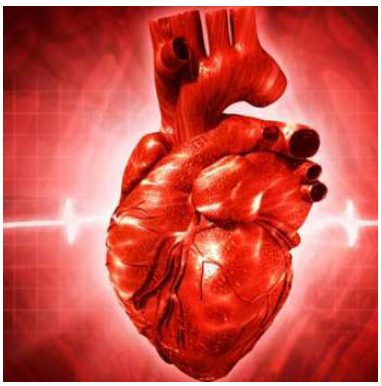
Poster Presentation

Cardiology & Nutrition Health 2018




Joint Event

3rd World Congress on

Cardiology

&

16th International Conference on

Nutrition and Fitness

October 29-30, 2018 | London, UK

The effect of auricular therapy on blood pressure: A systematic review and meta-analysis of human studies

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China Academy of Chinese Medical Sciences, China

Although a number of clinical studies have investigated the effectiveness and safety of auricular therapy for treating hypertension, the overall evidence remains uncertain. We aimed to evaluate the evidence for the effect of auricular therapy on blood pressure using meta-analysis methodology. We searched PubMed, Embase, Cochrane Library databases, Clinicalkey, China National Knowledge Infrastructure, China Scientific Journal Database and Wanfang Database and Chinese Biomedicine for trials that compared the effects of auricular therapy to that of sham auricular therapy, antihypertensive drugs (AD) or no intervention on blood pressure. BP value before and after treatment, magnitude of BP change between baseline and post-intervention and the efficacy rate, as outcomes, were synthesized by RevMan 5.3. Continuous outcomes were expressed as a weighted mean difference (WMD), and dichotomous data were expressed as relative risk (RR) with 95% confidence intervals (CI). We systematically reviewed forty-four randomized controlled trials (involving 5,022 patients through June 2018). Auricular acupressure plus antihypertensive drugs (AAPAD) might be more effective than AD alone in both reducing SBP value after treatment (n=464 patients; MD, -5.06 mmHg; 95% CI -6.76 to -3.36, p<0.00001; I2=32%), decreasing DBP after treatment (n=464 patients; MD, -5.30 mmHg; 95% CI -6.27 to -4.33, p<0.00001; I2=0%) and the efficacy rate (RR, 1.22; 95% CI, 1.17 to 1.26; p<0.00001; I2=0%). Although 44 trials were included, the quality of evidence was limited by their quality. Results from high methodological quality studies are still warranted to draw definitive conclusions in terms of effectiveness of auricular therapy.

Speaker Biography

Guang Chen, from Beijing University of Chinese Medicine and China Academy of Chinese Medical Sciences. His research mainly focus on the R&D of Chinese herbal medicine in treatment of cardiovascular diseases, genetic and epigenetic mechanism of Chinese herbal medicine and cell targeting Aptamers for Nanotheranostics using Cell-SELEX.

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Notes:

Once a week is not enough: The effect of different weekly training frequencies on phase angle and physical performance in obese women

Francesco Campa and **Stefania Toselli**
University of Bologna, Italy

Background: Phase angle (PA) is a strong predictor of sarcopenia, muscular function, fragility and risk of mortality in older adults, while strength and flexibility are required to perform different daily activities.

Aim: This study aimed to compare the effects of different weekly mixed training (aerobic and resistance) frequencies performed over a 24-week exercise program on phase angle, flexibility and handgrip strength (HS) in obese people.

Methods: Forty-two women (56.2 ± 9.1 years, BMI 37.1 ± 4.9 kg/m^2) were randomly allocated to one of two groups: a group with a high-weekly training frequency of three times a week (HIGH, n= 21) and a group that performed only one weekly session (LOW, n= 21). The groups trained with an identical exercise intensity and volume per session for 6 months. In addition, the participants followed a restricted caloric diet throughout the duration of the study. Before and after the intervention period, the participants were assessed for anthropometric measures, bioimpedance analysis, and physical performance tests of flexibility (sit and reach) and handgrip strength (HS).

Results: There was a significant group × time interaction ($P < 0.05$) for waist circumference (WC), bioimpedance reactance divided by body height (Xc/H), PA, flexibility and HS measures, even after adjusting for weight loss, menopausal status and age. In addition, only the HIGH group increased Xc/H, PA, flexibility and HS after the intervention period ($P < 0.05$).

Conclusions: Physical exercise performed three times a week promotes better adaptations in PA and physical performance when compared with the same program performed once a week in obese women.

Speaker Biography

Francesco Campa is a PhD student at the University of Bologna in Italy. He works at the Department of Biomedical Science and Neuromotor Sciences (DIBINEM). His research interests include body composition, anthropometry and sports sciences. Furthermore, he is interested in the effects of the hydration status on exercise performance. His most recent publication is Bioimpedance Vector Analysis of Élite, Sub-Élite and Low-Level Male Volleyball Players.

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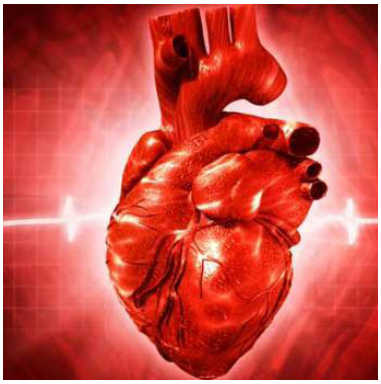


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Biological and immunological aspects of iron deficiency anemia in cancer development: A narrative review

Fatema Tuz Zohora, Katayoon Bidad, Mostafa Moin and **Zahra Pourpak**
Tehran University of Medical Sciences, Iran

Iron Deficiency Anemia (IDA) is a major and global public health problem in general population mainly affecting school-aged children and women with serious consequences on physical and mental health. It may be a risk factor for the development of cancer. IDA changes the microenvironment of the human body by affecting both biological and immunological systems. IDA is one of the leading causes of the imbalance between the pro-oxidant and antioxidant system (REDOX) in the body and generates excessive Reactive Oxygen Species (ROS) which are the crucial factors for oxidative damage of cellular structures like mitochondria, DNA leading to DNA damage and genomic instability, those are the hallmarks of cancer development. Moreover, IDA can severely affect the biogenesis/expression of microRNAs. IDA also interrupts the oxidative phosphorylation energy metabolism and intestinal Cytochrome-P450 systems. Additionally, IDA may diminish the cytoprotective role of Heme Oxygenase-1 (HO-1) against oxidative stress from external environment. During IDA, the body greatly suffers from hypoxia which may activates multi-cellular signaling pathways for cell survival, tumor progression, angiogenesis and metastasis. Besides, immune system is also affected by hypoxia. IDA cause immunological dysfunctions against invading pathogens. It decreases the proliferation and cytotoxic as well as phagocytic activities of the immune cells against tumor cells through down regulation of different immunological pathways which might predispose iron deficient individuals to cancer development.

Speaker Biography

Fatema Tuz Zohora is a PhD student in Immunology, Asthma and Allergy Research Institute (IAARI), Tehran University of Medical Sciences (TUMS), Tehran, Iran. She holds her D.V.M and M.Sc. from Bangladesh Agricultural University. She is currently working with Next Generation Technique (NGS) in the field of Immunodeficiency at IAARI. She received Bangladesh Government Junior Scholarship and TUMS international Scholarship. Her research interest also includes molecular genetics and gene editing technologies.

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Accepted Abstracts

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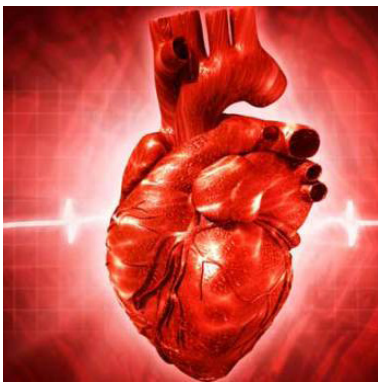

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Cardiovascular Disease and Genetics: Making a difference

Pamela McDonald
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Relevance: More providers today are seeing and treating patients with obesity, morbid obesity, glucose intolerance, insulin resistance, diabetes, dementia and cardiovascular disease today. Out of an obesity epidemic came a diabetes epidemic, out of a diabetes epidemic - we are seeing a very serious dementia epidemic. A dietary plan or nutrition therapy for these patients could prove to be a less expensive and more effective approach that addresses all of these diseases we are seeing on the frontlines of medicine.

The epidemic of cardiac and chronic inflammatory diseases is rampant. Traditional allopathic approaches are confusing, serve to band-aid the problem, and are insufficient to address the complex nature of these diseases, many of which are related to a poor match between nutrition, lifestyle choices and genetics. An understanding of the relationship between the Apolipoprotein E (ApoE) gene, (which transports fat and cholesterol) and nutrition may provide greater insight into how a gene-supportive environment can promote optimal cell health. Utilizing an individual integrative medicine approach which uses and an APO E gene specific anti-inflammatory nutrition plan to create a gene supportive environment for optimal health can be a critical and effective tool.

Target Audience: Allopathic, alternative and integrative medicine primary care providers, medical specialists, registered dieticians, exercise physiologists, physical therapists, pharmacists, psychotherapists, certified personal exercise specialists.

Objectives: After attending this presentation, the participant will be able to: Describe the role diet has as a therapeutic tool for heart disease, glucose intolerance, insulin resistance, diabetes, hypertension and obesity. Be aware of a practical nutritional protocol to effectively address the management of patients presenting with: genetic heart disease risk, obesity, diabetes, insulin resistance, glucose intolerance, dementia and hypertension.

Understand a one practical effective process of how genetic heart disease, obesity, diabetes, insulin resistance, glucose intolerance, hypertension, dementia may be created and reversed.

Recognize key genetic and behavioral components contributing to genetic heart disease, obesity, diabetes, insulin resistance, glucose intolerance, dementia and hypertension.

Describe individual dietary differences based on genetic factors and present a practical process to help prevent or regress this "Metabolic Syndrome" types disease states.

Methods: Lecture, Questions & Answer, Power Point Presentation.

Expected Outcomes: The importance of diet as it relates to individual genetic expression for the - Metabolic Syndrome, Coronary Artery disease and chronic illness type patients.

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Notes:

Cardiac Excitation – Contraction Coupling

Mark Cannell
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Calcium signalling is pivotal for cardiac function, but the complex interaction between cell structure, protein expression and function is far from clear. While the discovery of calcium sparks now forms a cornerstone for our understanding of cardiac excitation-contraction coupling, the problem of calcium spark termination has been resistant to clarification. Using detailed computer models, we now have a robust explanation of calcium spark termination that depends on the detailed microanatomy of the cardiac cell. Furthermore, we have found that disrupted cell anatomy, in the form of de-tabulation, is very closely linked to the loss of contractile performance seen in heart failure. Loss of t-tubules will reduce the efficiency of excitation-contraction coupling but also promote "late calcium sparks" which prolong the calcium transient and would be pro-arrhythmic. These late calcium signalling events are likely to become a new area for intensive study as we attempt to link deranged calcium signalling to arrhythmias and sudden cardiac death.

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Notes:

Assessing performance and reliability in cardiovascular care

Paul Barach
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Patients hospitalized for cardiovascular problems are vulnerable to experiencing medication errors, as they are commonly prescribed high-risk medications such as anticoagulants and antiplatelet agents. The cardiac surgical operating room (OR) is a complex environment in which highly trained subspecialists interact with each other using sophisticated equipment to care for patients with severe cardiac disease and significant comorbidities. Thousands of patient lives have been saved or significantly improved with the advent of modern cardiac surgery. Nonetheless, the highly skilled and dedicated personnel in cardiac ORs are human and will make errors. Refined techniques, advanced technologies, and enhanced coordination of care have led to significant improvements in cardiac surgery outcomes. However, more than 10 years after the Institute of Medicine report,there is little evidence that much progress has been achieved in reducing or preventing errors.

The tools to measure potential risks and interventions to improve patient safety are highly validated and yet have been implemented in a very uneven and scatter manner. We must extend the conversation of perioperative cardiac outcomes and expand our assessment beyond patient factors and the technical skills of the cardiologist /surgeon /anesthesia/ nurse; to extend assessment of skills beyond bench models to the operating theater and its equipment; to provide a basis for assessing interventions; and to provide a deeper understanding of surgical outcomes. We must consider the human/environmental factors that have been found to be of important in achieving safe, high-quality performance in other high-risk environments. Issues that impact human performance and increase the risk of error include factors that directly enable decision making, such as perception, attention, memory, reasoning, judgement and factors that directly enable decision execution, such as communication and the ability to carry out the intended action. We must address the implementation gap between what is known to work and what is actually implmented.

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Notes:

Double- chambered left ventricle and abnormal papillary muscle formation

Yassmin Hanfi
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Papillary muscles develop separately from mitral valve leaflet and chordae. Where papillary muscles origin from myocardial ridge of the anterior wall and to the posterior wall of the left ventricle, Chordae and mitral valve leaflets origin from a cushion tissue. The myocardial ridge gradually loosens from the ventricular wall and meanwhile the cushion tissue transforms into leaflet and chordae1. Abnormality in the development of papillary muscle could be responsible of a rare form of double chamber LV. The double chamber LV can be misdiagnosed as aneurysm or rupture LV. Identification of such form of double chamber LV would have an impact for the patient management care. Here is a case report of double chamber LV with variable presentation as previously published. Case report 17 years old male patient with a recent history of palpitation not related to exertion. Normal ECG findings. A transthoracic echocardiogram revealed mildly dilated left ventricle with abnormal trabeculated appearance and papillary muscle apparatus forming double chamber LV with mild obstruction. Cardiovascular magnetic resonance (CMR) cine images showed a well formed compacted myocardial layer with normal systolic thickening excluding the LV non compaction pathology. Although confirmed an anomalous muscular bridge opposite to the normally formed anterolateral (AL) papillary muscle causing partial division of the LV in two chambers without significant obstruction at rest (Panels A, B, D). Peak recorded velocity <1m/s by velocity mapping at rest (Panel E). While the posteromedial papillary muscle is abnormally hypoplastic and heavily fragmented (Panels G, H). The mitral valve found to be with mild bellowing of its anterior leaflet with no significant regurgitation. late gadolinium enhancement phase at the abnormally hypoplastic posteromedian papillary muscle.

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Notes:

Validity of Renal Denervation for the treatment of resistant hypertension. Experience in Honduras

Hugo Chinchilla
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Approximately 25% of the adult population of the industrialized countries suffers from arterial hypertension. Within this population there is a subgroup that despite an optimal treatment that includes 3 or more classes of drugs at maximum dose persists with high blood pressure figures both in the office and in the 24-hour monitoring. (AMBP). This is a population that represents 4-5% and has a very high risk of complications and cardiovascular, renal and cerebrovascular comorbidities with high mortality. Hence the importance of its detection and control in specialized units of HTA.

From the physiopathological point of view there are subtypes of resistant hypertension where sympathetic hyperactivity plays a central role. Hence the advent of non-pharmacological co-adjuvant therapies that aim to decrease renal sympathetic activity. The most studied and most experienced clinical method is Kidney Sympathetic Denervation with radiofrequency catheter. There are several designs on the market. Despite the good results in the first studies: SYMPLICITY-HTN I and SYMPLICITY-HTN II. There was a slowdown in the use of this treatment as a result of the disappointing results of SYMPLICITY-HTN III.

In this review we make a critical analysis of the SYMPLICITY-HTN III study and review the latest evidence demonstrating the current validity of the method in this specific subgroup of true hypertensive resistant patients, the importance of adequate selection and operator experience. We also show the results of the local experience where we observed a high percentage of responders in relation to the technique used, since from the first cases we used an off-label technique where a greater number of applications are made on average 8 per artery and in Secondary branches smaller than 4 mm. In perspective we analyze the results with multipolar devices of more recent design, their advantages and impact on the results.

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Heart transplantation in female recipient with cardiac sarcoidosis

Maria Simonenko
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There is a challenge to diagnose cardiac sarcoidosis (CS) which is extremely rare multisystem disease. Often it is diagnosed only in patients with end-stage chronic heart failure (CHF). A 30-yr-old female patient from her early childhood coped with arrhythmias, such as paroxysmal frequent supraventricular tachycardia. At the age of 9 WPW was found, and she underwent epicardial catheter ablation (CA) of accessory atrioventricular (AV) pathways. Since 13-yrs-old frequent syncope-associated ventricular extrasystoles were diagnosed. When she was 17-yr-old, CA of left posterior accessory connections of AV pathway was performed. Then cardiac pacemaker was implanted due to complete AV block. Moreover, LVEF dropped to 30%. To prevent sudden cardiovascular death we implanted CRT+D. Less in 1 yr patient was admitted to our hospital with CHF NYHA class III. According to TTE, LVEF was 20%, mitral regurgitation grade 4. Due to she was hemodinamically unstable we could not perform endomyocardial biopsy (EMB) prior heart transplantation (HTx). Patient's examination did not show any mediastinal lymphadenopathy or lung lesions. Despite the treatment, patient's condition deteriorated. She was heart transplanted less than in 6 months. Time in ICU was complicated by severe right heart failure. Two weeks after HTx we performed Batista procedure with mitral valve repair. Explanted heart biopsy revealed typical sarcoidosis signs: specific myocarditis, non-necrotic granulomas, fibrosis fields. Patient was treated with triple-drug therapy (steroids, tacrolimus, mycophenolic acid) plus the induction (thymoglobulin). After HTx EMB did not reveal any signs of myocardial cellular rejection or specific granulomatosis. In long-term follow-up there was no signs of CHF. In fact, 5 yrs after HTx according to EMB results there was no signs of CS. In conclusion, HTx can be considered as an effective treatment for patients with CS complicated by end-stage CHF. Post-HTx immunosuppressive therapy may prevent sarcoidosis relapse.

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Notes:

Acute myocardial infarction, Incidence, risk factors

Ahmet Hoxha
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Introduction: Acute Myocardial infarction is the main component for cardiovascular disease. The main triggers for cardiovascular risk with specific character for coronary arteries disease are: Systemic Arterial Hypertension, Hyperlipidaemia, Smoking, Diabetes and Obesity. The Purpose of research: based on the data on the incidence of myocardial infarction and risk factors of these diseased persons and based on findings of the research we make planning for further actions to prevent these diseases.

Patients and Methods: The research included data from the hospital information systems respectively in the emergency department and the one-year period of 2016, leading into account cases deaths, sick people by municipality and risk factors in the percentage.

Results: During 2016, from 01.01.2016 to 31.12.2016, there were 207 patients affected by cardiovascular disease, of whom male 126 or 61%, and women 81 or 39%. In men, the age group 60-70 years was 25 patients or 12%, women were 70-80 years-27 patients or 13%. The youngest patient was 19 years male and oldest was 102 years old female. The number of patient sent to Universital Clinic Center was 67 or 82%,treated in emergency center was 36 patients or 17 % and 33 patients who passed away or 16 %.The most common patology that arrived to emergency center was with Acute Myocardial Infarction with 41 patients or 20 % and with Acute Coronary syndrome 54 patients or 26 %.

Number of patients that arrived in emergency center by months was April 29 patients or 14 % and May 23 patients or 11% and moths mars was with only 9 patients or 4 % and December 11 patients or 5 %.

Risk factors: Cardiovascular disease which have dominated were systemic arterial hypertension with 178 or 86 %, hyperlipidaemia with 111 or 54%, smoking with 55 or 27%, diabetes with 62 or 39%, and 41 or 20% adiposity.

Conclusion: It is to be concluded that the incidence is more common in middle age groups whereby the higher incidence of the disease in to be found within male population. Therefore, we may conclude that the leading risk factors in investigated periods are the same. The obtained data can be used as a guideline for planning prevention program for high-risk groups of people especially middle –aged groups in which the increasing incidence of AMI is present.

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In vitro assays of anti-diabetic and anti-hypertensive potential of some traditional edible plants of Qatar

Tahra Elobeid
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In this study, four edible desert plants from Qatar were selected to analyse their phenolic bioactive and potential health benefits for managing the early stages of type 2 diabetes and hypertension using in vitro enzyme assays. High total soluble phenolics and high antioxidant activity associated with high α-glucosidase, moderate α-amylase, and angiotensin-converting enzyme (ACE) inhibitory effects were found in aqueous extracts of Cynomorium coccineum whereas Glossonema edule and Malva parviflora had moderate antioxidant potential, total soluble phenolics and angiotensin converting enzyme (ACE) inhibitory activity. It is suggested that edible plants, such as Cynomorium coccineum, possess medicinal properties that have potential as diet-based solutions for combating, preventing and managing the early stage of type 2 diabetes when coupled with overall healthy life style and pharmacological management strategies. This study provides the biochemical rationale for further animal and clinical studies to understand the health benefits of edible plants of Qatar as a part of dietary strategies for type 2 diabetes management.

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Notes:

Physical activity protects the vascular dysfunction in obesity

Yoonjung Park
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Obesity is associated with various cardiovascular disease and physical inactivity is one of the major causes of this pathology. We investigated the protective effect of physical activity on the coronary vascular dysfunction in obesity and its potential underlying mechanisms. Four groups of mice, 1] Control low-fat diet (LF-SED), 2] LF diet with free access to a voluntary running wheel (LF-RUN), 3] High-fat diet (HF-SED; 45% of calories from fat), and 4] HF-RUN, were utilized for the study. The endothelium-dependent vasodilatory function of isolated coronary arterioles and contributing factors to this vascular dysfunction were measured. We found that, despite high-fat diet, voluntary running (HF-RUN) improved acetylcholine (ACh)-induced and flow-induced vasodilatory function, endothelial nitric oxide synthase (eNOS) expression, leptin signals, and antioxidant enzymes expression, but decreased inflammation and oxidative stress in coronary arterioles compared to obesity mice (HF-SED). These findings suggest that physical activity protects the coronary vascular dysfunction in high-fat diet-induced obesity via multiple mechanisms including endothelial nitric oxide synthase (eNOS), leptin and redox balance.

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Notes:

Physical health in females competing in aesthetic fitness sports; Symptoms of Relative Energy Deficiency in sport (RED-s)

Therese Fostervold Mathisen
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Relative energy deficiency in sports (RED-s) involves insufficient energy intake by athletes compared to their total energy needs, potentially impairing health and performance. Athletes competing in weight-sensitive or aesthetic sports are specifically prone to this syndrome, and cardiorespiratory exercise, meal skipping, and low-kcal diets are common methods used for weight regulation. On the contrary, aesthetic fitness athletes are known for practicing resistance exercise, and regular, protein dense meals while dieting before competitions. However, the health effects from their specific practice is not known. In this study, we aimed at evaluating symptoms of RED-s in dieting, competitive fitness athletes. A cohort of 31 female fitness athletes (FA) and 28 female control persons (CP) aged 18-40 years were evaluated by indirect calorimetry, resting heart rate, DXA, and a 4-day diet registration before competition diet was initiated (pre), 2 weeks prior to fitness competition (mid), and +1month after competition (post). Mean (SE) resting metabolic rate (kcal) changed from pre to mid by -207.57 (68.9) in FA and -5.26 (62.3) in CP, with 60% of FA and 28% of CP being hypo-metabolic at mid. Concurrently, resting heart rate (BPM) changed by -10.34 (1.6) in FA and -2.51 (1.6) in CP ($P<0.001$ between groups). Body weight (kg) changed by -4.44 (0.6) in FA and 0.11 (0.6) in CP, with change in body fat percent -7.3 (0.6) in FA and 0.9 (0.6) in CP ($P<0.001$ between groups). Energy intake per kg lean body mass (kcal/LBM) at pre and mid was lower in FA compared to CP ($P<0.001$), with 39% of FA defined with low energy availability at mid. Most variables returned to normal at post. Current results indicate that symptoms of RED-s might be a problem in fitness athletes and further long-term follow up studies are warranted to learn more about possible long-term consequences for health.

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The effects of meat reduction on weight and metabolic parameters including: BMI, body composition, blood glucose concentration and total cholesterol

Riya Lakhani
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There is a considerable amount of literature that documents the encouraging effects of a plant-based diet on weight and the negative impact of high meat consumption on the risk of developing metabolic syndrome. The purpose of this pilot study was to examine the effects of substituting meat products with plant-based vegan foods on various health parameters including BMI, body composition, blood glucose concentration, and total cholesterol. Within a quasi-experimental pre-post study design, 7 overweight and obese individuals, who consumed meat products daily, took part in a four-week dietary intervention. All participants were asked to reduce their meat consumption as much as possible and to consume plant-based food; on an ad libitum basis. Pre-test and post-test measurements included weight, BMI, body composition, fasting, blood glucose and total cholesterol. All participants were offered weekly nutritional counselling sessions via Skype and were asked to complete an evaluation questionnaire to assess dietary adherence at the end of the study. The paired t-test determined statistically significant differences (P<0.05) in weight and BMI. In addition, a statistical trend was seen in body fat percentage loss (p=0.074). However, blood glucose and total cholesterol results were insignificant. Overall, positive trends suggested that the meat reduction and the adoption of a plant-based diet led to improvements in weight and BMI within the space of the month- without the need of energy restriction.

The significant results support the data currently available suggesting that a plant-based dietary intervention has the potential to be effective for weight maintenance. The data from this study ultimately adds to the emerging literature on the benefits of plant-based foods

Variable	n	Pre-Intervention (Mean ± SD)	Post-Intervention (Mean ± SD)	Mean Change	p-value*
Weight, kg	7	92.97 ± 15.57	90.97 ±15.01	2.00	0.047
BMI, kg/m^2	7	33.43 ± 4.12	32.70 ± 3.98	0.73	0.039
WHR	7	0.86 ± 0.05	0.86 ± 0.03	0.00	0.840
Body Fat %	7	46.16 ± 6.72	44.86 ± 7.72	1.30	0.074
Blood Glucose, mmol/L	7	4.20 ± 0.34	4.38 ± 0.52	-0.18	0.385
Total Cholesterol, mmol/L	7	5.25 ± 0.69	4.29 ± 1.62	0.96	0.151

*Paired t-test with p-value significant at <0.05

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Notes:

Effect of heat treatment on protein profile of Whey Protein Beverages (WPB)

Anibal Jose Barrios Quant
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There is interest in the production of heat-stable and clear beverages containing high levels of whey proteins. A challenge of incorporating whey proteins into sports beverages is done by hot-fill treatment (88 °C for 2 min). The objective of this research was studying the effects of whey proteins profile changes on a whey protein beverage (WPB) under thermal treatment. WPB were prepared by mixing 5% whey protein with 0.04% potassium sorbate, and 0.5M H_3PO_4 was used to adjust pH to 3.0 and 7.0. The protein particle size and zeta-potential were tested using a spectrophotometer. Lastly, the protein profile of beverages containing whey was determined by SDS-PAGE. Hot-fill treatment had a negative impact on the physiochemical properties of whey proteins. The formation of protein-protein complexes produced an increase in particle size and absolute zeta potential in WPB formulations at both pH 3.0 and 7.0.

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Notes:

Efficacy of new beverage made of dates vinegar and garlic juice in improving serum lipid profile parameters and inflammatory biomarkers of mildly hyperlipidemic adults: A double-blinded, randomized, placebo-controlled study

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A beverage made from dates vinegar and garlic juice was recently developed for use by people who wish to attain maximum quantities of both vinegar and polyphenols for their health and do not like to use vinegar and garlic directly in their daily diet. Fifty hyperlipidemic adults consumed two cups (500 ml) of either the new beverage or a placebo daily over a period of 7 weeks. Plasma lipids, inflammatory biomarkers, urea, creatinine, potassium, and b-carotenoid concentrations were measured before and after each treatment. A recommended dose of 500 ml of the new beverage reduced total cholesterol (TC) (260.10617.9 to 198.90617.31 mg/dL) and C-reactive protein (CRP) (8.0461.34 to 4.4561.42 mg/l) along with heart rate and mean blood pressure. These outcomes indicate that the new beverage improved the concentration of lipids and inflammatory biomarkers, and the new beverage is beneficial for people who are worried about hypertension.

Practical applications

Dietary therapy is the primary step in the treatment of hyperlipidemia. Dates, compared with different fruits, are a rich source of phenolic compounds. Researchers have claimed that extract of date fruit is effective in improving lipid profile parameters. Similarly, evidence from other studies has indicated that garlic can bring about the regulation of blood cholesterol along with the improvement of fibrinolytic activity and decrement of blood pressure. Thus, this study will provide a possible source of phenolic compounds and present a latent approach to the avoidance of hyper lipidemia and hypertension. This new beverage is suggested as a dietary supplement for the promotion of a healthy heart.

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Notes:

Necrotizing enterocolitis in a preterm infant new-born & role of feeding: An update (A clinical case report presentation)

Hawal Amr I M
Prime Health Care Group, UAE

Introduction: It's a clinical case presentation of a male Preterm infant New-born (+31 weeks) who was delivered in our hospital & transferred to our NICU because of Prematurity, VLBW & need of respiratory support. Baby shortly undergo Necrotizing Enterocolitis (NEC) on 5th day of life shortly after start of expressed milk feeding…! Which was early detected by use of Near Infrared Abdominal spectroscopy (NIRS). Baby was deteriorated clinically in a couple of hours & undergo intestinal perforation with peritonitis, So, abdominal exploration surgery with intestinal resection & end to end anastomosis was done urgently. Baby improved gradually & early feedings was started & gradually increased up to full feedings with use of Human Fortified Milk (HMF) & probiotics, Prebiotics. The Study stated the evidence-based Feeding Strategies guidelines for necrotizing enterocolitis (NEC) among very low birth weight infants & Role of trophic feedings, Probiotics, Prebiotics & micronutrients in Prophylaxis, Prevention & Management of NEC.

Recommendations: 1) -Prematurity is the single greatest risk factor for NEC & avoidance of premature birth is the best way to prevent NEC. 2)-The role of feeding in the pathogenesis of NEC is uncertain, but it seems prudent to use breast milk (when available) and advance feedings slowly and cautiously. 3)-NEC is one of the leading causes of mortality, and the most common reason for emergent GI surgery in new-borns. 4)-NEC remains a major unsolved medical challenge, for which no specific therapy exists, and its pathogenesis remains controversial. 5)-A better understanding of the pathophysiology will offer new and innovative therapeutic approaches, and future studies should be focused on the roles of the epithelial barrier, innate immunity, and microbiota in this disorder. 6)-Bioinformatics modelling is a new emerging strategy aimed at understanding the dynamics of various inflammatory markers and their application in early diagnosis and treatment.

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