



From the Founder:

Greetings to all Ayurveda lovers and researchers. Despite slowing down for the summer, work is continuing at CAR and we in fact have an exciting update to share!!

On June 29th, a one-day Symposium on Integrative Medicine and Role of Yoga and Ayurveda was convened by multiple organizations spearheaded by the Indo-American Health Initiatives at the Gordon Hall of Harvard School of Medicine, Boston, USA. Experts in the field of research, and integrative practice of Yoga and Ayurveda, came together to deliberate on the current status, challenges and future growth of Integrative medicine in the US. Honorable Ayurveda Minister Shri Shripad Yasso Naik and HR Nagendra, Chancellor S-VYASA, were among the invited dignitaries and speakers. I was given the opportunity to talk about Ayurveda in the US, realities and potential. I spoke at length about the CAR initiative and how far we have come. The talk was very well received and CAR got very good exposure. Some really exciting opportunities have opened up through several key connections made at this event. Stay tuned for details!

Tell us we are reaching you. Share your thoughts, ideas and suggestions and do share about us with your friends and colleagues. Email us at ayurvedaresearchusa@gmail.com. Let us know how we are doing and what more you would like to see happening at CAR. Stay connected by visiting our [website](#), following us on Twitter (@PratibhaAyurved), joining our [Facebook group](#) and/or liking our [Facebook page](#)!!



Pratibha Shah

(Pratibha Shah, Masters in Ayurveda, MPH)

Research Abstract

Role of Udvartana on psychophysical parameters of Healthy Volunteers-

A randomized controlled Trial

Mishra.VK. Dilipkumar K. V.and Mishra.N

Abstract: The world community on healthcare is on a lookout for more appropriate life style modifications to prevent the life threatening non communicable life style disorders. Āyurvēda has many of them in its store in the form of dinacaryā and ṛtucharyā. Udvartana is massage technique of whole body below the neck with powders of medicinal plants. Udvartana alleviates vitiated kapha doṣa, reduces excess of fat in the body, increase the stability of body and promotes the excellence of skin. this study is aimed to prove the effect of udvartana on psychophysical parameters of healthy volunteer to prevent kapha and meda related diseases. Considering overall effect of udvartana significant changes were observed in physical parameters such as Body Weight, Body Mass Index, Waist Circumference, Hip Circumference, Waist Hip Ratio and Skin Fold Thickness, Hand Grip Strength, score of Skin Texture and physical domain of WHO QOL in study group and also significant changes were observed in psychological parameters such as score of stress inventory scale and psychological domain of WHO QOL and improvement in quality of sleep in study group. Significance of Udvartana on psychophysical parameters of healthy individuals for 20 minutes daily for 14 days in comparison with individuals with no intervention is evaluated in this study.

Results: In study group statistically significant changes were observed in body weight, BMI, waist circumference, hip circumference, waist hip ratio, skin fold thickness, hand grip strength, score of skin texture, score of stress inventory scale, physical domain, psychological domain of WHO QOL and in lipid profile at the level of 0.1% ($p < 0.001$), moreover time taken to get sleep ($p < 0.01$) and feeling of freshness in the morning ($p < 0.001$) in national sleep foundation sleep diary. Statistically significant positive changes were observed in study group in, social domain ($p < 0.01$) and environmental domains ($p < 0.01$) of WHOQOL (BREF). vāta ($p < 0.001$), pitta ($p < 0.05$) and kapha ($p < 0.01$) domains of Āyurvēda Health Status Assessment Scale. Incidence of general health problems during follow up period were 80% in control group, against 13 % in study group. In control group 26.6 % were suffered from common cold and 20 % each by cough and fever. As per dōṣic analysis 33.33 % belonged to kapha pitta and 26.66 % belonged to kapha vāta. Control group showed statistically significant ($p < 0.001$) high incidence rate. So, the Null Hypothesis is rejected and the Alternate Hypothesis is accepted that is- "Udvartana has significant role on psychophysical parameters of healthy volunteers."

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News and Upcoming events

INTERNATIONAL EVENTS:

- 8th International Conference "Ayurveda: Herbs & Minerals (Dravya Guna & Rasa Shastra)" is scheduled to be held from September 9 – 11, 2016 at Bastyr University, Seattle, Washington, USA <http://aapna.org/>
- The 24th Global Ayurveda conference " Ayurveda for Health & Wellness " organized by European Ayurveda Academy is scheduled to be held from 11 to 12 November 2017 In London ,UK http://www.europeayurvedaacademy.org/?page_id=652

INDIAN EVENTS:

- NASYA chapter of Tamil Nadu is scheduled to be inaugurated by Shri. A. Jayakumar , National General Secretary, Vijnana Bharati. This will be followed by a Symposium and will be held on 24 July 2016 in Chennai. <http://nasya.in/>
- A National seminar on Vasti " Vasti Viveka 2016 " is scheduled to be held from 25th to 27th August at PNNM Ayurveda Medical College, Shoranur , Kerala



Quote of the month

Mind, soul and body are like tripod; the world is sustained by their combination; they constitute the substrata for everything.

(Charaka Samhita- Sutrasthana- 1/46)

Kitchen Spice Tip



Put a few drops of clove oil on a cotton ball and place it on the affected tooth. It reduces pain. Repeat same every night until the pain is completely subsided.

Domain Expert Corner

GINGER



Ginger (*Zingiber officinale*) is a member of the Zingiberaceae family and is consumed widely, not only as a spice but also as a medicinal agent. Other members of the family include Turmeric and Cardamom. Ginger cultivation appears to have begun in South Asia and has now spread to various parts of the world. It is sometimes called “root ginger” to distinguish it from other products that share the name. The principal constituents of ginger include [6]-gingerol, [6]-paradol, [6]-shogaol and zingerone. Several studies have investigated ginger’s antioxidant properties (Chrubasik, Pittler, and Roufogalis 2005).

Ginger was seen to significantly increase several liver antioxidant enzymes in animal studies, including superoxide dismutase, catalase and GPx. Lipid and protein oxidation was inhibited, as evidenced by significant decreases in liver and kidney levels of MDA and carbonyl levels in rats, compared to controls (Kota, Krishna, and Polasa 2008). Ippoushi et al. 2007 found that rats fed with 2% ginger decreased TBARS and suppressed 8-OHdG (a product of oxidative DNA damage) levels. TBARS was also significantly decreased following exposure to lindane, a pesticide that is a global pollutant (Ahmed et al. 2008). Gingerol has shown decrease in intracellular ROS formation in human keratinocyte cells (Kim et al. 2007), inhibit angiogenesis in human endothelial cells, limit nitrogen oxide synthase expression and epidermal growth factor-induced cell transformation and AP-1 transcriptional complexes in JB6 cells (Bode et al. 2000; Ippoushi et al. 2003; Davies et al. 2005; Kim et al. 2005). Various animal models have been used to examine the role of ginger in cancer prevention. Male Wistar rats induced with tumors resembling human low-grade papillary urothelial neoplasia and then fed with 1% ginger extract in diet for 26 weeks had significantly fewer urothelial lesions compared to controls or those fed with 0.5% ginger (Ihlaseh et al. 2006). However, ginger does not appear effective in all cases, as evidenced by the lack of protection against proliferative lesions in the bladders (Bidinotto et al. 2006). Providing 10µL ginger oil daily for 2 weeks to Swiss mice increased aryl hydrocarbon hydroxylase activity about 25% (Banerjee et al. 1994) and GST by 60% (Aruna and Sivaramakrishnan 1990). Providing 50µM [6]-gingerol up regulated MKP5 (pro-inflammatory inhibitor) expression in normal prostate epithelial cells; likewise, it up regulated MKP5 expression in human prostate cancer cell lines (Nonn, Duong, and Peehl 2007). Ginger extracts, more so than their individual components, have been shown to inhibit lipopolysaccharide induced prostaglandin E2 (PGE2) production to an extent similar to that of indomethacin (NSAID). [6]-paradol, another active compound in ginger, is reported to induce apoptosis in human pro-myelocytic leukemia cells, JB6 cells, an oral squamous carcinoma cell line and Jurkat human T-cell leukemia cells in a dose dependent manner (Huang, Ma, and Dong 1996; Lee and Surh 1998; Keum et al. 2002; Miyoshi et al. 2003).

Ginger also appears to have anti-tumorigenic properties. Several cell lines have been examined for their sensitivity to ginger. Alcoholic extracts of ginger inhibited tumor cell growth for Dalton’s lymphocytic ascites tumor cells and human lymphocytes at concentrations of 0.2-1mg/mL in vitro (Unnikrishnan and Kuttan 1988). In a study of cytotoxic activities of several compounds in ginger against four tumor cell lines (lung, ovarian, skin and colon cancer), [6]-shogaol was the most potent, and [4]-, [6]-, [8]-, and [10]-gingerol displayed moderate cytotoxicity (Kim et al. 2008). Adding [6]-gingerol has been reported to inhibit proliferation in rat ascites hepatoma cells and increase apoptosis at higher concentrations (Yagihashi, Miura, and Yagasaki 2008). Likewise, [6]-shogaol also provokes DNA damage and apoptosis through an oxidative stress mediated caspase-dependent pathway (Chen et al. 2007). Similarly, incubation of HEP-2 cells with ginger resulted in a dose dependent decrease in nitrite generation, increased production of superoxide, and decreased GSH levels compared to untreated cells, indicating ginger induced apoptosis through the generation of ROS (Chen et al. 2007).

Ginger is also recognized for its potential usefulness to reduce nausea. To determine the antiemetic effects, a randomized, double-blinded, crossover study was conducted in cisplatin-induced emesis in gynecologic cancer patients. The addition of ginger (1g/day) to a standard antiemetic regimen has no advantage in reducing nausea or vomiting in the acute phase. In the delayed phase, ginger and metoclopramide have no statistically significant difference in efficacy (Manusirivithaya et al. 2004). In another study, 1000mg of ginger was compared to 20mg IV metoclopramide, and 4mg IV ondansetron in controlling nausea in cyclophosphamide chemotherapy patients. Ginger was determined to be as effective as metoclopramide, but was not as effective as ondansetron (Sontakke, Thawani, and Naik 2003). Overall, while the anticancer findings of ginger are intriguing and several processes may be associated with the observed responses, additional studies are needed to clarify the underlying mechanisms and to determine overall benefits to humans (Pan et al. 2008).

- Prof. Dr. Satyendra Narayan Ojha, B.A.M.S; Masters In Ayurveda

Case Study

A cure for fungal infection of the skin in Ayurveda!

Background - Skin is the largest organ in humans, visible to public and hence is a subject of social stigma at times when alterations in the complexion of skin results due to various reasons. Pigmentations (hypo and hyper) are one the most common skin conditions seeking medical advise worldwide and recurring fungal infections are one of the most common causes of such. Ayurvedic treatment in such gives promising results.

Objective - To ascertain the efficacy of Ayurvedic treatment in tinea versicolor

Clinical features - A female patient aged 22 years, complained of on and off hypo-pigmented macular patches on the chest and face, and hyper-pigmented patches on the back region, associated with severe itching, diminished appetite and hunger since 4 years.

Intervention and treatment followed - The following medicines were prescribed in different combinations and adjuvants extending over a period of about 3 months - Arogyavardhini rasa, Chitrakasavam, Gandhaka rasayana, Khadirarishta, Patola katurohinyadi kashaya, Bhumyamalaki tablets, Nimbamrutadi erandam (orally), Kutaja oil for external application. Do's and don'ts w.r.t diet and lifestyle were accordingly advised. After a fortnight's treatment, hunger and appetite improved with about 30% lightening of the hyper-pigmented patches and reduction in itching. In the subsequent fortnight, further lightening of the lesions was seen with mild darkening of the light patches over the chest and face. The subsequent treatment planned over a period of two months resulted in skin complexion reaching almost normal with no itching.

Conclusion - Ayurveda is efficient in treating fungal skin problems like tinea versicolor.

- Dr. Chaitra Rao B.A.M.S

Interesting trivia

DIET PLAN IN AYURVEDA - A SAATWIK APPROACH

Ayurveda, the age old system of holistic medicine proposes an entirely different approach to food, diet and nutrition. Ahara (Food), Nidra (Sleep) and Brahmacharya (Celibacy) are considered as the three major pillars of health in Ayurveda. Food has been placed in very first place among three and life cannot be sustained without food. Ayurveda widely discusses and emphasizes on diversified aspects of diets and nutrition, as wholesome food plays a major role in maintaining health.

In comparison to modern science which emphasis on balanced diet by considering micro and macronutrient constitution and calories, Ayurveda has totally contrast approach towards nutrition and diet. Ayurvedic diet plan is based on Panchamahabhuta chemistry and tridosha function. As the body is built of Panchamahabhuta so also the food which we consume is basically composed of Panchamahabhuta and when such food is consumed it helps in balancing biological activities. Hence Ayurvedic diet plan can rather be termed as bio balancing diet.

Food in Ayurveda is not only a substance providing nourishment to body but also to mind, hence Ayurveda puts forth a holistic approach towards diet. The factors like, quality, quantity, processing method, rational combinations of food articles, individual’s nature (Prakruthi), environmental conditions play major role in nourishment.

The nutrition is closely related with the type of food, Agni (the digestive fire) and also on srotas (inner bio transport system-body channels). Hence it is important that wholesome diet is something which is compatible to body channels, keeps the individual healthy, maintains normal function without causing any disturbance to Agni and thereby nourishes mind and body thus prevents occurrence of diseases. One should observe that his daily diet encompasses all the six types of tastes (Sweet, Salt, Sour, Bitter, Spice and Astringent) and is easy to digest. One should regularly use such articles which are conducive to the maintenance of good health. For example regular use of Ghee, Honey, and Amla etc. helps in preventing diseases as they act as anti-oxidant.

The saatwik diet plan proposed by Ayurveda helps in positive balancing of mind and body

Shruthi Hegde, B.A.M.S; Masters In Ayurveda

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