagnosed with type 2 diabetes.

**Methods:** In this randomised, double-blind, placebo-controlled trial, adults with prediabetes and a body-mass index of at least 30 kg/m2, or at least 27 kg/m2 with comorbidities, were randomised 2:1, using a telephone or web-based system, to once-daily subcutaneous liraglutide 3·0 mg or matched placebo, as an adjunct to a reduced-calorie diet and increased physical activity. Time to diabetes onset by 160 weeks was the primary outcome, evaluated in all randomised treated individuals with at least one post-baseline assessment. The trial was conducted at 191 clinical research sites in 27 countries and is registered with ClinicalTrials.gov, number NCT01272219.

**Findings:** The study ran between June 1, 2011, and March 2, 2015. We randomly assigned 2254 patients to receive liraglutide (n=1505) or placebo (n=749). 1128 (50%) participants completed the study up to week 160, after withdrawal of 714 (47%) participants in the liraglutide group and 412 (55%) participants in the placebo group. By week 160, 26 (2%) of 1472 individuals in the liraglutide group versus 46 (6%) of 738 in the placebo group were diagnosed with diabetes while on treatment. The mean time from randomisation to diagnosis was 99 (SD 47) weeks for the 26 individuals in the liraglutide group versus 87 (47) weeks for the 46 individuals in the placebo group. Taking the different diagnosis frequencies between the treatment groups into account, the time to onset of diabetes over 160 weeks among all randomised individuals was 2.7 times longer with liraglutide than with placebo (95% CI 1.9 to 3.9, p<0·0001), corresponding with a hazard ratio of 0·21 (95% CI 0·13–0·34). Liraglutide induced greater weight loss than placebo at week 160 (-6·1 [SD 7·3] vs -1·9% [6·3]; estimated treatment difference -4·3%, 95% CI -4·9 to -3·7, p<0·0001). Serious adverse events were reported by 227 (15%) of 1501 randomised treated individuals in the liraglutide group versus 96 (13%) of 747 individuals in the placebo group.

**Interpretation:** In this trial, we provide results for 3 years of treatment, with the limitation that withdrawn individuals were not followed up after discontinuation. Liraglutide 3·0 mg might provide health benefits in terms of reduced risk of diabetes in individuals with obesity and prediabetes.

Funding: Novo Nordisk, Denmark.


Abstract:

Cancer is acknowledged as a source of stress for many individuals, often leading to suffering, which can be long-lasting. Mindfulness-based stress reduction offers an effective way of reducing stress among cancer patients by combining mindfulness meditation and yoga in an 8-week training program. The purpose of this study was to inspect studies from October 2009 to November 2015.
and examine whether mindfulness-based stress reduction can be utilized as a viable method for managing stress among cancer patients. A systematic search from Medline, CINAHL, and Alt HealthWatch databases was conducted for quantitative articles involving mindfulness-based stress reduction interventions targeting cancer patients. A total of 13 articles met the inclusion criteria. Of these 13 studies, 9 demonstrated positive changes in either psychological or physiological outcomes related to anxiety and/or stress, with 4 describing mixed results. Despite the limitations, mindfulness-based stress reduction appears to be promising for stress management among cancer patients.


Abstract:

Introduction: Idiopathic male infertility is a global problem with almost no definite medicinal treatment. Most patients have to go through intrauterine insemination or assisted reproductive technology for achieving fertility. Unfortunately, success rates are low in cases with very low sperm count. Therefore it seems that improvement in sperm quality can have beneficial effects on assisted reproductive technology outcome.

Case Report: A 39-year-old man with history of infertility for 6 years was referred to the traditional medicine clinic with a recurrent unsuccessful intracytoplasmic sperm injection trial. His sperm analysis showed severe oligoasthenoteratozoospermia. After taking a traditional remedy he had a remarkable improvement in his sperm parameters, which led to the formation of 8 embryos in the following intracytoplasmic sperm injection cycle.

Conclusion: Traditional medicine presents various food and remedy options for treating male infertility. It seems that combination therapy can be beneficial in obtaining better results in treatment of male idiopathic infertility.


Abstract:

Background: Time-limited, early-life exposures to institutional deprivation are associated with disorders in childhood, but it is unknown whether effects persist into adulthood. We used data from the English and Romanian Adoptees study to assess whether deprivation-associated adverse neurodevelopmental and mental health outcomes persist into young adulthood.

Methods: The English and Romanian Adoptees study is a longitudinal, natural experiment investigation into the long-term outcomes of individuals who spent from soon after birth to up to 43 months in severe deprivation in Romanian institutions before being adopted into the UK. We used developmentally appropriate standard questionnaires, interviews completed by parents and adoptees, and direct measures of IQ to measure symptoms of autism spectrum disorder, inattention and overactivity, disinhibited social engagement, conduct or emotional problems, and cognitive impairment (IQ score <80) during childhood (ages 6, 11, and 15 years) and in young adulthood (22–25 years). For analysis, Romanian adoptees were split into those who spent less than 6 months in an institution and those who spent more than 6 months in an institution. We used a comparison group of UK adoptees who did not experience deprivation. We used mixed-effects regression
models for ordered-categorical outcome variables to compare symptom levels and trends between groups.

**Findings:** Romanian adoptees who experienced less than 6 months in an institution (n=67 at ages 6 years; n=50 at young adulthood) and UK controls (n=52 at age 6 years; n=39 at young adulthood) had similarly low levels of symptoms across most ages and outcomes. By contrast, Romanian adoptees exposed to more than 6 months in an institution (n=98 at ages 6 years; n=72 at young adulthood) had persistently higher rates than UK controls of symptoms of autism spectrum disorder, disinhibited social engagement, and inattention and overactivity through to young adulthood (pooled p<0.0001 for all). Cognitive impairment in the group who spent more than 6 months in an institution remitted from markedly higher rates at ages 6 years (p=0.0001) and 11 years (p=0.0016) compared with UK controls, to normal rates at young adulthood (p=0.76). By contrast, self-rated emotional symptoms showed a late-onset pattern with minimal differences versus UK controls at ages 11 years (p=0.0449) and 15 years (p=0.17), and then marked increases by young adulthood (p=0.0005), with similar effects seen for parent ratings. The high deprivation group also had a higher proportion of people with low educational achievement (p=0.0195), unemployment (p=0.0124), and mental health service use (p=0.0120, p=0.0032, and p=0.0003 for use when aged <11 years, 11–14 years, and 15–23 years, respectively) than the UK control group. A fifth (n=15) of individuals who spent more than 6 months in an institution were problem-free at all assessments.

**Interpretation:** Notwithstanding the resilience shown by some adoptees and the adult remission of cognitive impairment, extended early deprivation was associated with long-term deleterious effects on wellbeing that seem insusceptible to years of nurturance and support in adoptive families.

**Funding:** Economic and Social Research Council, Medical Research Council, Department of Health, Jacobs Foundation, Nuffield Foundation.


**Abstract:**

**Introduction:** Insurance reimbursement for clinical services provided by complementary healthcare professionals in the United States likely differs by provider specialty. It is hypothesized that a lower likelihood of insurance reimbursement demonstrates that complementary healthcare services are not utilized to an optimal level and are not financially accessible to all who may need or want these services. The purpose of this project was to evaluate the likelihood of insurance reimbursement for complementary healthcare services compared with other complementary services and with conventional primary care medical services in New Hampshire.

**Methods:** The authors studied health claims for services provided in a nonemergent outpatient setting in New Hampshire in 2014. The study population consisted of New Hampshire residents aged 18–99 years with claims for selected clinical services commonly provided by complementary
healthcare providers. The authors modeled the proportion of reimbursed claims by specialty of complementary healthcare service provider, compared with the reimbursement rate for primary care physicians' claims. The authors modeled first for the proportion of reimbursement for any selected clinical service, next for any evaluation and management (E&M) service, and finally for the most commonly used E&M procedure code, current procedural terminology (CPT) 99213 (reevaluation of established patient).

**Results:** Compared with primary care physicians, the likelihood of reimbursement for any service was 69% lower for acupuncturists, 71% lower for doctors of chiropractic medicine, and 62% lower for doctors of naturopathic medicine. For any E&M service, likelihood of reimbursement was 69% lower for acupuncturists, 78% lower for doctors of chiropractic medicine, and 60% lower for doctors of naturopathic medicine. With further restriction to CPT 99213 only, likelihood of reimbursement was 34% lower for acupuncturists, 77% lower for doctors of chiropractic medicine, and 60% lower for doctors of naturopathic medicine.

**Conclusions:** In New Hampshire, the likelihood of health insurance reimbursement for certain clinical services differs significantly by provider specialty. More research is needed to evaluate the extent and cause of such differences and the effect of such differences on the utilization of complementary healthcare services in the United States.


**Abstract:** In this Series paper, we examine how mass incarceration shapes inequality in health. The USA is the world leader in incarceration, which disproportionately affects black populations. Nearly one in three black men will ever be imprisoned, and nearly half of black women currently have a family member or extended family member who is in prison. However, until recently the public health implications of mass incarceration were unclear. Most research in this area has focused on the health of current and former inmates, with findings suggesting that incarceration could produce some short-term improvements in physical health during imprisonment but has profoundly harmful effects on physical and mental health after release. The emerging literature on the family and community effects of mass incarceration points to negative health impacts on the female partners and children of incarcerated men, and raises concerns that excessive incarceration could harm entire communities and thus might partly underlie health disparities both in the USA and between the USA and other developed countries. Research into interventions, policies, and practices that could mitigate the harms of incarceration and the post-incarceration period is urgently needed, particularly studies using rigorous experimental or quasi-experimental designs.


**Abstract:**

**Background:** Xerostomia is one of the most common complaints in maintenance hemodialysis (MHD) patients. This problem contributes to excess fluid intake and results in poor survival outcome. Based on Traditional Chinese Medicine (TCM) theory and literature studies, the authors have been practicing auricular acupressure therapy (AAT) to help patients with xerostomia. This pilot study was conducted to demonstrate the potential of AAT for xerostomia in MHD patients.

**Methods:** Eligible subjects who agreed to participate in this study were recruited and provided with AAT for 4 weeks. The Summated Xerostomia Inventory (SXI), as well as measurement of inter-dialytic weight gain (IDWG), daily inter-dialytic weight gain (daily IDWG), percentage of inter-
dialytic weight gain (IDWG%), blood pressure, and biochemical parameters, were completed at baseline and after a 4-week intervention.

**Results:** A total of 26 eligible participants were recruited. Of them, 10 men and 16 women (Mage = 52.92 ± 11.80 years; dialysis vintage 81.86 ± 46.05 months) completed the study. After the 4-week AAT intervention, the SXI scores were significantly decreased compared with baseline (from 10.08 ± 2.26 to 9.04 ± 2.14; p < 0.05). However, the IDWG, daily IDWG, IDWG%, blood pressure, and biochemical parameters did not change significantly after the intervention.

**Conclusion:** This study provides preliminary evidence that AAT may be effective in reducing xerostomia intensity for MHD patients.