

Research Highlights

ONE IN EVERY THREE INDIAN ADULTS HAS HYPERTENSION

Article title: Prevalence of hypertension among Indian adults: Results from the Great India Blood Pressure Survey

Authors: Sivasubramanian Ramakrishnan, Geevar Zachariah, Kartik Gupta, J. Shivkumar Rao, P. P. Mohanan, K. Venugopal *et al*

Journal: Indian Heart Journal. Available online 18 Sep 2019. <https://doi.org/10.1016/j.ihj.2019.09.012>.

Summary: This survey was conducted to estimate the prevalence of hypertension among Indian adults. As the available studies differed in the method of measuring blood pressure (BP) (mercury and aneroid or electronic machines), the definition of hypertension and enrolment of participants, this survey was taken up, as a part of Cardiac Prevent 2015 under the aegis of the Cardiological Society of India. In this survey, all consecutive adult participants' BP was measured who gave informed written consent. A self-reported history of hypertension and diabetes and the use of antihypertensive medications was also noted. Distribution of BP across the four classifications (normal, prehypertension, Stage I hypertension and Stage 2 hypertension) was calculated across six mutually exclusive age groups (18–19, 20–44, 45–54, 55–64, 65–74 and ≥ 75 years). Across 24 states and union territories of India, a total of 180,335 participants (66.8% men and 33.2% women) with a mean age of 40.6 ± 14.9 years were surveyed. The overall prevalence of hypertension was found to be 30.7% (95% confidence interval: 29.7, 32.8). A high prevalence of hypertension was reported among young adults (20–44 years). Homogenous data collection, real-time feeding of data in the online system and independent review of all readings were the strengths of this study. This survey reports a very high prevalence of hypertension among Indian adults, across all age groups, and poor awareness, treatment and control among those with hypertension.

Comment: The survey findings point to the high prevalence of hypertension and poor awareness. Screening for high BP in all the patients approaching homeopaths for any condition will result in diagnosing the unknown cases and aid in a timely intervention.

HOMOEOPATHIC *SYMPHYTUM OFFICINALE* HAS THE POTENTIAL TO ENHANCE OSTEOGENESIS

Article title: *Symphytum officinale* augments osteogenesis in human bone marrow-derived mesenchymal stem cells *in vitro* as they differentiate into osteoblasts

Authors: Dey D, Jingar P, Agrawal S, Shrivastava V, Bhattacharya A, Manhas J, Garg B, Ansari MT, Mridhar A, Sreenivas V, Khurana A, Sen S

Journal: J Ethnopharmacol. 2019 Oct 28;112329. doi: 10.1016/j.jep.2019.112329.

Summary: *Symphytum officinale* is a medicinal plant and, in homoeopathic literature, believed to accelerate bone healing. This study was carried out in AIIMS, New Delhi, to determine the effect of homoeopathic doses of *Symphytum officinale* on osteogenesis in mesenchymal stem cells (MSCs) as they differentiate into osteoblasts *in vitro*. MSCs were isolated from bone marrow samples of 15 patients, and osteogenic differentiation was induced in these cells for 2 weeks. Different homoeopathic doses of *Symphytum officinale* (MT, 3C, 6C, 12C and 30C) were added to the basic differentiation medium, and the efficiency of MSCs differentiating into osteoblasts was measured by evaluating the expression of osteocalcin using flow cytometry and alkaline phosphatase activity using enzyme-linked immunosorbent assay. It was observed that the selected doses of *Symphytum officinale* did not induce any cytotoxicity in the MSCs and most doses of *Symphytum officinale* enhanced osteogenesis, especially mother tincture. This study suggests that homoeopathic dose (especially mother tincture) of *Symphytum officinale* has the potential to enhance osteogenesis.

Comment: The well-known therapeutic action of *Symphytum officinale* as recorded in the homoeopathic literature is validated by such *in-vitro* studies, which enhances the confidence for clinical utility and paves way for further *in-vivo* studies.

INDIVIDUALISED HOMOEOPATHY CURES A CASE OF BURNING MOUTH SYNDROME

Article title: A case report of burning mouth syndrome treated with individualised homeopathy

Authors: Gaertner K, Frei-Erb M

Journal: Homeopathy. 2019 Sep 10. doi: 10.1055/s-0039-1693744 [Epub ahead of print].

Summary: Burning mouth syndrome is a rare disease of unknown origin for which no efficient treatment is known, and integrative approaches are warranted. The authors report that individualised Homoeopathy has not been evaluated or reported in any peer-reviewed journal as a treatment option for burning mouth syndrome. A case of a 38-year-old patient has been reported who had burning mouth syndrome along with other complaints and was treated at the Centre of Complementary Medicine at a university institute in Switzerland, with individualised Homoeopathy. The patient was treated for

around 4 years with individually selected homeopathic single remedies. Follow-up assessment was done with two validated questionnaires concerning patient-reported outcomes. Modified Naranjo criteria were also used to assess whether the documented changes were likely to be associated with the homeopathic intervention. Increasingly beneficial result was noted for oral dysaesthesia and pains as well as for other concomitant symptoms. It was concluded that individualised Homoeopathy treatment approach which integrates the totality of symptoms and complaints of a patient might be of value in cases where an association of psychological factors and the neuralgic complaints is likely.

Comment: There are several clinical conditions which are frequently encountered in practice and are well managed with individualised Homoeopathy. However, clinicians must be encouraged to publish their clinical successes to enrich the evidence-based literature of Homoeopathy.

A 10-POINT GOOD PUBLICATION PRACTICE 3 GUIDELINE FOR ASIA-PACIFIC REGION

Article title: A guide to applying the Good Publication Practice 3 guidelines in the Asia-Pacific region

Authors: Blair R. Hesp, Katsuhisa Arai, Magdalene Y. S. Chu, Stefanie Chuah, Jose Miguel B. Curameng, Sandeep Kamat, Zhigang Ma, Andrew Sakko, Hazel Fernandez

Journal: Research Integrity and Peer Review volume. 2019 Oct 2;4:21. doi: 10.1186/s41073-019-0079-1.

Summary: This commentary intends to provide practical guidance for enhancing ethical publication practices to international standards, in view of the lower awareness and understanding of such guidelines in the Asia-Pacific region. The challenges faced by speakers of English as their second language regarding the standard guidelines for medical publications have been highlighted, and practical guidance for authors in the Asia-Pacific region have been provided to improve the quality of their publications. The Good Publication Practice 3 (GPP3) enlists ten key publication practices which are intended to support the six core principles of GPP namely integrity, transparency, completeness, accuracy, accountability and responsibility. These can also serve as a checklist for the authors and medical writers¹. The aim of this commentary was to improve publication practices in the Asia-Pacific region by providing guidance on applying the ten principles of the GPP3 guidelines and the International Committee of Medical Journal Editors criteria for authorship. The barriers to compliance with guidelines are also highlighted. The roles of study sponsors

1 (<https://www.sciformix.com/medical-communications-blog/good-publication-practice-3-gpp3-practice-road-map-ethics-transparency-medical-communication/#targetText=Primarily%2C%20GPP3%20enlists%20ten%20key, the%20authors%20and%20medical%20writers>)

and professional medical writers, regional journals, regulatory authorities and professional bodies in improving practices are also discussed. Such guidance supports the authors submitting manuscripts for publication, thereby improving the quality, timeliness and transparency of published medical data.

Comment: It is pertinent for homeopathic researchers to stay abreast with standard guidelines to present their findings as quality publications. Reporting guidelines for main study types are available at <https://www.equator-network.org/>.

NUTRITIONAL HABITS AND OBESITY IN ASTHMATICS

Article title: The effects of obesity on pulmonary function in adults with asthma

Authors: Ümüş Özbey, Aslı Uçar, and Aliye Gamze Çalıs

Journal: Lung India. 2019 Sep-Oct; 36(5): 404-410. doi: 10.4103/lungindia.lungindia_16_19.

Summary: Asthmatic patients tend to live sedentary lifestyles due to their respiratory problems, so they may be more prone to obesity. In addition, the overconsumption of energy and carbohydrates further triggers tendencies to obesity and effects people with asthma in a vicious cycle. There is a high prevalence of both obesity and asthma, which indicates a potential relationship between them. The factors that have been suggested to play a role include the mechanical pressure of obesity on the lungs, increased inflammatory responses, hormonal changes due to obesity, total body weight or body mass index (BMI), body composition, body fat distribution and modern diet containing processed food with reduced antioxidants. This cross-sectional study investigated the relationship between obesity and macro-micronutrient intake as a dietary variable with pulmonary functions and asthma control in adult asthmatics. This study was carried out in the Kırsehir Ahi Evran Training and Research Hospital, Turkey. The study population consisted of sixty normal weight and sixty obese asthmatic patients (20–65 years age) who were enrolled over a 2 months' period in the spring. Anthropometric measurements and pulmonary function tests were done, and nutrition consumption was recorded, and the collected data were evaluated using the Turkey-Specific Nutrition Guide and a computer-supported nutrition program (BeBIS). The Asthma Control Test (ACT) was applied which showed poorer control in obese than in normal weight respondents (17.9 ± 3.7 and 20.6 ± 2.3 , respectively). All the pulmonary function parameters were better in the respondents with normal BMI than in the obese respondents. A negative correlation was noted between ACT scores and total energy and carbohydrate intake ($P < 0.01$), whereas a positive significant correlation was identified between ACT score and omega 3 intake ($P < 0.05$). The results of this study have shown that ACT scores and pulmonary functions decreased with increasing BMI, waist circumference and waist-hip ratio values in adults with asthma. The findings of this study suggest that obese asthmatic people be referred to nutrition and diet clinics for correct diet recommendations, as decreased body weight will be effective

in reducing the symptoms of asthma and in improving the quality of life.

Comment: Nutrition and dietary advice may form an important component of integrative approach in the treatment of asthmatic patients by homeopathic clinicians as well. In addition, the clinical studies' impact of such confounders is to be adjusted while analysing the results to avoid biased assessment of the outcome of intervention.

HOMOEOPATHIC MATERIA MEDICA SYMPTOMS AND PHYSIOLOGICAL ACTIVITY OF DRUG SUBSTANCES

Article title: Nineteenth-century homeopathic Materia Medica texts predict source materials whose physiological actions influence thyroid activity

Authors: Janice Block

Journal: Homeopathy 2019; 108(03): 214-222 doi: 10.1055/s-0039-1677704.

Summary: This study was done to examine the association of symptoms recorded in the homeopathic Materia Medica (consisting of clinical symptoms and proving symptoms) with the physiological mechanisms for thyroid activity-inhibiting substances in their undiluted state. Considering the four specific symptoms for iodine deficiency hypothyroid state: (1) generalised aggravation by or sensitivity to cold; (2) chronic painless hoarseness; (3) goitre and (4) painless diffuse non-scarring alopecia, their representation within the homeopathic Materia Medica was compared for two halogen inhibitors, for three substances that influence thyroid hormone target tissues, for six substances known or suspected to increase thyroid-stimulating hormone or decrease thyroid hormone levels and for 11 substances not known to inhibit thyroid activity. The Materia Medicas published before the discoveries of the crucial aspects of thyroid physiology were only used to avoid bias. It was found that homeopathic medicines derived from the 11 substances with mechanisms for the inhibition of thyroid activity were more likely to exhibit selected symptoms than the medicines derived from the 11 substances without known physiological mechanisms for thyroid activity inhibition. The difference between the groups was statistically significant at $P < 0.01$, analysed via the Mann–Whitney non-parametric U-test. After observations obtained from provings alone were removed from the analysis, the difference remained statistically significant to $P < 0.01$. Only the two halogen inhibitors of iodine (bromine and fluoric acid) and one of the influencers of thyroid hormone target tissue (calcium carbonate) were significantly goitrogenic. Therefore, with respect to thyroid activity inhibition, an association was found between homeopathic Materia Medica symptoms and the expected physiological mechanisms for the corresponding undiluted substances.

Comment: Such studies validate the old homeopathic literature and its clinical applicability in the present scenario as well.

REVIEW OF HOMEOPATHIC ARNICA AND BROMELAIN FOR PERIOPERATIVE OUTCOMES

Article Title: Perioperative Homeopathic Arnica and Bromelain: Current Results and Future Directions.

Authors: Rebecca Knackstedt, James Gatherwright

Journal: Annals of Plastic Surgery. Publish Ahead of Print, November 19, 2019 DOI: 10.1097/SAP.0000000000002043, PMID: 31800557

Summary: Researchers from Cleveland, Ohio conducted a systematic review of the literature to examine the homeopathic medications—*arnica* and *bromelain*, for improving perioperative outcomes. These medicines have not yet been adopted by allopathic practitioners, major reasons being the variability in preparation and dosage. The data was searched with the keywords “arnica,” “bromelain,” and “surgery.” References for each identified article were analyzed for additional articles. A total of 29 articles were analyzed for methodology, outcomes, and conclusion. A marked heterogeneity was observed with regard to surgical procedure, dosing regimen, outcomes measured, and results. *Arnica* seemed to have a mitigating effect on ecchymosis, most notably following rhinoplasty and facelifts/facial procedures. *Bromelain* was well supported across numerous studies in reducing trismus, pain, and swelling following molar extractions. However, there was no effect demonstrated when evaluating topical *arnica* following blepharoplasty procedures. This review demonstrates the potential for *arnica* and *bromelain* to improve perioperative outcomes including edema, ecchymosis, and pain control. The authors hope this article stimulates surgeons to consider using these interventions to improve perioperative outcomes in the context of well-done studies with an objective analysis of results.

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