

APPLICABILITY OF DWADASHA ASHANA PRAVICHARANA AS THERAPEUTIC DIET IN MAJOR NCDs IN PRESENT ERA

Arpitha R Sachin¹, Rekha B V²

¹III year PG Scholar, ²Associate Professor, Department of Swasthavritta and Yoga, JSS Ayurveda Medical College, Mysuru, Karnataka, India

Email: rajuarpitha77@gmail.com

ABSTRACT

Ayurveda, being an oldest medicine on earth deals with both Medicine and Food patterns to each healthy individual and also to diseased, based on *Rasa, Guna, Veerya, Vipaka* and *Prabhava* of *Ahara Dravya* and *Aushadha Dravya* respectively. During 19th century disease prism took drastic shift from Infectious disease to Life-Style diseases or Non-communicable disease (NCDs). A non-communicable disease is a medical condition or disease that is not caused by infectious agents. At present, NCDs kills approximately 41 million people each year, equivalent to 71% of all deaths globally. Food stands first in the row of prime risk factors of NCDs as it goes with Imbalanced diets (high consumption of sugar, salt, saturated fats & trans-fatty acids), Tobacco use (smoking), Alcohol abuse, Physical inactivity⁽¹⁾. So one should give utmost importance to dietetics to manage NCDs, If one implements Food Techniques like *Ahara Vidhi Vidhana, Dwadasha Ashana Pravicharana, Bhohajana Vidhi, Bhojanottara Viddhi, Shadrassa Bhojana* and food articles like *Nitya Sevniya Ahara, Hitha Ahara, Rithu Harithaki, Sada Pathya Dravya* will be fortunately become free from disease set and even from NCDs. One of food techniques i.e. *Dwadasha Ashana Pravicharana* elaborately explained only by *Sushrutha Acharya* as therapeutic aspect and also maintains health aspect can be applied to present prevalent NCDs and can get benefited from this therapeutic dietetic principle. So here is an effort made to explain applied aspects of *Dwadasha Ashana Pravicharana* in NCDs.

Keywords: *Dwadashaashana Pravicharana*, Non-communicable disease, Therapeutic Diet

INTRODUCTION

FOOD TRENDS

Food History: Historically, humans secured food through two methods- Hunting and gathering, Agriculture. The “right to food” is a human right derived from the International Covenant on Economic, Social & Cultural Rights (ICESCR). "right to an adequate standard of living, including adequate food", as well

as the "fundamental right to be free from hunger"(WHO)⁽²⁾. The first journal was launched in 1979 in *Petits Propos Culinaires*⁽³⁾. The first conference was the Oxford Food Symposium in 1981⁽⁴⁾

Food Facts of Present Era: Now in 21st century, a two-tier structure has arisen, Food Industry: The majority of the food required by growing population is

supplied by the food industry. Restaurant: The term is credited to the French from the 19th century, as it relates to the restorative nature of the bouillons. The NSSO survey, in its 68th edition, aims at generating estimates of household monthly per capita expenditure (MPCE) and the findings based on the data collected between July 2011–June 2012 shows 7.9% on beverages, refreshments and processed food by Rural Indians and 9 % by Urban Indians⁽⁵⁾. And advanced technologies came in Food system with Computer based control systems, sophisticated processing, packaging methods and nano-technology for short term cultivation resulted in following

Advantage: Pre-prepared time-saving food, Disadvantage: Ending up in health issues.

These two-tier structures brought above two things to the bulk of ordinary people, The changing Food system is one among the main causes for the development of **New Trends of Diseases-Non Communicable diseases**

DISEASE TRENDS

Non-Communicable Diseases (NCD): The Prism of diseases changed from Infectious diseases to Non Communicable disease. Non-communicable disease is a medical condition or disease that is not caused by infectious agents. It refers to chronic diseases which last for long periods of time and progress slowly. It's a "lifestyle" disease, because the majority of these diseases are preventable illnesses. It has been estimated that if the primary risk factors were eliminated. Preventable: 80% of heart disease stroke and type 2 Diabetes Mellitus, 40% of cancers

Risk factors: The most common causes for NCD include; Imbalanced diets (high consumption of sugar, salt, saturated fats & trans-fatty acids), Tobacco use (smoking), Alcohol abuse, Physical inactivity

Prevalence: NCDs are the leading cause of death globally, in 2012; they caused 68% of all deaths (38 million) up from 60% in 2000. About half were under age of 70 and half were women.⁽⁶⁾

CLASSICAL BIRD VIEW ON AHARA: अन्नं वृत्तिकराणां श्रेष्ठः॥⁽⁷⁾ Ahara is considered best among everything to sustain.

CLASSICAL CONCEPTS OF AHARA: To prevent diseases in *Swastha Purusha* and to cure diseases in *Atura* our *Acharya's* explained many dietetic principles; *Ashtaahara vidhi vishesha ayathana*, *Dwadasha ashana pravicharana*, *Sapta ahara vidhi*, *Viruddha ahara*, *Ahara parinamakarakabhava*, *Shadrasatmaka ahara*, *Bhojana Vidhi*, *Bhojanottara Vidhi*, *Bhojanopayogi Patra*, *Ahara Varga*, *Hita & Ahitha Dravya*, *Krutanna Kalpana*

AIM AND OBJECTIVES: To create awareness about prevention and management of NCDs with Ayurveda Food Techniques. To understand the applied aspect of *Dwadasha ashana pravicharana* in NCDs

MATERIAL AND METHODS: The present article is based on the review of classical text books of *Ayurveda*. Literary source: Materials related to *Dwadasha ashana pravicharana* and relevant topics has been collected from all *Samhitha*, *Nighantu*, national and international journals, authentic websites and contemporary medicine textbooks.

DWADASHA ASHAN PRAVICHARANA

It is one among classical approach to cure many diseases

1. *Sheetha* 2. *Ushna* 3. *Snigdha* 4. *Ruksha* 5. *Drava* 6. *Shushka* 7. *Eka kala* 8. *Dwikala* 9. *Aushadhiyukta* 10. *Matrahina* 11. *Doshaprashamana* 12. *Vrtyartha*

Dwadasha Ashana Pravicharana - In Detail⁽⁸⁾

1. ***Sheeta Ahara:*** Person suffering from following diseases should be treated by cold foods *Trushna* (Thirst), *Ushna* (Heat), *Mada* (Intoxication), *Daha* (Burning Sensation), *Raktapitta* (Bleeding Disease), *Visha* (Poisoning), *Murcha* (Fainting), *Strishu Kshina* (Emaciated from copulation)
2. ***Ushna Ahara:*** *Ushna Ahara* can be used to treat the following condition. *Kaphavata Amayam*, *Virikta* (after purgation), *Snehapani* (oleation), *Aklinnakaya* (moisture free body)
3. ***Snigdha Ahara:*** *Snigdha ahara* can be given in the following Persons. *Vata prakruthi*, *Ruksha deha* (dryness of body), *Vyavaya upahatha* (exhausted by copulation), *Vyayama* (physical exercises)
4. ***Ruksha Ahara:*** Foods which are dry (which absorbs excess fluids from body and requires more digestive juices for their digestion) in nature are

recommended in conditions like, *Medasaabhipareeta* (increased with excessive fat), *Snigdha* (excessive unctuousness), *Meha* (Diabetes mellitus), *Kaphaabhipanna* (excessive kapha)

5. **Drava Ahara:** Liquid foods are recommended in conditions like *Shushka deha* (Dehydrated) *Pipasarta* (Excessive Thirst), *Durbala* (Weakness due to dehydration)
6. **Shushka Ahara:** Foods which are dry are recommended in *Praklinna kaya* (*Kaphayukta sharira*), *Vrana* (Ulcers), *Meha* (Diabetes mellitus)
7. **Eka Kalika Ahara:** One meal a day is recommended in *Durbalagni* -- very less or weak digestive capacity
8. **Dwikalika Ahara:** Two meals a day is recommended in *Samagni* (optimum digestive capacity) nothing but in *Swastha Purusha*

सायं प्रातर्मुष्ण्याणामशनं श्रुतिबोधितम्। नान्तरा भोजनं कुर्यादग्निहोत्रसमो विधिः ॥⁽⁹⁾

Humans are advised to take food two times a day one in morning and other on evening by scriptures, one should not eat in between as it similar to that of fire oblation.

In History⁽¹⁰⁾:- Even in the European Middle Ages, breakfast was not usually considered a necessary and important meal, and was practically nonexistent during the earlier medieval period.

1. **Aushadhiyukta Ahara:** *Aushadhi Dweshi* (Food prepared or added with medicines are recommended in persons who are averted to take medicines)
2. **Matrahina Ahara:** Less quantity of food is recommended in *Mandagni* (week digestive capacity), *Rogi* (suffering with diseases). *Matra:* Total quantity '*Sarvagraha*' and Quantity of different items '*Parigraha*' is considered, *Hina:* lesser than normal food intake.
3. **Dosha Prashamana Ahara: Ritu** - There is change in state of *Tridoshas* (*Vata/Pitta/Kapha*) according to change in seasons as *Chaya* (abnormal increase), *Prakopa* (aggravation), *Prashama* of *Tridoshas*.

Classical *Doshaprashamana* Recipes for Specific *Ritu*

Vasanta Ritu⁽¹¹⁾: *Kapha prakopa* happens

Krutanna Kalpana

Purana shashtika shaali Odana (old boiled rice) , *Kulatta yusha* (horse gram gruel), *Patola*, *Nimbaadi tikta shaaka sidda ahara* (food prepared with bitter vegetables), *Krita Mudga yusha* (seasoned green gram soup), *Madhudaka* (honey water), *Ushna jala* (warm water).

Grishma Ritu: *Pancha Panaka* can be prescribed

Panchasarpanak⁽¹²⁾→ Ing: *Draksha*, *madhuka*, *gambhari*, *khajura*, *karpura*., *Mrudvikapanak*⁽¹³⁾→ Ing: *Mrudvika*., *Drakshadi panaka*⁽¹⁴⁾→ Ing: *Draksha*, *parushaka*, *khajursara*, *kola*, *guda*, *chaturjata*, *karpura*, *maricha*., *Aamrapanak*⁽¹⁵⁾→ Ing: *Amra*, *sita*, *karpura*, *maricha*., *Dhanyakpanaka*⁽¹⁶⁾→ Ing: *Dhanyaka*, *sharkara*, *karpura*.

Varsha Ritu⁽¹⁷⁾: *Vata prakopa*

Krutanna Kalpana: *Madhuduka* (boiled and cooled water with honey)., *Purana shali odana* (old boiled rice)., *Mudga yusha* (green gram soup)., *Jangala mamsa rasa* (meat soup of arid animals)., *Panchakola sidda Yavaga* (greul prepared by *panchakola*)., *Panchakolamustha sidda mamsa rasa* (meat soup prepared with *panhakola*, *mustha*)

Sharad Ritu⁽¹⁸⁾: *Pitta prakopa* happens

Krutanna Kalpana: *Shali odana* (boiled rice)., *Godhuma manda* (wheat scum)., *Mudga yusha* (green gram soup)., *Sarkarodaka*(sugar water)., *Amalaka panaka* (amla juice)., *Draksha panaka* (raisin juice)., *Jangala mamsa rasa* (meat soup of arid animals)., *Phanitha* (sugarcane molasses)., *Hamsodaka*

Hemantha ritu Krutanna Kalpana⁽¹⁹⁾ *Shali odana* (boiled rice)., *Masha yusha* (black gram gruel)., *Tila palala* (sesame sweet)., *Saka sidda odana* (leafy vegetable rice)., *Dadhi* (curd)., *Saguda dadhi* (curd with jaggery)., *Ikshu vikruthi* (sugarcane products)., *Anupa mamsa rasa* (meat soup)., *Pishatanna*

Doshaprashamana- Relevance

Food is traded and marketed on a global basis. In between 1961-1999, there was a 400% increase in worldwide food exports. Some countries over 80% are

economically dependent on food exports. The variety and availability of food is no longer restricted by the diversity of locally grown food. All kinds of Fruits and Vegetables are available in all 6 RITU's. These developments in food system may harm the basic constituents of plant kingdom and may end up in Severe New Disease Trend in humankind. To prevent future Unknown diseases-- *Rituanusara* diet should be taken

4. Vrutyartha:

Swasthavrittarta: This is recommended for maintaining the health of individual. This includes *Ahara* with *Shadrassa* and many more concepts of *Ahara* According to once nature. For the maintenance of *Swasthyatha* many dietetics Principle were mentioned, it includes (Table 1) These principles should be implemented to enhance the health and to stay away from NCDs of present era

Table 1: *Swasthya Vruthyarthaha Ahara Upaya*

Sl. No	<i>Swasthya Vruthyarthaha Ahara Upaya</i>	
1	<i>Shadrassa Bhojana</i> ⁽²⁰⁾	<i>Madura, Amla, Lavana, Katu, Tikta, Kashaya</i>
2	<i>Nithya sevaniya Ahara</i> ⁽²¹⁾	<i>Shastika shali ,Yava, Madhu , Mudga, Jangala Mamsa , Amalaka, Saindava, Antariksha jala, Ksheera, Sarpi</i>
3	<i>Rithu haritaki</i> ⁽²²⁾	<i>Shishira : Pippali, Vasantha: Madhu, Grishma: Guda, Varsha: Saindhava, Sharad: Sharkara, Hemantha : Shunti</i>
4	<i>Hita dravya</i> ⁽²³⁾	<i>Raktha shali, Mudga, Antariksaha ambu, Saindhava lavana, Goghritha, Go ksheera, Tila taila, Mridvika</i>
5	<i>Ahita dravya</i> ⁽²⁴⁾	<i>Yavaka, Masha, Varsha nadi jala, Oushara lavana, Avika gritha, Avika ksheera, Kusumba taila, Likucha</i>

Major NCD's with Dwadasha Ashana Pravicharana and its Therapeutic Diet

1. Cardio Vascular Disease (CVD)

Prevalence: ⁽²⁵⁾ CVDs take the lives of 17.9 million people every year, 31% of all global deaths. Triggering these diseases – which manifest primarily as heart attacks and ends up with decreased Life expectancy of countries population. Mainly due to unhealthy diet, physical inactivity and the harmful use of alcohol & tobacco.

Dwadashashana Pravicharana: In *Vataja Hridroga Ushna ahara, Snigda ahara, In Pittaja Hridroga, Sheeta, drava ahara, in Kaphaja Hridroga ushna, ruksha shuskha ahara, and Sannipataja* according *dosha* should be given, *Aushadiyukta Ahara, Dwikalabojana, Doshaprashamana* can be indicated.

Krutanna Kalpana ⁽²⁶⁾: *Mudga Yusha, Kulatta Yusha, Kambhalika Yusha, Arjunasidda Ksheera . Abhaya Shadava, Patola, Kushmanda, Amra, Dadima Sidda Panaka*

2. Diabetes Mellitus (DM)

Prevalence ⁽²⁷⁾: The number of people with DM has risen from 108 million in 1980 to 422 million in 2014. The global prevalence of DM among 18 years of age

has risen from 4.7% in 1980 to 8.5% in 2014. Around 205 million women live with DM worldwide, over half in South-East Asia and the Western Pacific. Almost half of women who die prematurely, before the age of 70 years in low-income countries are due to high blood glucose.

Dwadashashana Pravicharana: *Ushna Ahara, Shushka Ahara, Ruksha Ahara, Aushadiyuktha Ahara, Matraheena Ahara, Doshaprashamana*

Krutanna Kalpana ⁽²⁸⁾: *Mudga/ Kulatta Yusha, Agnibala Yusha, Amalaki Sidda Yusha, Dadimasidda Yusha, Jambusidda Yusha, Yava Rotika, Triphalamadhusaditha Yava*

3. OBESITY

Prevalence ⁽²⁹⁾: Worldwide obesity has nearly tripled since 1975. In 2016, more than 1.9 billion adults, were overweight, of these over 650 million were obese. In 2016 39% -18 years were overweight, and 13% were obese. Most of the world's population lives in countries where overweight and obesity kills more people than underweight. 340 million children and adolescents aged 5-19 were overweight or obese in 2016.

Dwadashashana Pravicharana: *Shushka Ahara, Ruksha Ahara, Ushna Ahara, Aushadiyuktha Ahara, Matraheena Ahara, Ekakalika Ahara, Doshaprashamana*

Krutanna Kalpana ⁽³⁰⁾: *Madhudhaka, Kulatta Yusha, Barjitha Vrinthaka, Kapotha Mamsa, Takra Kalpana, Triphala Yavagu, Mudgamalaka Yusha*

4. CANCER

Prevalence ⁽³¹⁾ **Cancer** is the second leading cause of death globally, It is responsible for an estimated 9.6 million deaths in 2018. Globally, 1 in 6 deaths due to Cancer, 70% of deaths from cancer occur in low- & middle-income countries and, around one third of deaths from cancer are due to 5 leading behavioral and dietary risks i.e. High body mass index, low fruit and vegetable intake, lack of physical activity, Tobacco and alcohol use.

Dwadashashana Pravicharana: *Ushna Ahara, Drava Ahara, Dwikala Ahara, Aushadiyukta Ahara, Doshaprashamana*

Krutanna Kalpana: *Ashwaganda Sidda Ksheera* ⁽³²⁾, *Haridrasaditha Ksheera* ⁽³³⁾, *Guduchi Sidda Yavagu* ⁽³⁴⁾

DISCUSSION

CVD According to types of CVD, *Ashana pravichara* can be applied i.e., In *Vataja Hridroga ushna ahara* and *snigda ahara* can be prescribed as it is condition of Atherosclerosis, where wasting is due to *prakupitha vata*, In *Pittaja Hridroga, sheeta* and *drava ahara* can be given as its symptom resembles to inflammatory status of Heart and in *Kaphaja Hridroga ushna, ruksha* and *shushka ahara* can be advised as it can be considered as Myocardial infarction. In *sannipataja* according to *doshic* variations one has to decide. *Dwikala bhojana* to maintain *swasthyatha*. *Aushadiyuktha* and *Doshaprashamana* plays role in managing CVD by acting on *Prakupitha dosha*.

OBESITY *Shushka Ahara & Ruksha Ahara* mainly helps to mitigate *prakupitha kapha & meda* in *sthoulya*. *Ushna Ahara* acts on aggravated *Vata, Matraheena Ahara & Ekakalika Ahara* to balance the energy level in body instead of *Langahana*,

Aushadiyuktha and *Doshaprashamana* plays role in managing obesity by acting on *Prakupitha dosha*

DIABETES MELLITUS: *Sushka* and *Ruksha ahara* mentioned by *Acharya Sushruta* as these properties helps in checking *prakupitha meda* and *prabutha mutra*. *Ushna* property mainly helps in improving *dhathwagni* even it includes *dhathus* of islet of langeren. *Matrahina ahara* because to maintain glycaemic level in body. *Dwikala bhojana* to maintain *swasthyatha*, *Aushadiyuktha* and *Doshaprashamana* plays role in managing diabetes by acting on *Prakupitha dosha*.

CANCER: *Ushna dravyas* kindles *Agni* of individual. As we know all diseases are due to *Ama*. If *Agni* is maintained well then ones sustainable capacity against disease manifestation will be increased so in cancer due to accumulation of *Ama* in the form of free radicals results in hyperplasia of effected cells. *Ushna dravya* will help to abolish such *ama* formation so *ushna* can be indicated. *Drava ahara* should be given as it maintains cells integrity. *Dwikala bhojana* to maintain *Swasthyatha*. *Aushadiyuktha* and *Doshaprashamana* plays role in managing cancer by acting on *Prakupitha dosha*. *Dwadasha Ashana Pravicharana* dietetic principle explained by *Shushruta Acharya* for both *Swastha* and *Atura*. Whereas *Acharya Charaka* explains *Ashta Ahara Vidhi Vishesha Ayathana* for *Swastha*. Both should be applied according to *lakshanas prakruthi, kala, desha and bala* later diet should be planned successfully for both *Swastha* and *Atura* As therapeutic diet are based on general concept of diseases. Along with *Dwadasha Ashana Pravicharana* one should apply *yukthi* to plan diet for both *Swastha* and *Atura*.

CONCLUSION

NCDs prevalence are rising day by day, it is affecting people in every Corner of the World. If present disease growth trends are maintained, by 2020, NCDs will attribute to 7/10 Deaths in developing countries, killing 52 million people annually worldwide by 2030. Instead of Aesthetically pleasing and eye-appealing food from Restaurants and Industries, *Sathvika Ahara* should be preferred by using all *Ayurvedic* food con-

cepts. One should not eat food for the sake of taste but should eat for maintaining good health. To prevent the further complication along with medications *Dwadashashana pravicharana* can be implemented in NCDs at secondary line of prevention. As classical concepts of food will help in maintaining health, mass Education regarding this is very much needed. Health professionals should throw Light on these to get highest benefit for Society

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Source of Support: Nil

Conflict Of Interest: None Declared

How to cite this URL: Arpitha R Sachin & Rekha B V: Applicability Of Dwadasha Ashana Pravicharana As Therapeutic Diet In Major Ncds In Present Era. International Ayurvedic Medical Journal {online} 2019 {cited April, 2019} Available from: http://www.iamj.in/posts/images/upload/571_577.pdf